1161 ROCHDALE ROAD, BLACKLEY

PHASE 1:
PRELIMINARY RISK ASSESSMENT &
PHASE 2:
GEO-ENVIRONMENTAL SITE INVESTIGATION, RISK ASSESSMENT AND REMEDIATION STRATEGY

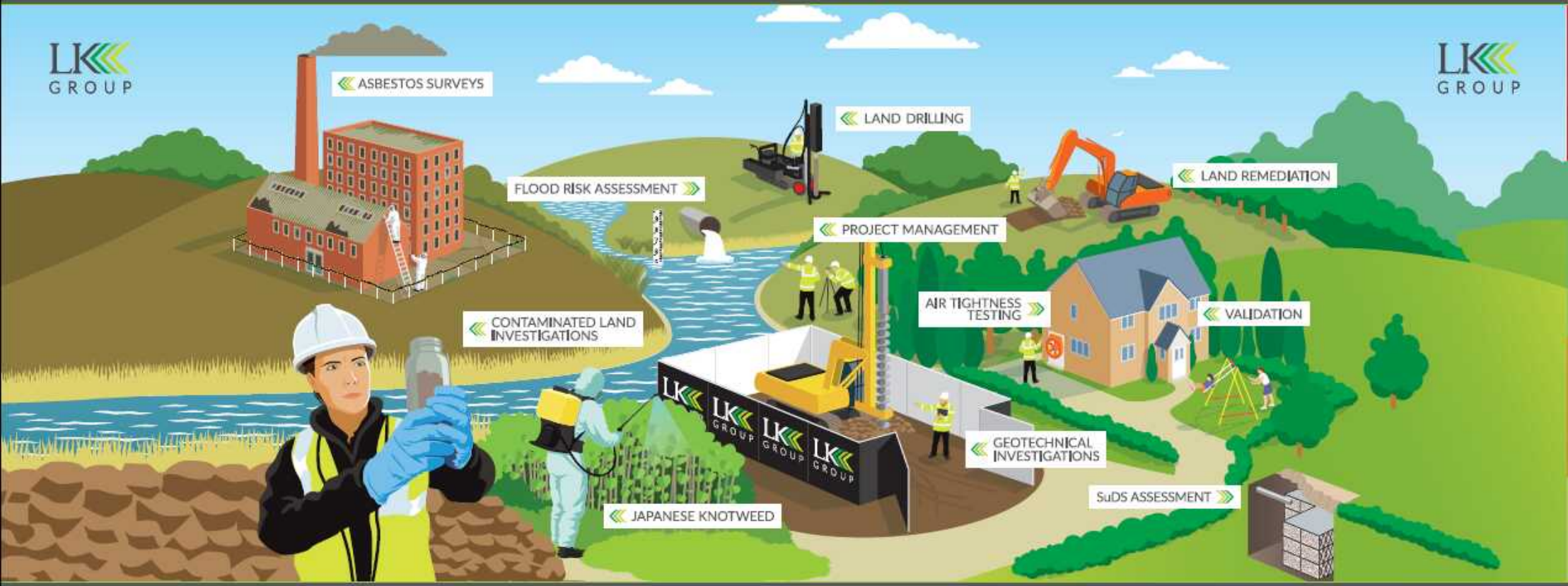
Job Number: LKC 21 1140
Date: April 2021
Client: RH Kennedy Properties Ltd



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Document Verification

Site Address	1161 Rochdale Road, Blackley, Manchester, M9 7FP		
Report Title	Phase 1: Preliminary Risk Assessment & Phase 2: Geo-Environmental Site Investigation, Risk Assessment and Remediation Strategy		
Job Number	LKC 21 1140	**Document Ref.**	CL-602-LKC 21 1140-01
Date Issued	March 2021	**Report Version**	R0
Prepared By	Emma Khadun	**Signature**	
Reviewed By	Peter Dunn	**Signature**	

Revision Record			
Revision No.	**Date**	**Nature of Revision**	**Approved By**

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1 Introduction

LK Consult Ltd (LKC) has been retained to carry out a Phase 1 Preliminary Risk Assessment (PRA) and Phase 2 Site Investigation, Risk Assessment and Remediation Strategy for 1161 Rochdale Road, Blackley.

In accordance with current guidance (including LCRM[1] and the National Planning Policy Framework (NPPF)[2]), the PRA will include a site reconnaissance, site history, geology, hydrogeology, hydrology, mineral search and a landfill search. Information gathered from the desk study and site reconnaissance will be used to develop a contamination conceptual model for the site.

In addition, the information gathered will be used to identify potential geotechnical constraints associated with the redevelopment of the site.

Based on the findings of this report, an appropriate site investigation has been derived and undertaken.

A previous investigation has been undertaken in April 2020 by Mini Bore for a proposed detached dwelling to the east of the existing property. While LKC do not have access to the full report, the Client has provided an engineering log and a borehole location plan.

Site details are provided in Table 1-1. Figure 1 shows the site location and boundary. Figure 2 shows the proposed development plan.

Site Location	Northeast of junction between Rochdale Road and Lion Road. Centred at approximate National Grid Reference 385887E, 403205N.
Approximate Area	330m^2 (275m^2 proposed residential houses and 55m^2 detached garage).
Topography	80-75 metres Above Ordnance Datum (AOD). Gentle slope down to Rochdale Road / southeast.
Current Site Use	Large detached residential house with private rear garden, soft landscaping and associated driveway.
Purpose of Report	Planning.
Planning Ref.	116936/FO2017 and 107956/FO/2015/N1
Proposed Development	Residential housing with gardens / soft landscaping. Erection of two pairs of three storey, semi-detached dwelling houses fronting Rochdale Road with three storey detached dwelling house to the rear (Class C3) together with access alterations, landscaping, parking and boundary treatment. Erection of single-storey detached domestic garage, ancillary to refurbished dwelling house at 1161 Rochdale Road

Table 1-1: Summary of site details

[1] Land Contamination Risk Management (LCRM) https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm
[2] "National Planning Policy Framework." The Ministry of Housing, Communities and Local Government. February 2019.

2 Historical Review

2.1 Historical Map Review

In compiling the site history, LKC consulted Envirocheck historical mapping (Appendix A) and other public domain maps / aerial photography.

Table 2-1 summarises features on site.

Site Features	Location on Site	Dates Present		Comments
		From	To	
Agricultural field	Whole Site	1848	1923	Site located within field boundary.
2no. embankments	SW	1909	Present	Current site boundaries established.
Rectory	NW	1933	Present	Marked as 'St Peter's Rectory' by 1951 mapping.
Unmarked building	NE	1951	1995	No longer present by present day.

Table 2-1: Summary of site features. Dates based on available historical map editions.

Table 2-2 summarises potentially contaminative land uses within approximately 50m and potentially infilled features within approximate 250m.

Surrounding Area Features	Distance (m)	Direction	Dates Present		Comments
			From	To	
Rochdale Road	15	SE	1848	present	Tramline present by 1909 mapping. No longer present by 1933 mapping.
2no. embankments	18	SE	1909	1923	No longer present by 1932 mapping.
	21	E	1909	1938	No longer present by 1951-89 mapping.
Garage	48-69	S	1951	present	Currently Total petrol station.
2no. embankments	52	N	1933	1938	No longer present by 1951-89 mapping.
	55	S	1951	present	Fuel station forecourt extended by 1978-79 mapping.
Pond	57	SE	1848 only		No longer present by 1893-09 mapping.
Embankment	62	E	1933	1966-68	No longer present by 1975 mapping.
2no. ponds associated with Disused Lion Field (Pickle) Works (demolished by 1980-81 mapping)	70	W	1893-09	1978-79	No longer present by 1980-81 mapping.
	70	SE	1848	1959-71	Marked as a reservoir by 1893-09 mapping. Shown as marsh by 1955-70 mapping. No longer present by 1980-81 mapping.
Spoil heap / excavation	78	S	1951	2006	No longer present by 2020 mapping.
Spring	79	N	1893-09 only		No longer present by 1909 mapping.
2no. ponds	80	SE	1848	1988-89	Marked as a reservoir by 1893-09 mapping. No longer present by 1990 mapping.
	80	E	1848 only		No longer present by 1893-09 mapping.

Table 2-2: Summary of potentially contaminative features within 50m and potentially infilled features with 250m. Dates are based on available historical map editions.

Embankment	85	NE	1893-09	1966-68	No longer present by 1975 mapping.
2no. ponds	88	SE	1848 only		No longer present by 1893-09 mapping.
	89	S	1951-52	1955-70	Within spoil heap / sand pit. No longer marked by 1955-70 mapping.
4no. spoil heaps / excavations	91	SE	1933	1988-89	No longer present by 1990 mapping.
	91	SE	1951	1988-89	No longer present by 1990 mapping.
	92	SE	1951	1995	No longer present by 1999 mapping.
	98	E	1933	1988-89	No longer present by 1990 mapping.
Pond	107	S	1848	1938	No longer present by 1951 mapping.
Embankment	109	S	1923	1938	No longer present by 1951 mapping.
Pond	116	S	1848 only		No longer present by 1893-09 mapping.
Sand Pit	124-172	E	1848	1938	Extended to the southeast by 1909 mapping. Marked as 'Old Sand Pit' by 1923 mapping. Extended to the east by 1933 mapping.
Spoil heap / excavation	132	E	1893-09	1966-68	Marked as 'Old Sand Pit' by 1951-55 mapping. No longer present by 1963-89 mapping. No longer present by 1975 mapping.
Pond	154	N	1848	1910	No longer present by 1923 mapping.
2no. embankments	156	N	1951-55	only	No longer present by 1955-70 mapping.
	166	NE	1951-55	1956	No longer present by 1966-68 mapping.
2no. embankments	176	SW	1951-89	1995	Assumed to still be present.
	180	NE	1893-09	1966-68	No longer present by 1975 mapping.
Pond	185	NW	1848	only	No longer present by 1893-99 mapping.
3no. embankments	185	SW	1951-89	1995	Assumed to still be present.
	195	W	1951	1995	Assumed to still be present.
	197	SW	1951-89	1988-89	No longer present by 1992 mapping.
Embankment	207	N	1951-52 only		No longer present by 1951-55 mapping.
Graveyard	208	SW	1932-33	1951	Extended to NE by 1933 mapping. No longer marked by 1951-55 mapping.
Old Sand pit	232	NW	1951-89	1952-53	No longer present by 1955-70 mapping.

Table 2-2 (continued): Summary of potentially contaminative features within 50m and potentially infilled features with 250m. Dates are based on available historical map editions.

Plate 2-1 shows the features noted in Table 2-1 and 2-2.

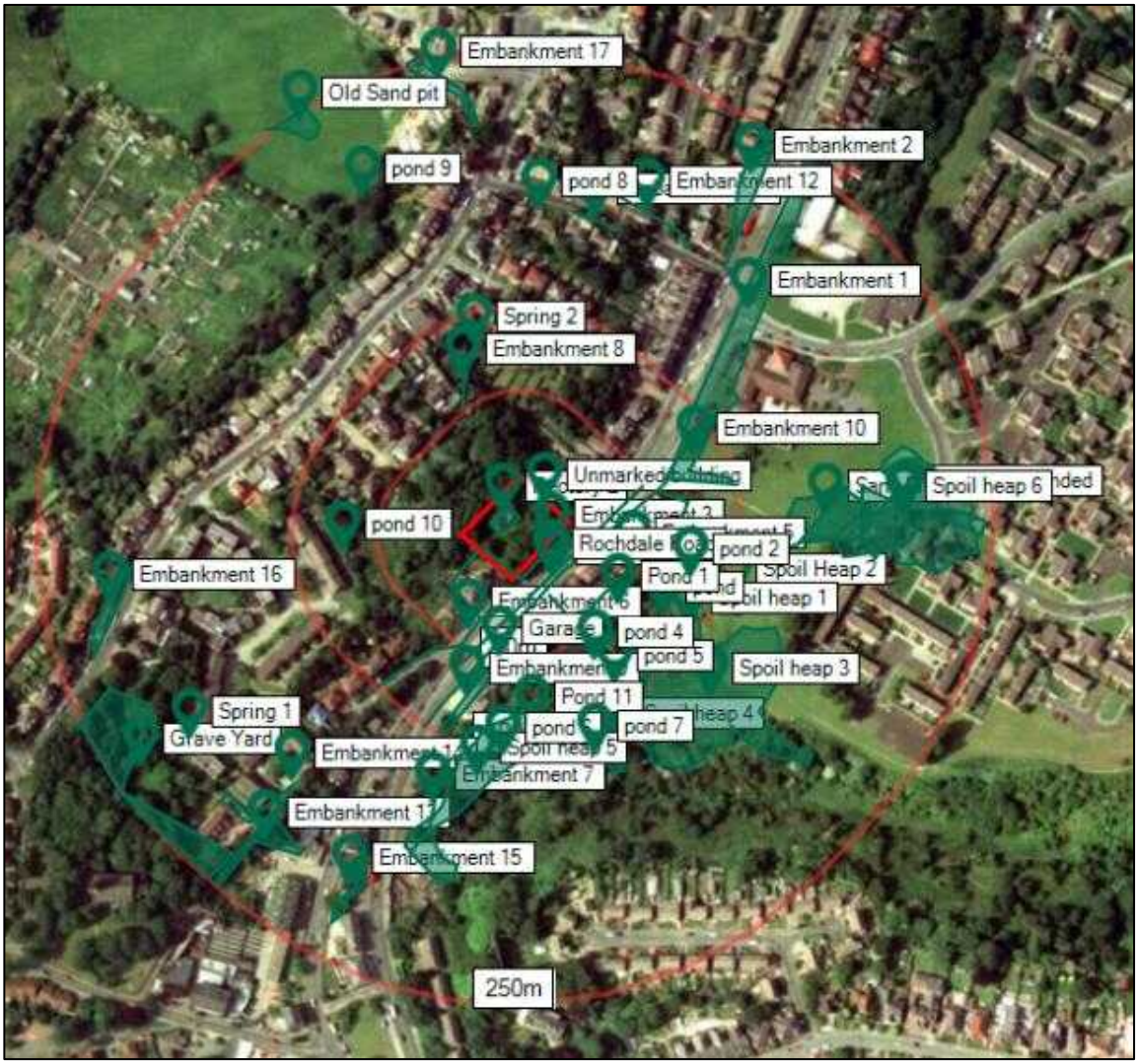


Plate 2-1: Historical features.

The 1951-52 mapping showing the former rectory on site and the sandpits, reservoirs and ponds offsite to the southeast are shown on Plate 2-2.

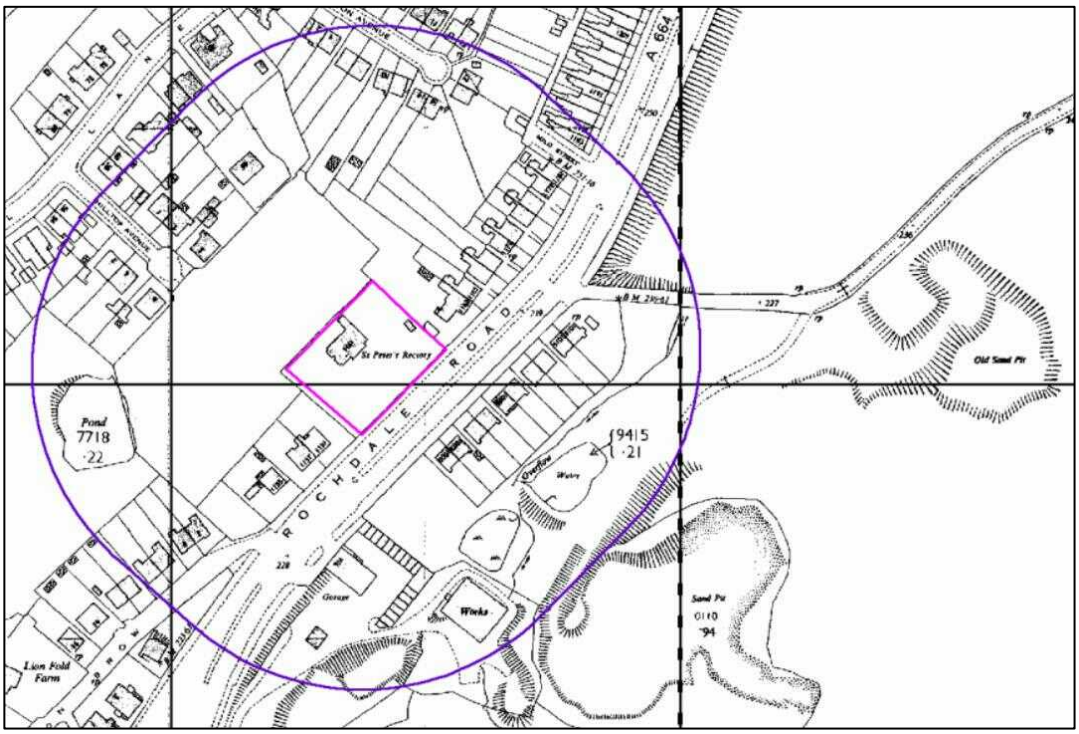


Plate 2-2: Extract from 1951-52 mapping.

2.2 Anecdotal Information

According to one of the neighbours, the wooded area adjacent to the northwest of the property is a nature reserve. This has not been identified as a sensitive area by the Envirocheck Report or historical mapping (Appendix A & B).

3 Environmental Setting

A summary of environmental settings is presented in Table 3-1, based on a review of available environmental data.

Categories(data sources)			Details
Geology[1,2]	Artificial		- No BGS recorded artificial.
	Superficial		- Till (diamicton). - Glaciofluvial deposits (sand and gravel) recorded adjacent to the east and south.
	Bedrock		- Collyhurst Sandstone Formation (sandstone). - Fault recorded adjacent to the northern boundary of the site, running NW-SE.
	BGS Logs (<50m)		- BH Ref: SD80SE1007, 12mE: topsoil to 0.15m, gravel fill to 0.38m, granite sets bound by asphalt to 0.69m, concrete to 0.91m, brown sandy clay to 1.52m, very dense gravel to 1.98m, medium clayey brown sand to 3.35m, cobbles (Old Rochdale Road) to 3.43m, coarse sand and gravel to 5.49m, fine brown silty sand to 14.63m, gravel and cobbles to 15.85m. Last page of BH logs missing.
Hydro-geology[1]	Aquifer Designation	- Superficial	- Secondary Undifferentiated and Secondary A Aquifer.
		- Bedrock	- Principal Aquifer.
	Source Protection Zone (SPZ)		- Site not within an SPZ.
	Groundwater Abstractions (100m)		- None.
Hydrology[1]	Surface Water Courses (100m)		- Un-named stream 55m SE, flowing SW.
	Flooding risk		- Flood Zone 1.
	Surface Water Abstractions (100m)		- None.
	Discharge Consents		- Nearest is 344m S: storm tank discharging storm sewage into Boggarts Hole Brook.
	Pollution Incidents		- None within 500m.
Minerals & Mining[1,2]	Coal Mining		- Within a Coal Reporting Area. - Not within a Development High Risk Area.
	Surface Mineral Extractions (250m)		- 3No. within 250m: ceased), Blackley Parsonage Sand Pit (2no. entries) 183m E (silica sand and sand, ceased).
	Cheshire Brine Compensation District		- Not within Compensation District.
	Non-Coal Mining Area		- Not within an area of conclusive metalliferous mining.
Ground Stability[1]	Collapsible Ground		- Very low hazard.
	Compressible Ground		- No hazard.
	Ground Dissolution		- No hazard.
	Landslide		- Low to very low hazard.
	Running Sand		- Very low hazard.
	Shrinking / Swelling Clay		- Very low to no hazard.

Table 3-1: Summary of the environmental setting.
Notes: Distance in brackets is the distance from site that features are included. Where no distance given, features relate to on site only.
Data Sources:
1 Envirocheck Report (Appendix A & B); **2** BGS GeoIndex http://mapapps2.bgs.ac.uk/geoindex/home.html (Appendix C); **4** The Coal Authority Web Mapping Services (WMS) / Interactive Map Viewer http://coal.decc.gov.uk/en/coal/cms/publications/data/map/map.aspx; **5** Zetica UXO Unexploded Bomb Risk Map (Appendix D).

Landfill Sites (250m)[1]	Known / Registered	- 76m SE – 'Land off White Moss Road'. Waste type not supplied.
	Potentially Infilled Land (non-water and water), based on Envirocheck Report	- 3no. non-water features: 96m SE, 150m E (1990 mapping) 237m NW (1990 mapping). - 3o. water features: 22m SE 1910 mapping, 66m SE (1956 mapping), 73m SE (1956 mapping).
	Potentially infilled sites, based on LKC historical review	- See Table 2-2: 4no. current embankments (8no. no longer present), 11no. ponds, 6no. spoil heaps / excavations, 2no. sand pits, 2no. springs and 1no. graveyard.
Radon Potential[1]		- 1-3% of homes above Action Level. No protective measures are necessary in the construction of new dwellings or extensions.
Designated Sites (50m)[1]		- None.
Contemporary Trade Directory (50m)[1]		- None.
Fuel Station Entries (50m)[1]		- None. - Nearest 76m S (open).
Unexploded Ordnance Risk (UXO)	Zetica Risk Map[6]	- Moderate.
	Historical / Current Military Activity	- None present on site or in the immediate vicinity of the site.
	Pre-Desk Study Assessment	- A detailed desk study, whilst always prudent, is not considered essential in this instance.

Table 3-1 (continued): Summary of the environmental setting.
Notes: Distance in brackets is the distance from site that features are included. Where no distance given, features relate to on site only.
Data Sources:
1 Envirocheck Report (Appendix A & B); **2** BGS GeoIndex http://mapapps2.bgs.ac.uk/geoindex/home.html (Appendix C); **4** The Coal Authority Web Mapping Services (WMS) / Interactive Map Viewer http://coal.decc.gov.uk/en/coal/cms/publications/data/map/map.aspx; **5** Zetica UXO Unexploded Bomb Risk Map (Appendix D).

3.1 Previous Site Investigation

A previous site investigation was undertaken by Mini Bore in April 2020 for a proposed detached building in the soft landscaping to the east of the existing residential house. The client has provided LKC with a copy of the engineering logs and a borehole location plan, which is contained in Appendix E.

The following ground conditions were encountered from ground level:

- Made ground to a maximum depth of 0.5mbgl (topsoil containing brick fragments and concrete rubble over reworked clay containing roots).
- Stiff brown sandy CLAY to 1.1mbgl with an SPT 'N' value of 9.
- Loose to medium dense SAND with lenses or pockets of brown clay to 1.4mbg.
- Loose fine grained brown SAND to 2.1mbgl with SPT 'N' value of 6.
- Firm brown very sandy CLAY to 2.8mbgl.
- Stiff brown sandy gravelly CLAY with rare fragments of coal to 3.0mbgl.
- Loose medium grained brown SAND to 3.4mbgl with SPT 'N' value of 8.
- Firm dark brown sandy gravelly CLAY with rare fragments of coal to 5.1mbgl. N value of 10.
- Firm to stiff greyish brown very sandy gravelly CLAY to 6.5mbgl, SPT 'N' value of 12.
- No sample recovery from 6.5-7.0m due to stone cobble wedged at end of sampler tubs. N values of 35.
- Standing water encountered at 3.3mbgl.

4 Site Reconnaissance

A site reconnaissance was carried out on 24th March 2021.

Relevant features identified on site are summarised below:

- Steep slope down to the south along the southern boundary of the site in area of proposed residential houses. This area is heavily vegetated with bushes and small trees. Bricks, plastic piping and other building materials were noted within this area.
- Gentle slope down to the south in proposed rear garden area. This area is grassed.
- Small clump of bushes, small trees and several tree stumps were present in the northwest corner of the site in vicinity of the proposed detached double garage.
- Site bounded by mixture of stone walls, brick walls, concrete and timber fences.
- Steep slope / heavy vegetation along southern boundary: inaccessible to plant.

The surrounding area comprises residential housing adjacent to the west and east, a wooded area adjacent to the north with a steep slope up to the north, and Rochdale Road adjacent to the south.

Relevant photographs are provided in Plate 4-1.



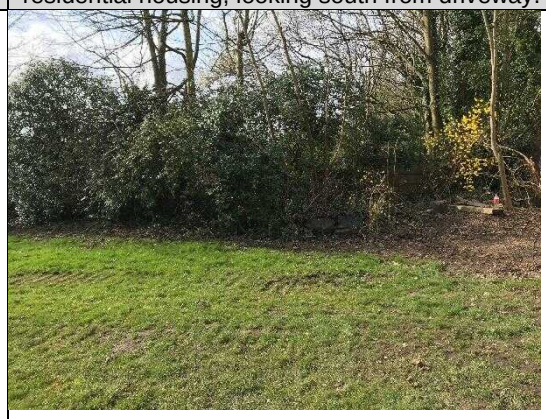
Photograph 1: View of existing retaining wall, looking west from Rochdale Road.



Photograph 2: View of area of proposed residential housing, looking south from driveway.



Photograph 3: Dense vegetation and slope down to the south at south of site, looking west.



Photograph 4: View of area of proposed detached garage, looking northwest.

Plate 4-1: Site photographs.

Relevant features are also shown on Plate 4-2.

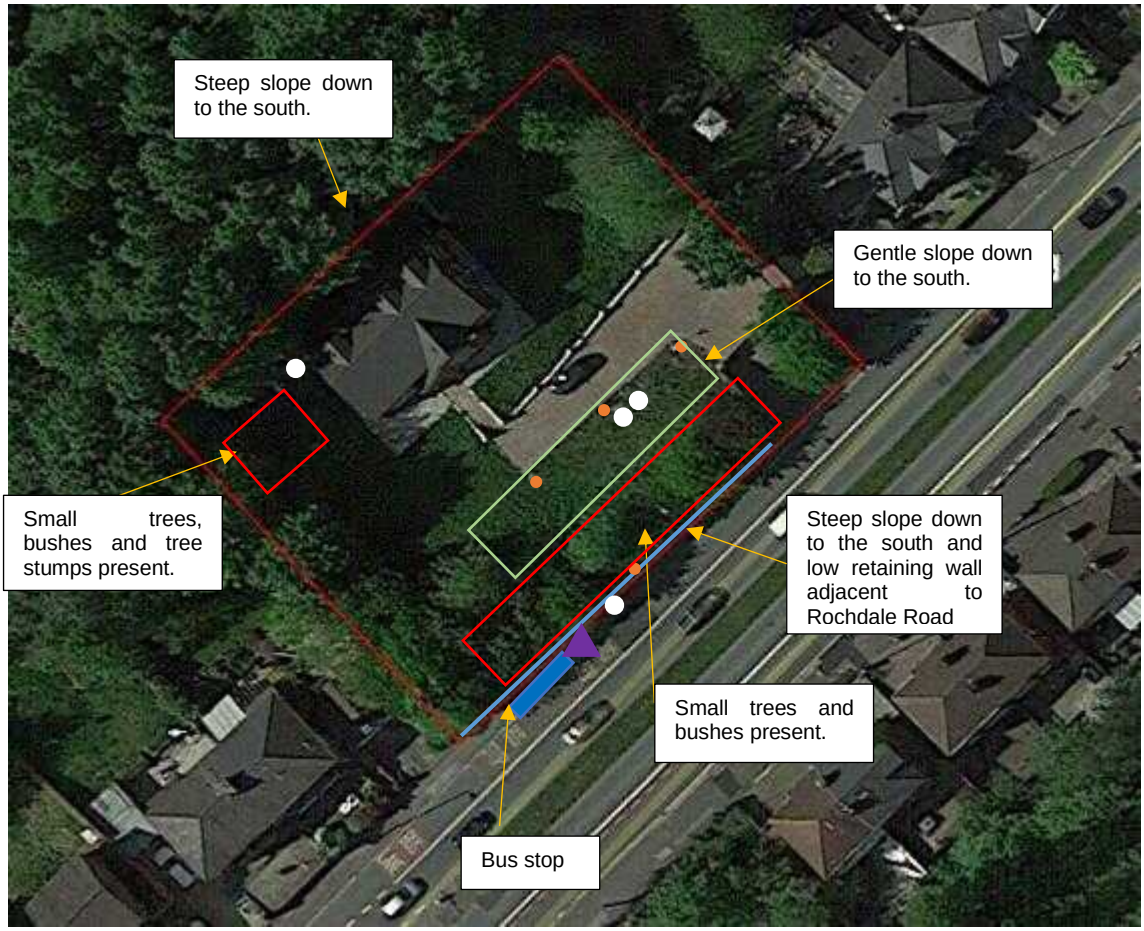


Plate 4-2: Plan showing relevant site walkover features.
Notes: white circles = manholes; orange circles = lamp posts; purple triangle = electricity box.

5 Preliminary Conceptual Model

5.1 Introduction

The aim of the conceptual model is to provide a preliminary assessment of the likelihood of a pollutant linkage for each potential combination of contaminant, pathway and receptor. A conceptual model can be used to make an informed decision on the contamination risks associated with the site and whether further site investigation work is required.

The Sections below are therefore divided into potential contaminant, potential pathway and potential receptor as described in LCRM[3], on the premise that, if there is no pollutant linkage, then there will be no risk to the receptor. The final Section provides an assessment of the potential pollutant linkages that may still be present on the site if redevelopment were to occur.

5.2 Potential Contaminants

Potential viable contamination sources are detailed in Table 5-1. These are split into onsite sources, offsite sources and underlying geology.

Potential Source	Contaminants
On Site	
Shallow Made Ground below some or all of site	- Assuming predominantly reworked natural soils with possible demolition rubble from previous small building, ash and clinker: Asbestos, heavy metals, sulphates, PAHs[4]. - Not expected to be a significant source of gas given anticipated depth and nature of Made Ground.
Agricultural field, assumed pastoral given the slopes present on site (sheep, dairy)	- No significant contamination source anticipated within the fields.
Residential property and former rectory	- Assuming no demolition has occurred: No significant contamination source anticipated.
Surrounding Area	
Surrounding area	- No significant contamination sources within influencing distance of the site.
Nearby petrol station / former garage, Adjacent road	- Petroleum hydrocarbons, oils. - Not considered to pose a risk as located downslope from site.
Cemetery	- Significant contamination not anticipated given distance from site.
1no. landfills and multiple offsite potentially infilled features within 250m	- Given size, distance and age of features, there is considered to be a source of hazardous gas (principally carbon dioxide and methane).

Table 5-1: Potential contamination sources.

5.3 Potential Receptors

Potential receptors are detailed in Table 5-2.

[3] Land Contamination Risk Management (LCRM) https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm
[4] Defra (2002). "Potential Contaminants for the Assessment of Land". R&D Publication CLR 8.

Receptors	
Human Health	- Future site users (including residents, visitors and site workers). - Offsite land users (adjacent residents).
Controlled Waters	- Un-named stream 55m SE, flowing SW. - Secondary A and Undifferentiated Aquifer (superficial). - Principal Aquifer (bedrock)
Buildings and structures.	
Potable water pipes.	
Flora within future gardens and landscaping.	

Table 5-2: Potential receptors.

5.4 Potential Pathways

Potential pathways are detailed in Table 5-3.

Pathways		
Soil	Human Health[5] (residential land use: houses with private gardens)	- Ingestion of soil. - Ingestion of soil-derived indoor dust. - Ingestion of contaminated vegetables. - Ingestion of soil attached to vegetables. - Dermal contact with soil. - Dermal contact with soil-derived indoor dust. - Inhalation of soil-derived outdoor dust. - Inhalation of soil-derived indoor dust. - Inhalation of vapours outside. - Inhalation of vapours inside.
	- Windblown dust and fibres to adjacent receptors.	
	- Direct contact with receptors (building foundations, services).	
	- Root uptake.	
Water	- Surface run-off over impermeable surface. - Site has one gentle slope and one steep slope down to the south. - Site is predominately grassed, surface run-off limited in these areas - High run-off from paved driveway on site.	
	- Infiltration into the ground, through potentially contaminated material (contamination possibly going into solution). - Site is predominantly grassed; therefore, infiltration is likely to be high. - Low infiltration within existing paved driveway.	
Water and Gas	- Migration through potentially permeable strata and preferential pathways. - Superficial (interbedded sand and clay) likely to be variably permeable - Bedrock (sandstone) likely to be relatively permeable. - Preferential pathways: services.	
Gas	- Migration into buildings (e.g. via services) and accumulation of gases in confined spaces (potentially causing explosion if methane is present).	

Table 5-3: Potential pathways.

5.5 Preliminary Contamination Conceptual Model

The Preliminary Contamination Conceptual Model is illustrated in Table 5-4 and has identified seven generic potential pollutant linkages.

Each linkage is described along with an assessment of the risk based upon guidance on probabilities and consequences outlined in CIRIA C552[6].

[5] EA (2008). "Updated Technical Background to the CLEA Model". Science Report – SC050021/SR3.
[6] CIRIA (2001). "Contaminated Land Risk Assessment: A Guide to Good Practice". C552.

In order to assess the potential risk for each pollutant linkage, an assessment of the magnitude of the potential consequence (severity) of the risk occurring and the magnitude of the probability (likelihood) of the risk occurring has been considered and classified. This is based on the guidance provided in CIRIA C552 and further details including a risk matrix is provided in Appendix F.

Where LKC identified a low to very low risk, targeted or low density intrusive investigation work, a watching brief (during construction work) or no investigation work will be recommended. This will be dependent on the nature of the site and the proposed development.

Where the risk falls into the moderate/low risk, LKC will undertake an assessment to establish what category the pollutant linkage will fall into (i.e. moderate or low risk will be chosen).

Where LKC identifies a moderate or higher risk, intrusive investigation work or precautionary remedial measures will be recommended.

It should be noted that there may be risk from short term exposure from contaminated soil to site workers. The Preliminary Contamination Conceptual Model deals with long term exposure to key receptors. Acute risks can be easily mitigated by good environmental management of the site during site works. Standard health and safety precautions (as per HSE guidance[7]) should be adopted by all workers involved with site enabling and construction works. Therefore, this receptor is not considered in the contamination conceptual model.

[7] HSE (1991). "Protection of Workers and the General Public During Development of Contaminated Land". London HMSO.

PL	Pathway	Receptor	Contaminants of Concern (CoC)	Probability	Consequence	Risk	Recommendations
1	- Dermal contact. - Inhalation of soil, fibres and dust. - Ingestion of soils, dust, vegetables, soil attached to vegetables. - Windblown dust.	- Future site users. - Offsite receptors.	- ACM. - Heavy metals. - PAHs. - Petroleum hydrocarbons.	Low Likelihood (given site history, site conditions and proposed end use)	Medium	Moderate / **Low** (low assumed as significant source not anticipated)	Low density intrusive investigation required. Soil analysis of CoC, subject to ground conditions encountered.
2	- Inhalation of vapours. - Migration via permeable strata and preferential pathways.	- Future site users. - Offsite receptors.	- Volatile contaminants (naphthalene, TPHCWG).	Unlikely (given site history, site conditions and proposed end use)	Medium	**Low**	Low density intrusive investigation required, to include PID testing. Soil analysis of CoC, subject to ground conditions encountered and PID testing.
3	- Inhalation of gas. - Migration via permeable strata and preferential pathways. - Explosion in confined spaces. - Exposure to radon.	- Future site users. - Buildings. - Offsite land users.	- Ground / hazardous gas (carbon dioxide, methane).	Likely (given viable gas source and limited pathway)	Severe	**High**	Gas monitoring or gas protection measures required.
			- Radon	Unlikely (as 1-3% of homes above action level)	Medium	**Low**	(1-3%) No protective measures are necessary in the construction of new dwellings or extensions.
4	- Surface run-off. - Migration via permeable strata and preferential pathways. - Perched waters migration.	- Groundwater (Secondary A, Secondary Undifferentiated, Principal Aquifers). - Surface water (Unnamed stream).	- Mobile contaminants such as metals, PAHs, hydrocarbons	Unlikely (no significant mobile contamination anticipated, limited pathway to principal aquifer)	Medium	**Low**	Watching brief during groundworks. Groundwater sampling or leachate testing, subject to ground conditions encountered. Analysis of CoC.
5	- Sulphate attack on concrete.	- Building structure.	- Sulphate.	Low likelihood (given site history, site conditions, geology and direct contact / pathway)	Mild	**Very** Low	- Testing of soils recommended for geotechnical purposes.
6	- Ingestion of tainted water supply.	- Future site users. - Water pipes.	- Organic contaminants such as petroleum hydrocarbons, naphthalene.	Low Likelihood (given site history, site conditions and made ground not expected at pipeline depth)	Medium	Moderate / **Low** (low risk assumed given anticipated limited made ground and contamination)	Low density intrusive investigation required. - Soil analysis of CoC, subject to ground conditions encountered.
7	- Direct contact (plant uptake).	- Flora.	- Phytotoxic contaminants such as heavy metals.	Likely (given site history, site conditions and proposed end use)	Minor	**Low**	Targeted intrusive investigation required. Soil analysis of CoC, subject to ground conditions encountered.

Table 5-4: Preliminary Contamination Conceptual Model.
Notes: PL = Pollutant Linkage. Contaminant of Concern (CoC) - See Table 5-1 for contamination sources. Site conditions based on observations during site reconnaissance.

6 Preliminary Geotechnical Risk Assessment

Table 6-1 summarises the possible geotechnical constraints of the site, based on the site history, environmental settings and site reconnaissance. Investigation work will be required to confirm the risks and provide a detailed geotechnical assessment and foundation design.

Coal Mining	Site is not within a Development High Risk Area. No further assessment required.
Slope Stability	Steep slope identified on site in vicinity of proposed residential buildings, with retaining wall along southern boundary adjacent to Rochdale Road. Further assessment required to determine the instability risk. Client will appoint structural engineer to design new retaining walls.
Envirocheck Ground Stability Hazards	No to low hazard identified. No further action required.
Made Ground	Unknown depth and constituent of made ground across the site. Initial information indicates relatively shallow made ground. Unlikely to be a suitable founding strata unless engineering work is undertaken.
Superficial	Unknown strength of soils for foundation design. Interbedded clay and sand anticipated below the site. Strata may be variable giving differential settlement.
Bedrock	Unknown depth to bedrock.
Groundwater	Unknown depth and variability of groundwater. Shallow / fluctuating groundwater can affect the strength of the soil, particularly in granular ground. Shallow groundwater can also affect construction works.
Plasticity	Plasticity of clay deposits should be confirmed, particularly where trees are present or proposed, to identify the shrink / swell risk. Clay recorded on site.
Sulphate	Unknown sulphate content of the made ground and natural. Ash possibly within the made ground which may give rise to elevated sulphate. Anticipated strata below the site is a sulphate bearing strata.
Road / Pavement Design	Unknown CBR values for footpath and road design.

Table 6-1: Summary of geotechnical constraints.

7 Ground Investigation

7.1 Site Investigation Design and Methodology

In order to assess the ground conditions at the site and to investigate the potential pollutant linkages identified in the preliminary contamination conceptual model an intrusive investigation was undertaken.

The investigation was carried out on 29th March 2021 and comprised the following:

- 3no. window sample boreholes drilled to 5.00-5.45 metres below ground level (mbgl) (ref. WS101 to WS103).
- Follow on Dynamic Probing through window sample boreholes WS102 and WS103 to a depth of 10mbgl (ref. DP102 & DP103).
- 2no. hand pits (using hand auger / spade) excavated to 1.2mbgl (ref. HD101 & HD102).

All site investigation locations are shown in Figure 3.

The locations were chosen to allow a good spread across the site as well as target areas of concern. Table 8-1 details the targeted site investigation locations.

Site Investigation Locations	Rationale
WS101	Proposed double garage.
WS102 / DP102	Proposed residential property.
WS103 / DP103	Proposed residential property.
HD101	Proposed rear garden.
HD102	Proposed rear garden.

Table 8-1: Summary of sampling locations.

The number of site investigation points corresponds to approximately one location per 9m square centres. This is considered to be a conservative sampling density and is in line with BS10175[8] for a 'main investigation'.

All profile logs are provided in Appendix G and are in line with BS14688-1[9] and BS5930[10].

7.2 Sampling Protocol

7.2.1 *Soil Sampling (Contamination)*

Standard sampling protocol and preservation of samples was undertaken as described in the EA guidance on site investigation[11].

Soil was collected for onsite testing. A plastic zip bag was half filled with soil allowing a suitably sized headspace. The bag was sealed and stored for at least 20 minutes before being tested for total volatile organic compounds (TVOCs) using a PhoCheck Tiger photoionisation detector (PID). Results of the PID readings are presented on the

[8] British Standard (2017). "Investigation of Potentially Contaminated Sites – Code of Practice." BS10175:2017.
[9] British Standards (2002) Geotechnical investigation and testing – Identification and Classification of Soil. Part 1: Identification and description. BS EN ISO 14688-1:2002.
[10] British Standard (2015). "Code of Practice for Ground Investigations". BS5930:2015.
[11] EA (2000). "Technical Aspects of Site Investigation. Volumes 1 & 2 Text Supplements Research and Development Technical Report." P5-065/Tr.

profile logs (Appendix G). The on-site monitoring was carried out in line CIRIA C665[12] to aid in screening samples for volatile analysis.

Soil samples of approximately 500g were recovered in amber jars, amber vials for volatile analysis and plastic tubs. All the samples were labelled and stored in cool boxes prior to being collected by courier at the end of the day for delivery to the Chemtest laboratory in Newmarket for chemical testing. If collection was not possible the same day then samples were stored in the sample storage fridge at the LK Group offices below 4˚C. Samples were tracked using appropriate Chain of Custody forms provided by Chemtest.

Many of the contamination tests are UKAS or MCERTS accredited and further details are given in the Certificate of Analysis presented in Appendix H. Table 8-2 shows the soil testing undertaken.

Suites and Contaminants	No. Samples	Location & Depth	Justification
Metals / metalloids, pH, water soluble sulphate, speciated PAHs, SOM and asbestos screen.	5	WS102 0.0-0.4m WS103 0.0-0.2m WS103 0.2-1.0m HD101 0.15-1.0m HD102 0.0-0.3m HD102 0.3-1.2m	A basic suite with a broad selection of contaminants tested on samples across the site where no significant evidence of contamination was identified (with the exception of occasional ash) and no TVOCs identified from the PID tests.

Table 8-2. Summary of soil sample testing undertaken.
Notes:
If asbestos present during screen identification and quantification will be undertaken.
Metal/metalloids=arsenic, cadmium, chromium, (total and hexavalent), copper, lead, mercury, nickel, selenium, vanadium, zinc; PAH=polycyclic aromatic hydrocarbons, SOM=Soil Organic Matter.

7.2.2 *Water Sampling*

Groundwater sampling / leaching testing was not carried out as part of this investigation.

A low risk was identified in the preliminary contamination conceptual model for controlled waters (pollutant linkage 4) and further action was only recommended if significant soil contamination was identified on site. Based on the ground conditions encountered, LKC did not consider testing to be required. This is discussed further in Section 11.4.

7.3 Gas Monitoring

Gas monitoring was not carried out as part of this investigation.

Although a high risk was identified in the preliminary contamination conceptual model for gas (pollutant linkage 3), precautionary gas protection measures are proposed to be installed in the building. This is discussed further in Sections 11.3.

7.4 Geotechnical Testing

7.4.1 *In-situ Onsite Geotechnical Testing*

In-situ geotechnical tests were performed in the boreholes to further characterise the sub-soil conditions. The following tests were undertaken:

[12] CIRIA (2007). “Assessing Risks Posed by Hazardous Ground Gases to Buildings.” CIRIA C665.

- Standard Penetration Tests (SPTs) were performed at approximately 1m intervals, generally within the natural strata.
- Continuous equivalent SPTs were performed in the dynamic probes (strata not determined).
- Pocket penetrometer tests were undertaken within the cohesive deposits.

The SPT and pocket penetrometer readings are provided within the profile logs (Appendix B).

7.4.2 Laboratory Geotechnical Testing

Soil samples taken during the investigation were collected in tubs and bulk bags and sent to Murray Rix Laboratories and Chemtest for geotechnical testing.

Many of the tests are UKAS accredited and further details are given in the laboratory report presented in Appendix I. Table 8-3 shows the geotechnical testing undertaken.

Suites and Contaminants	No. Samples	Location	Justification
pH and water-soluble sulphate	3	WS101 0.1-0.3m WS102 0.4-1.0m HD102 0.3-1.20m	Additional samples of natural ground taken across the site to assess the pH and sulphate for geotechnical purposes. pH and water-soluble sulphate are also included in the soil contamination testing.
Atterberg Limits (plasticity testing)	2	WS101 5.0-5.45m WS102 4.0-4.45m	A selection of clay samples across the site were tested for Atterberg Limits to assess their shrinkability potential associated with current trees.
Particle Size Distribution (PSD) Sedimentation	1	WS101 0.3-1.4m	PSD sedimentation test undertaken to confirm grading of silt.

Table 8-3. Summary of geotechnical testing undertaken.

8 Ground Conditions

8.1 Geology – Generalised Sequence

The ground conditions beneath the site comprised made ground underlain by natural clay, sand and silt. A summary section of the logs is provided in Plate 9-1, with additional comments below.

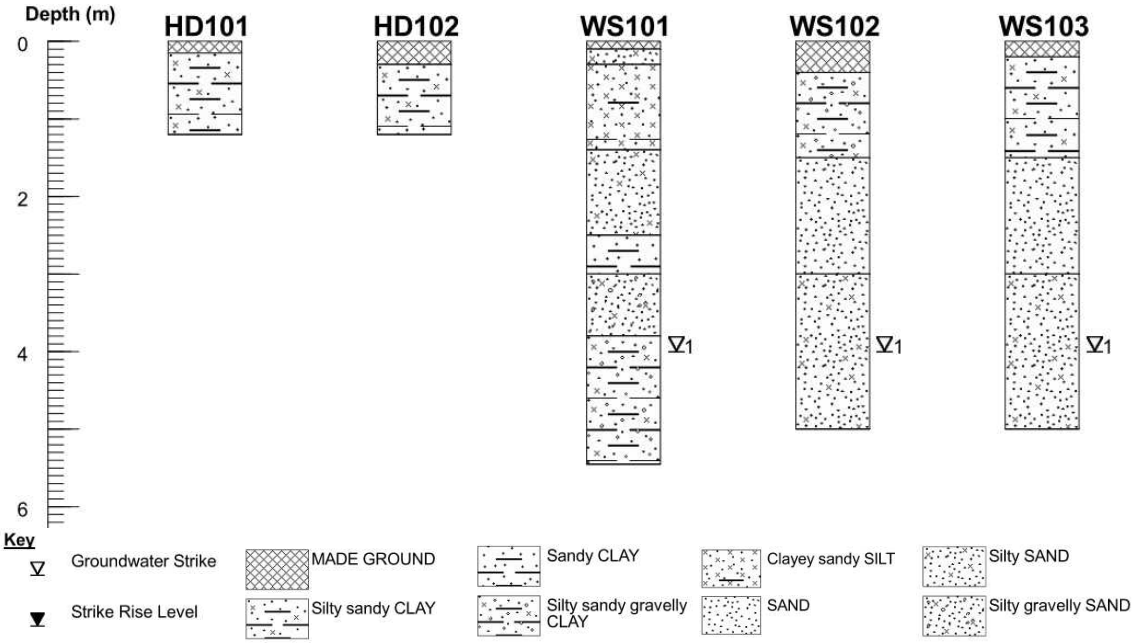


Plate 9-1: Summary of ground conditions.

Additional information on ground conditions:

- Made ground was recorded to depths of 0.15-0.40mbgl and generally consisted of sandy gravelly silt with frequent rootlets, rare glass, ash, concrete, brick and plastic fragments.
- No visual / olfactory evidence of hydrocarbons or volatile contaminants were observed at any of the exploratory locations.
- Superficial deposits consisted of interbedded clay and sand of variable consistency, with clayey SILT encountered between 0.3-1.4mbgl at WS101.

8.2 Groundwater

8.2.1 Groundwater Levels

Groundwater strikes were recorded during the investigation in trial pits and boreholes. An oil-water interface probe (approximately 1cm detection limit) was used to detect the presence of free phase hydrocarbons within each borehole.

Results are summarised in Table 9-2.

BH/TP	Water Strike Depths (mbgl)	Evidence of Contam?
WS101	4.0	N
WS102	4.0	N
WS103	4.0	N
HD101	Dry	N
HD102	Dry	N

Table 9-2: Summary of water strike depths within boreholes and handpits.

8.3 In-Situ Geotechnical Testing

8.3.1 *Standard Penetration Tests*

In-situ standard penetration tests (SPTs) were undertaken within the window sample boreholes, predominantly in the natural ground. The results are summarised in Table 9-3 and provided within the profile logs in Appendix B.

Approximate Depth (mbgl)	SPT 'N' Values		
	WS101	WS102	WS103
1-2	6 (Si/S)	11 (C/S)	10 (C/S)
2-3	13 (S)	13 (S)	10 (S)
3-4	6 (S)	19 (S)	13 (S)
4-5	10 (C)	18 (S)	13 (S)
5-6	13 (C)	-	-
GW Level	4.0	4.0	4.0

Table 9-3: Summary of SPT (N) values.
Notes:
S=Sand; C=Clay; Si=Silt.
Groundwater level based on strikes during investigation.

8.3.2 *Dynamic Probing*

Dynamic probing (DP) was carried out from the termination depth of the window sample boreholes and recorded equivalent 'N' values (3 DP blows = 1 'N' values). Results are provided in Appendix B and summarised in Table 9-4.

Approximate Depth (mbgl)	Equivalent 'N' Values	
	WS102	WS103
5.2	11	3
5.5	5	6
5.8	6	10
6.1	10	16
6.4	24	19
6.7	24	24
7.0	20	25
7.3	19	33
7.6	20	24
7.9	22	25
8.2	22	24
8.5	22	25
8.8	23	19
9.1	23	21
9.4	26	23
9.7	24	25
9.9	21	23

Table 9-4: Summary of equivalent 'N' values from dynamic probing.

8.3.3 *Pocket Penetrometer Tests*

Pocket penetrometer readings, recording undrained shear strength (s_u), were taken within the clay strata at the window sample borehole locations. The results are summarised in Table 9-5 and provided within the profile logs in Appendix B.

Approximate Depth (mbgl)	Average Undrained Shear Strength (kN/m²)		
	WS101	WS102	WS103
0-1	-	61.31	-
1-2	-	-	24.53
2-3	103	-	-
3-4	-	-	-
4-5	49.05	-	-
GW Level	4.0	4.0	4.0

Table 9-5: Summary of average hand shear vane readings.
Notes:
Groundwater level based on strikes during investigation.
Shear vane readings can be influenced by coarse material including coarse silt.

8.4 Geotechnical Laboratory Testing

8.4.1 *Particle Size Distribution*

One particle size distribution (PSDs) sedimentation test was undertaken on the silt strata to confirm the material type. Full results are presented in Appendix I and summarised below in Table 9-6.

Location	Depth (mbgl)	Material	Percent passing through sieve			
			63mm	2mm	0.063mm	0.0025mm
WS101	0.3-1.4m	Stiff brown silty very sandy CLAY with rare gravel	100	97	48	11

Table 9-6: Summary of particle size distribution results.
Notes:
% passing: 63mm = cobble / gravel boundary; 2mm = gravel / sand boundary; 0.063mm = sand / silt boundary; fine silt / clay boundary = 0.002mm

8.4.2 *Atterberg Limits*

Representative samples of natural clay were subjected to Atterberg Limits (plasticity) and Moisture Content testing. Results are presented in Appendix I and summarised in Table 9-7.

Table 9-7 also includes the modified plasticity index as detailed in Chapter 4.2-D5 of the NHBC standards (modified plasticity index = plasticity index x % less than 425µm sieve / 100%).

Location	Depth (mbgl)	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Class	Passing 425 micron (%)	Modified Plasticity Index (%)
WS101	5.0-5.45	14	37	15	22	CI	97	21.34
WS102	4.0-4.45	17	35	16	19	CL	94	17.86

Table 9-7: Summary of plasticity index testing.

The modified plasticity index is between 18% and 21%. This characterises the clay as having a low to medium volume change potential.

8.4.3 *Sulphate and pH*

Water soluble sulphate and pH tests were carried out on soil samples. Full results are presented in Appendix H and summarised in Table 9-8.

Strata	pH	Sulphate (g/l)
Made Ground	6.8-7.5	<0.01-0.029
Natural	5.8-7.8	<0.01-0.12

Table 9-8: Summary of pH and sulphate results.

9 Geotechnical Assessment

9.1 Proposed Development

It is understood that the proposed development will comprise 4no. three storey semi-detached residential units, a proposed garage and associated landscaping and infrastructure. Details of the proposed loadings are not known and therefore a line loading of 75kN/m has been assumed for preliminary assessment purposes only.

Finished ground levels are set to be substantially reduced from the existing ground levels to accommodate the proposed buildings, with circa 4m of reduction in areas.

The depths of any underground engineering works (sewers etc.) are unknown and therefore have not been taken into account in the following assessment. It is considered that any such works will be designed so as not to have an effect on, or compromise, proposed or existing foundations or ground stability.

Given the nature of the proposed development it is considered that the structure meets the criteria of Geotechnical Category 1 of Euro Code 7.

9.2 Summary of Ground Conditions

Ground conditions identified at the site are detailed in Section 9.1, and typically comprises Made Ground up to 0.40mbgl over natural CLAY to 1.50m overlying medium dense SAND to the completion depths of the boreholes at the locations of WS102 and WS103 (proposed houses). At the location of WS101 (proposed garage) the shallow CLAY extends to 1.40m and is underlain by interbedded medium dense SAND and soft to firm CLAY to the completion depth of the borehole.

Window samples WS102 & WS103 were extended by dynamic probing to give continuous SPT ‘N’ values to a depth of 10.0mbgl

9.3 Site Preparation

The site should be cleared and any vegetation below areas of proposed development stripped in accordance with Series 200 of the Specification for Highway Works. This should include:

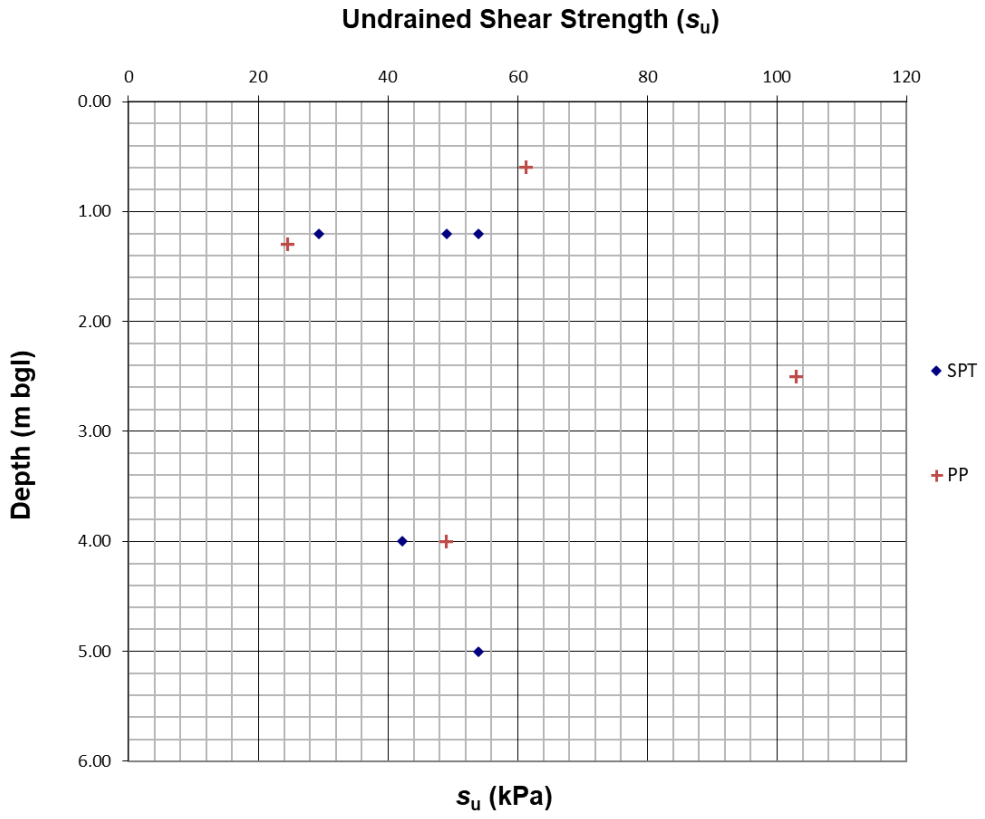
- Roots present below the footprint of proposed structures and infrastructure should be grubbed out and the resulting void infilled with suitable compacted engineered fill;
- Redundant services should be sealed off and grubbed out and replaced with suitable compacted engineered fill; and,
- Slope forming the southern boundary with Rochdale Road should be suitably retained.

The near surface soils may potentially be disturbed by weathering and site traffic. Precautions should be taken to avoid this, as excessive disturbance may result in more onerous floor slab design, road cap thickness and increased amount of site disposal etc.

9.4 Foundation Conditions and Bearing Capacity

9.4.1 General

Strength of the shallow natural cohesive material has been assessed using in-situ testing by SPT and Pocket Penetrometer (PP). The results of the testing have been plotted against depth as is shown in Graph 5-1 below:

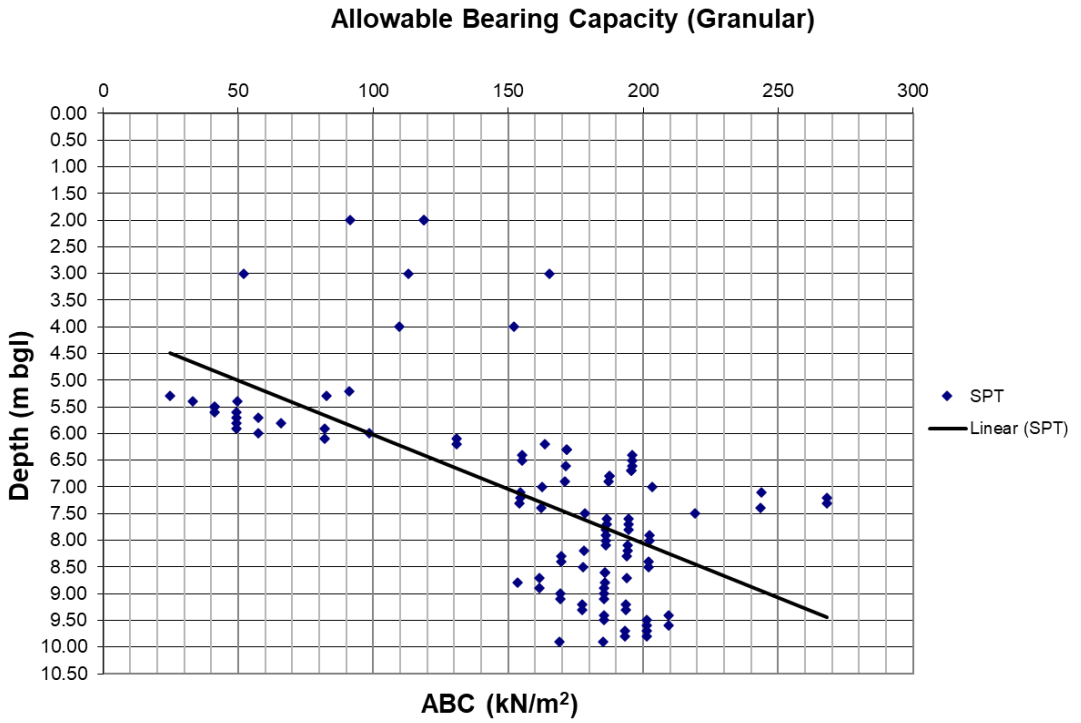


Graph 5-1: Summary of s_u vs depth from in-situ SPT and PP testing.

From Graph 5-1 it can be seen that the s_u of the cohesive deposits at shallow depth (above 1.50mbgl) range between 24 and 61kPa, averaging 43.7kPa.

An average s_u of 43.7kPa is assigned to the cohesive material to a depth of *c*. 1.5mbgl for the natural superficial deposits, returning an allowable bearing capacity (ABC) of 89kN/m^2 for strip/trench fill foundations.

Density of natural granular material has been assessed using in-situ testing by SPT and Super Heavy Dynamic Probing giving continuous SPT values. The results of the testing have been plotted against depth as is shown in Graph 5-2 overleaf:



Graph 5-2: Summary of ABC vs depth from in-situ SPT testing.

The ABC of the granular deposits range between 52 and 165kN/m^2 above 4.0mbgl, averaging at 114kN/m^2. This gives an average angle of internal friction (ϕ) of 31°.

Groundwater strikes were encountered at depths of c. 4.00mbgl within the window sample holes and the presence of groundwater within granular material has the potential to reduce bearing capacities by as much as 50%, therefore consideration must be given to the bulb of pressure exerted by the foundations to ensure that it does not exceed the ABC below the water table.

9.5 Proposed Garage

At the location of the proposed garage one window sample hole (WS101) was advanced to a depth of 5.45mbgl (approximately 100m AOD). The window sample encountered various strata comprising horizons of soft SILT, loose to medium dense SAND and soft to firm CLAY.

9.5.1 Strip Foundations

It is anticipated that the proposed garage structure will exert a low load and shallow strip foundations bearing upon the soft sandy clayey SILT at encountered between 0.30 and 1.40mbgl will return an ABC of 60kN/m^2. The loose to medium dense SAND which underlies the SILT at depths of between 1.40 and 2.00m will also support an ABC of 60kN/m^2.

Strip foundations would be subject to bearing upon a uniform stratum to limit the potential for differential settlements.

9.5.2 Raft Foundations

From WS101, the shallow strata is of varying composition with varying horizons of SAND, SILT and CLAY which offer varying compressibility. Consideration should be given to the use of a stiffened pad and beam raft which will bridge over areas of more compressible strata and minimise differential settlements.

Raft foundation design should be undertaken by a suitably qualified and experienced Structural Engineer.

9.6 Proposed Residential Houses

At the location of the proposed three storey semi-detached houses, two window sample holes (WS102 & WS103) were advanced to a depth of 5.00mbgl (approximately 98m AOD). The window samples recorded soft CLAY to 1.50mbgl (approximately 101.50m AOD) over medium dense SAND to the completion depths of the window sample boreholes. The window samples were continued by Dynamic Probes to a depth of 10mbgl (approximately 93m AOD) giving continuous SPT values to indicate the density of the material. Dynamic probing does not allow recovery of samples to classify material type, either cohesive or granular, so care must be taken when interpreting the results of the dynamic probes. As the window sample holes terminated in granular material and the recorded superficial geology is glaciofluvial deposits (SAND & GRAVEL), the dynamic probes have been interpretated as being within granular deposits.

9.6.1 Strip Foundations

It is understood that ground levels at the proposed houses will be reduced by c.4.00m, removing the soft CLAY and upper medium dense SANDs. Foundations will be supported in the medium dense SANDs at depth but consideration must be given to the presence of groundwater, encountered at a depth of 4.00mbgl (approximately 99m AOD) within the window sample holes which has the potential to reduce bearing capacity of granular material by as much as 50%.

9.6.2 Piled Foundations

As an alternative consideration maybe given to the use of piled foundations. For preliminary purposes the following initial pile carrying capacities have been calculated. When undertaking these preliminary calculations the following parameters have been used:

- Internal Friction Angle of 32° based on SPT data;
- Earth pressure coefficient, Ks of 1;
- Skin friction angle of 24°;
- Factors of safety of 1.5 on side resistance and 3 on base resistance; and,
- Global Factor of safety of 2.5.

Depth (m AOD)	Pile Carrying Capacity (kN)		
	300mm dia	450mm dia	600mm dia
94.00	54	122	211
91.00	94	194	345
89.00	128	250	430

Table 10-1: Preliminary Pile Carrying Capacity.

Pile design should be undertaken by a specialist contractor to allow them to reduce the factor of safety based on their extensive pile testing data.

9.7 Recommendation

Due to the presence of groundwater reducing the bearing capacity of the SAND by up to 50% it is considered that a piling solution is the most reliable and cost effective option for the proposed houses.

In the location of the proposed garage, it is recommended that a reinforced stiffened raft is used to minimise the potential for differential settlements due to the variable strata encountered within WS101.

9.8 Ground Floor Slabs

For the proposed residential properties, suspended block and beam floors are considered suitable due to the short spans involved along with the ease of installation.

At the location of the proposed garage, if a raft foundation solution is selected than this can be utilised as a ground bearing floor slab.

Where suspended floor slabs are employed ventilation of the under floor void will be required to address condensation issues. This would also assist in the mitigation of potential gas ingress issues.

9.9 Retaining Walls

The design of temporary and permanent retaining structures is beyond the scope of this report. At present it is unknown what form the retaining wall will comprise (gravity, sheet pile, gabion etc.). Sheet piled retaining structures will have a smaller footprint allowing more of the site to be developed however these structures have the potential to interrupt groundwater flow and this may need to be considered to prevent potential groundwater flooding up gradient of the site

The calculation of permanent lateral pressures against the sides should relate to long term (effective) stress analysis using critical state soil parameters. However, the following primary guidelines are accordingly considered appropriate:

<u>Cohesive Material</u>

Bulk Unit Weight, γ_b -	18kN/m^3
Effective cohesion, c' -	Zero
Effective angle of internal friction, f' -	20°

<u>Granular Material</u>

Bulk Unit Weight, γ_b -	17kN/m^3
Effective cohesion, c' -	Zero
Effective angle of internal friction, f' -	32°

For Surcharge loading it is necessary that the analysis take account of all lateral loadings arising from potential vehicle loading and any adjacent existing foundations.

9.10 Drainage

Soil infiltration tests have not been undertaken as part of this assessment however, the potential for shallow groundwater after site re-levelling may negate the application of soakaway drainage at the location of the proposed houses. In the location of the proposed garage ground conditions may be suitable for soakaways but are unlikely to be 5m from an existing or proposed structure, therefore it is not recommended that soakaways are used for disposal of surface water runoff.

9.11 Concrete Durability

Based upon the results of the chemical analyses summarised in Table 9-8 it is considered that subsurface concrete can be designed in accordance with Design Sulphate Class DS-1, Aggressive Chemical Environment for Concrete Classification (ACEC) AC-1 in accordance with the recommendations provided in BRE Special Digest 1 (2005).

9.12 Excavations

Site observations indicated that excavations should be feasible in the near surface with normal plant. At the location of the proposed housing, consideration must be given to the reduced levels which may encounter the presence of groundwater and may result in running sands and instability of excavations.

Due to the granular nature of the shallow deposits it is considered that all excavations are supported or battered back in accordance with guidance contained in CIRIA R97[13].

9.13 Construction Activity and Inspection

The following activities and inspections should be incorporated in to the site works:

- Due to the variability of the soils at the site it is recommended that sufficient allowance is made for the inspection of formation and sub formations to foundations and pavement construction;
- Excavations where access is required should be subject to a risk assessment from a competent person and where appropriate mitigation measures such as benching back the sides or use of support systems in accordance with CIRIA R97 utilised;
- It is considered that de-watering may be required, especially following periods of heavy rainfall. Removal of surface water and water within trenches should be possible with conventional sump pumping. Discharge of any water should be agreed with the relevant regulatory body and be undertaken under a trade effluent discharge, where required. Measures to remove silt and suspended solids may be required and consideration should be given to provision of space for settling tanks or an attenuation pond;
- Where access to confined spaces is required appropriate mitigation measures should be addressed within the Construction Stage Health and Safety Plan. Particular account should be taken of the gas results;
- The presence of potential contamination and mitigation measures should be addressed as part of the Construction Stage Health and Safety Plan and should include measures to design out the risks, reduce their impact and finally the use of Personnel Protective Equipment (PPE).

[13] CIRIA Report 97 – Trenching Practice – Second Edition (2001 revision)

10 Generic Risk Assessment

10.1 Introduction

Current good practice requires that the findings from a site investigation should be evaluated on a site-specific basis, using a risk-based approach. Risk assessment involves identification and evaluation of the hazards presented by the concentrations of contaminants measured followed by an evaluation of the risks which are associated with these hazards (LCRM[14]). Information gathered from the risk assessment has been collated in the revised contamination conceptual model in Section 11.6.

10.2 Soil Risk Assessment

With regards to the soil risk assessment LKC will use the following hierarchy:

- Category 4 Screening Levels (C4SLs).
- LQM Suitable 4 Use Levels (S4ULs).
- ATRISK Soil Screening Values (SSVs) and CL:AIRE Generic Assessment Criteria (GACs).

C4SLs were published in 2013[15,16]. The change to the contaminated land guidance has changed the evaluation of risk from 'minimal' (referred to as Health Criteria values (HCVs))[17] used to generate Soil Guideline Values (SGVs) to 'low' (referred to as Lowest Level of Toxicological Concern (LLTCs)). The policy companion document and supporting letter by Defra, dated 3rd September 2014, states that C4SLs *'could be used under the planning regime, as well as within Part 2A'.* Based on these comments LKC considers the justifications and assumptions used to generate 'low' risk are suitable for the planning regime.

Where no C4SLs have been generated LKC will use the LQM S4ULs[18]. Similar assumptions and land uses to C4SLs have been used. However, toxicological information has been based on 'minimal risk' as per previous guidelines and assumptions[19,20,21,22].

If contaminants are not present as C4SLs and S4ULs then LKC will use ATRISK SSVs or CL:AIRE GACs[23]. These follow the 'minimal' risk principle and more stringent exposure parameters and will be conservative.

LKC consider the main risk drivers for PAHs are benzo(a)pyrene (B(a)P) and naphthalene. This is due to B(a)P possibly being a carcinogen and most toxic of the

[14] Land Contamination Risk Management (LCRM) https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm
[15] Defra (2014). "SP1010: Development of Category 4 Screening Levels and Assessment of Land Affected by Contamination – Policy Companion Document."
[16] CL:AIRE (2013). "SP1010: Development of Category 4 Screening Levels and Assessment of Land Affected by Contamination – Final project Report."
[17] EA (2008). "Human Health Toxicological Assessment of Contaminants in Soils." Science Report – SC050021/SR2.
[18] LQM (2014). "The LQM/CIEH S4ULs for Human Health Risk Assessment."
[19] EA (2008). "Updated Technical Background to the CLEA Model." Science Report – SC050021/SR3.
[20] EA (2008). "Human Health Toxicological Assessment of Contaminants in Soils." Science Report – SC050021/SR2.
[21] EA (2008). "A Review of Body Weight and Height Data used within the Contaminated Land Exposure Assessment Model (CLEA)." Project SC050021/Technical Review 1.
[22] EA (2009). "Compilation of Data for Priority Organic Pollutants for Derivation of Soil Guideline Values." Science report SC050021/SR7.
[23] CL:AIRE (2009). "The Soil Generic Assessment Criteria for Human Health Risk Assessment."

PAHs[24,25] and naphthalene the most volatile and soluble[26]. The new C4SLs indicate B(a)P as a surrogate marker for carcinogenic PAHs, if it falls within appropriate limits, since the risk from other non-carcinogenic PAHs are considered negligible[27]. For B(a)P to be used as a surrogate marker it should follow the profile described by the HPA (2008)[28] and CL:AIRE (2013). Naphthalene will be treated separately using the LQM S4ULs.

The proposed development is for residential houses with gardens, therefore the assessment criteria for residential with plant uptake has been used.

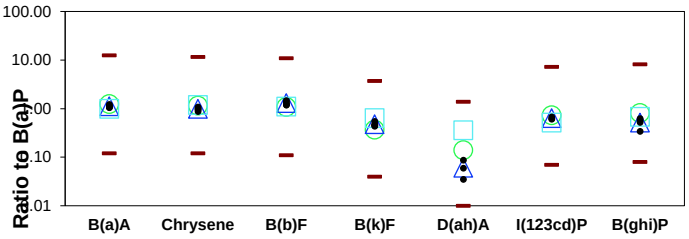
All criteria have been generated using the CLEA V1.06 model[29] based either on 1%, 2.5% and 6% Soil Organic matter (SOM). Results will be compared to the nearest appropriate SOM.

A summary of the generic assessment criteria is provided in Appendix J. ATRISK SSVs and CL:AIRE GACs were not required for this dataset and have not been included.

B(a)P as Surrogate Marker

Based on the above assumption for PAHs, LKC undertook an assessment of the data for the site with regards to using B(a)P as a surrogate marker for carcinogenic PAHs as per HPA and CL:AIRE guidelines. The primary toxicological study related to Culp *et.al*[30], which was based on coal tar mixtures (>80,000mg/kg of total PAHs) fed in food to mice over a two-year carcinogenicity study.

Graph 11-1 summarises the study site data with respect to how the ratios of carcinogenic PAHs relate to B(a)P, within the confidence limits provided in the HPA document.



Graph 11-1: The ratio of PAH to B(a)P in soil for all available data at the site based on 5 samples (where values were >LOD to allow the calculation of a ratio).

Notes:
B(a)P = Benzo(a)pyrene; D(ah)A = Dibenzo(ah)anthracene; B(a)A = Benzo(a)anthracene; B(b)F = Benzo(b)fluoranthene; B(k)F = benzo(k)fluoranthene; I(123cd)P = Indeno(123cd)pyrene; B(ghi)P = Benzo(ghi)perylene
● = Ratio to B(a)P for all data ○ = Mean ratio to B(a)P for Culp data △ = Mean ratio to B(a)P from all data at the site
□ = Mean ratio to B(a)P for UK data presented by HPA ▬ = Upper and Lower limits (order of magnitude from Culp data)

[24] EA (2002). "Contaminants in Soils: Collation of Toxicological Data and Intake Values for Humans. Benzo[a]pyrene." R&D Publication TOX2.
[25] USEPA (1984). "Health Effects Assessment of Polycyclic Aromatic Hydrocarbons (PAHs). EPA 540/1-86-013."
[26] EA (2003). "Review of the Fate and Transport of Selected Contaminants in the Soil Environment." Draft technical report P5- 079/TR1.
[27] CL:AIRE (2013). "SP1010: Development of Category 4 Screening Levels and Assessment of Land Affected by Contamination – Final project Report."
[28] HPA (2010). "HPA Contaminated Land Information Sheet: Risk Assessment Approaches for Polycyclic Aromatic Hydrocarbons (PAHs)." Version 3.
[29] EA (2008). "CLEA Software (Version 1.05) Handbook." Science Report – SC050021/SR4.
[30] Culp, S; Gaylor, D; Sheldon, W; Goldstein, L and Beland, F (1998). " A Comparison of Tumours Induced by Coal Tar and Benzo-a-pyrene in a 2-Year Bioassay." Carcinogenesis. **Vol 19**, no. 1, pp. 117-124.

All the data points that could be used to calculate ratios fall inside the upper or lower limits.

Based on this distribution of data LKC considers B(a)P can be used as a surrogate marker for carcinogenic PAHs and the C4SL criteria is suitable for this dataset.

10.2.1 Soil Results Comparison against Assessment Criteria

All analysis sheets are presented in Appendix H. Elevated and pertinent results are presented in Table 11-1.

Contaminant	Units	No. of samples	Elevated Results	Sample Location	Criteria (2.5%/6%)	Source of Criteria
PAHs						
Benzo(a)pyrene	mg/kg	5	23	WS103 (0.0-0.2m)	5	C4SL
			5.3	HD102 (0.0-0.3m)		
GENERAL						
pH	pH	6	Range 5.8 to 7.5			
SOM	%	6	Range 1.2 to 7.1			
Asbestos	N/A	6	Not detected.			

Table 11-1: Summary of elevated and pertinent analytical results.
Notes:
Only results that exceeded assessment criteria have been shown and results from **all depths** are noted.
Results have been compared to the nearest appropriate SOM.

No asbestos was identified in any soil samples analysed.

Elevated results have been identified for PAHs (BaP) (WS103 and HD102).

No elevated levels of contaminants were encountered in the natural clay deposits (based on only two samples). As such LKC considers that the clay was not impacted by the made ground above, with regards to human health.

10.2.2 *Direct Contact Risk – Pollutant Linkage 1*

Elevated PAHs (BaP) have been identified on site, given the number and location of elevated samples, the contamination is considered to be site wide.

The source of the contamination is expected to the ash noted in the made ground at HD102; there is likely to be fine ash within the made ground at WS103.

At the concentrations identified, the contaminants are considered to pose a potential risk to future site users (residents) in gardens and soft landscaped areas, where made ground may be exposed / in contact with vegetables. The principal pathways are the ingestion pathways (soil, dust and vegetables) and dermal contact.

The probability of PAH and metal contamination affecting site users is likely. With a medium consequence, the risk is considered to be moderate and remediation is recommended.

No asbestos was identified in any of the samples, therefore the probability of asbestos affected site users is considered to be unlikely. With a moderate consequence, the risk is moderate / low. At this stage, a low risk is assumed (as no asbestos identified) and remediation is not required. However, as a precaution, construction workers should be and vigilant for any suspected ACM during groundworks (discussed further in Section 14).

No olfactory or visual evidence of gross hydrocarbon contamination was identified within the soils, therefore the probability of these contaminants posing a risk to site users in considered unlikely. With a medium consequence, the risk is considered to be low and no remediation is recommended.

10.2.3 *Risk from Inhalation of Vapours – Pollutant Linkage 2*

No visual / olfactory evidence of volatile contaminants was identified during the investigation. The PID did not detect any TVOCs. Confirmatory soil analysis did not detect any elevated naphthalene above GACs.

LKC therefore consider the probability of volatile contaminants affecting site users as unlikely. The consequence is expected to be medium, giving a low risk and no remediation is required with respect to pollutant linkage 2.

10.3 Gas Risk Assessment

The PRA identified a high risk and recommended gas monitoring or gas protection measures due to the offsite landfill and infilled features.

As gas monitoring has not been undertaken as part of this assessment, given the presence of sand at depth below the proposed residential houses, there is a pathway from the former landfill 76m SE and other offsite infilled features to the proposed development site, and precautionary gas protection measures should be installed within the new residential houses.

No information on the first of last deposited waste within the former landfill at c.76m SE. Using the historical mapping, the closest mapped spoil heap at 78m south was last present on the 2006 mapping the most recent waste is c. 15 years old; after this the spoil heap is no longer shown and we assume that no further waste has been deposited since 2006. No further information is available within the Envirocheck Report on the type of waste deposited. Therefore, LKC recommend that precautionary gas protection measures to Characteristic Situation (CS) 2[3132] are installed within the proposed houses. The Local Planning Authority may require gas protection measures are upgraded to CS3. This should be confirmed with the Local Planning Authority.

10.4 Controlled Water Assessment

The PRA identified a low risk with respect to controlled waters as no significant source of mobile contamination was anticipated. Furthermore, although Secondary Undifferentiated, Secondary A and Principal Aquifers are present below the site, no abstractions have been identified within influencing distance.

No evidence of significant mobile contamination was identified on the site. Although elevated PAHs were identified within the soils, the source is anticipated to be ash noted within the made ground. Contamination associated with ash is not anticipated to be mobile due to the residual crystalline nature of the matrix.

The site investigation did not identify any significant sources of likely mobile contamination within the soils. This confirms an unlikely probability of onsite contamination affecting controlled waters. With a medium consequence the risk is anticipated to be low and no remediation is required.

[31] CIRIA (2007). "Assessing Risks Posed by Hazardous Ground Gases to Buildings." CIRIA C665.
[32] BSI (2015). "Code of Practice for the Characterisation and Remediation from Ground Gas in Affected Developments." BS8485:2015.

10.5 Additional Risk Assessments

10.5.1 Concrete (Pollutant Linkage 5)

As stated in Section 10, sulphate resistant concrete will not be required at the site. The site was classified as DS-1 AC-1.

Based on the above, the probability of sulphate concentrations affecting buildings is unlikely. Given the consequence is considered to be mild, the risk (pollutant linkage 5) is anticipated to be very low and no remediation is required. This should be confirmed with the structural engineer.

10.5.2 Potable Water Supply (Pollutant Linkage 6)

Soil results were compared to United Utilities (UU) guidelines for the selection of potable water pipes in land potentially affected by contamination[33]. Only contaminants of concern, based on the preliminary conceptual model and ground conditions encountered, were analysed. The following contaminants were not considered to be a risk and therefore not included in the analysis suites: speciated petroleum hydrocarbons, chlorinated compounds, BTEX compounds, phenols, cresols, ethers, nitrobenzene, ketones, aldehydes and amines.

The following elevated contaminants were identified:

- Elevated TVOCs (inc. naphthalene) in made ground and clay across the site.

It should be noted typical pipework depths are 0.75mbgl to 1.35mbgl. The pipework will likely be laid into the underlying natural sand strata after levels have been reduced by c.4m.

Once details of the pipeline location and depths are known a UU Risk Assessment should be undertaken.

At this stage, the probability of organic contaminants affecting potable water pipes is likely. Given the consequence is considered to be medium, the risk (pollutant linkage 6) is anticipated to be moderate risk and remediation (i.e. barrier pipe) may required (subject to further risk assessment).

10.5.3 Phytotoxicity (Pollutant Linkage 7)

Soil results were compared to phytotoxic guideline values as outlined in BS3882[34].

No elevated contaminants were identified therefore the probability of phytotoxic contaminants affecting vegetation is considered to be unlikely. With a minor consequence, the risk (pollutant linkage 7) is anticipated to be very low.

10.6 Revised Contamination Conceptual Model

The preliminary contamination conceptual model (Table 5-4) has been revised following the risk assessments undertaken in Sections 11.1-11.5. The revised contamination conceptual model follows the same methodology and guidance used in the preliminary contamination conceptual model. The risk matrix is provided in Appendix E.

[33] UU(2011). "United Utilities Water Supplementary Guidance for the Selection of Water Pipes in Land Potentially Affected by Contamination."
[34] BS (2015). "Specifications for Topsoil and Requirements for Use." BS3882:2015.

The revised contamination conceptual model is presented in Table 11-2.

Where a very low risk is identified no specific remediation is required.

Where a low risk is identified, some form of remediation may be required depending on the pollutant linkage, the type and concentration of contaminants present and the proposed development.

Where there is a moderate/low risk is identified, an assessment will be undertaken to establish what category the pollutant linkage will fall into.

Where LKC identifies a moderate or higher risk, remediation or further investigation work is recommended.

Further details of the remedial proposals and a remedial option appraisal are given in Section 14.

Pollutant Linkage	Pathway	Receptor	Contaminant	Probability	Consequence	Risk	Assessment
PL1	– Dermal contact. – Inhalation of soil, fibres and dust. – Ingestion of soils, dust, vegetables, soil attached to vegetables. – Windblown dust.	– Current residents. – Future residents. – Site users. – Offsite receptors.	PAHs: – BaP	Likely	Medium	**Moderate**	– Likely probability as elevated PAHs (BaP) identified within made ground. – **Recommendation***1 *2**:** Remediation required. Likely to include removal of made ground offsite and imported topsoil.
			Hydrocarbons Heavy metals Asbestos	Unlikely	Medium	**Low**	– No elevated heavy metals identified. No asbestos fibres detected. No visual or olfactory evidence of hydrocarbons identified. – **Recommendation**: No remediation required.
PL2	– Inhalation of vapours. – Migration through permeable strata and preferential pathways.	– Current residents. – Future residents. – Site users.	Volatile Contaminants - Naphthalene.	Unlikely	Medium	**Low**	– No evidence of volatile contaminants, no elevated PID readings. – **Recommendation**: No remediation required.
PL3	– Inhalation of gas. – Migration through permeable strata and preferential pathways. – Explosion in confined spaces (methane only).	– Current residents. – Future residents. – Buildings. – Offsite land users.	- Carbon dioxide, methane	Likely	Severe	**High**	– Offsite landfill to south. No gas monitoring undertaken. – **Recommendation:** Precautionary gas protection measures required to CS2. CS3 may be required by Local Planning Authority.
			- Radon	Unlikely	Moderate	**Low**	– Site located in an area where 1-3% buildings above action level. – **Recommendation**: No radon protection measures required.
PL4	– Surface Run-off. – Migration through permeable strata and preferential pathways – Perched waters migration.	– Groundwater (Secondary A, Secondary Undifferentiated, Principal Aquifers). – Surface water (Unnamed stream).	Mobile contaminants: - Metals and PAHs.	Unlikely	Medium	**Low**	– Although slightly elevated PAHs identified in made ground soil samples, likely associated with crystalline ash, which is unlikely to leach into groundwater. – **Recommendation**: No remediation required.
PL5	– Sulphate attack on concrete.	– Building structure.	– Sulphate.	Unlikely	Mild	**Very Low**	– No elevated sulphate identified. – **Recommendation:** No remediation required.

Table 11-2: Revised Contamination Conceptual Model.

Notes

*1 Although no ACM identified, contractors should be vigilant during earthworks of any potential ACM. This is discussed further in Section 14.

*2 The conceptual model only takes into consideration the future use of the site and long-term exposure. Consideration should also be given to the short-term exposure of construction workers and nearby land users to ACM containing soils during groundworks. This is discussed further in Section 14.

*3 Although no phytotoxic contaminants identified in soils, the characteristics of the made ground should also be taken into account if it is to be used as a topsoil / growing medium for flora. The material should be assessed against the parameters outlined in Table 1 of BS3882 (not included within this assessment).

Pollutant Linkage	Pathway	Receptor	Contaminant	Probability	Consequence	Risk	Assessment
PL6	- Ingestion of tainted water supply.	- Future site users (via potable water).	Organic Contaminants: - Naphthalene.	Likely	Medium	**Moderate**	- Likely probability as elevated naphthalene encountered which could permeate water pipes and contaminate water supply. - **Recommendation:** UU risk assessment should be undertaken. Barrier piping may be required.
PL7	- Direct Contact (plant uptake).	- Flora.	Phytotoxic Contaminants: - Zinc, copper, nickel.	Unlikely	Minor	**Very Low**	- No elevated contaminants identified. - **Recommendation**: No remediation required.

Table 11-2: Revised Contamination Conceptual Model.

Notes

*[1] Although no ACM identified, contractors should be vigilant during earthworks of any potential ACM. This is discussed further in Section 14.

*[2] The conceptual model only takes into consideration the future use of the site and long-term exposure. Consideration should also be given to the short-term exposure of construction workers and nearby land users to ACM containing soils during groundworks. This is discussed further in Section 14.

*[3] Although no phytotoxic contaminants identified in soils, the characteristics of the made ground should also be taken into account if it is to be used as a topsoil / growing medium for flora. The material should be assessed against the parameters outlined in Table 1 of BS3882 (not included within this assessment).

11 Waste Disposal Assessment

The soil contamination results as presented in Appendix H have been used to help determine the waste classification of material for off-site disposal.

As an initial screen the soil results were inputted into Hazwaste Online™. This is a web-based facility that allows an assessment waste as either hazardous or non-hazardous waste based on relevant guidance and legislation[35, 36 ,37,38 ,39 ,40, 41, 42, 43].

Hazwaste Online™. has been designed to cover, amongst other waste types, the European Waste List of Waste (LoW) code number 17 "Construction and Demolition Waste (Including Excavated Soil from Contaminated Sites)".

Where less than limits of detection (LOD) were recorded, the value of the LOD was inputted.

Where applicable, appropriate metal species based on hazard statements/ molecular weight, site history, ground conditions and likely species present in soils were used (e.g. metal oxides relating to an ash based source).

The results show that all the samples tested are classified as NON-HAZARDOUS WASTE and LoW code “17-05-04 - soil and stones other than those mentioned in 17 05 03” is suitable. The Hazwaste Online™ output sheets are provided in Appendix K.

[35] EA (2018). “Guidance on the Classification and Assessment of Waste (1st Edition v1.1)”. Technical Guidance WM3.
[36] CLP Regulation - Regulation 1272/2008/EC of 16 December 2008.
[37] 1st ATP - Regulation 790/2009/EC of 10 August 2009
[38] Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
[39] WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
[40] Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014
[41] 13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
[42] POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
[43] 2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

12 Conclusions

12.1 Geotechnical

Geotechnical observations and conclusions are summarised in Table 13-1 below (more detailed model provided in Section 10).

Proposed Development	- Residential development comprising 4no. semidetached properties and a garage for the existing property. Earthworks will be required to create a developable platform with retaining walls providing support across the changes in elevation.
General Ground conditions / Geotechnical Testing	- Based on WS102-WS103, HD101-HD102 (location of proposed houses). - Maximum investigation depth 5.45mbgl. - Made Ground (silt) to 0.2-0.4mbgl over soft silty sandy CLAY, SPT N=10-11 at 1.2mbgl. - Medium dense SAND to >5.00mbgl. SPTs N=10-19 at 2-5mbgl. - Boreholes extended to depths of 10mbgl by dynamic probing. SPTs range from N3 increasing to N24 with depth. - Based on WS101 (location of proposed garage). - Maximum investigation depth 5.45mbgl. - Various strata comprising horizons of soft SILT, loose to medium dense SAND and soft to firm CLAY. SPTs N=6-13 at 1.2-5m.0mbgl. - No bedrock encountered. - Groundwater encountered at 4m bgl within all window sample boreholes.
Allowable Bearing Capacity	- 60kN/m^2 at 0.5-1.4mbgl in the sandy clayey SILT at the location of the proposed garage. - At the location of the proposed houses, ground levels will be reduced to create a developable platform. An ABC of 60kN/m^2 can be achieved in the granular material but consideration must be given to the presence of the groundwater encountered in the exploratory holes which has the potential for reducing bearing capacities in granular material by as much as 50%.
Anticipated Foundation Type	- Traditional shallow foundations are not expected to be suitable for the proposed residential homes given the ground conditions encountered. The presence of groundwater will reduce the ABC of the granular material. It is recommended that buildings are piled. - The appointed specialist piling contractor will be able to optimise pile design such as pile grouping per pile cap, pile diameter & pile spacing, installation methodology, pile cap settlement, and socket lengths to suit from the SI data. -At the location of the proposed garage a stiffened raft is recommended..
Retaining Walls	- The preferred retaining wall solution is unknown. If a gravity wall is opted for then in areas of soft ground, the depth of the retaining structures below ground may need to be increased. For sheet pile retaining walls an assessment on ground conditions has been obtained by in-situ dynamic probing. - The presence of shallow groundwater is a constraint to the installation of retaining structures and suitable drainage e.g. weepholes, granular fill behind structure should be provided. - For Surcharge loading it is necessary that the analysis take account of all lateral loadings arising from potential vehicle loading and any adjacent existing foundations. - Sheet piled retaining structures have the potential to interrupt groundwater flow and this may need to be considered to prevent potential groundwater flooding up gradient of the site.
Shallow Groundwater	- Shallow groundwater identified on the site which will present a constraint to the development.

	- Suitable drainage should be considered in the proposed development layout. - Lowering of the water table may be required to facilitate the construction work especially site level reductions. A discharge consent to release water to existing storm water or foul water drains may be required.
Concrete Requirements	- Based on BRE Digest 2005[44] – DS-1 AC-1 recommended.
Services	- Consideration must be given to the presence of services running through the site. Services may need to re-routed.
Temporary support of excavation	-Likely to be required given the predominantly granular nature of the deposits along with the potential for running sands where groundwater is encountered.

Table 13-2: Geotechnical Conclusions Table.

12.2 Contamination Assessment

A revised contamination conceptual model has been produced by LKC which is summarised in Table 13-2 below (more detailed model provided in Section 11). Where a moderate / low risk was identified, the assumed risk at this stage has been shown.

Pollutant Linkage		Risk	Recommendations
1	Contaminants posing a risk to site users (future residents) via dermal contact, ingestion and inhalation (of soil, dust, fibres and vegetables).	**Moderate (PAHs)**	- Elevated PAHs (BaP) identified in made ground. - **Recommendations:** Remediation required in garden and soft landscaped areas.
		Low (heavy metals, hydrocarbons, asbestos)	- No asbestos identified. No elevated heavy metals. No visual or olfactory evidence of hydrocarbons. - **Recommendations:** No remediation required.
2	Volatile contaminants posing a risk to site users (future residents) via the inhalation of vapours.	**Low**	- No elevated naphthalene or PID readings. - **Recommendations:** No remediation required.
3	Gas posing a risk to buildings and site users (future residents) via the migration of gas into building causing explosion and asphyxiation.	**High**	- Offsite landfill identified. No gas monitoring undertaken. - **Recommendations:** Precautionary gas protection measures to CS2 required. Local Planning Authority may required CS3.
		Radon	- 1-3% buildings above action level. - **Recommendations:** No radon protection measures required.
4	Mobile contamination posing a risk to controlled waters via the migration through permeable strata.	**Low**	- Although elevated PAHs, contamination associated with crystalline ash, unlikely to leach into groundwater. - **Recommendations:** No remediation required.
5	Sulphate posing a risk to building via direct contact (sulphate attack).	**Low**	- No elevated sulphate identified. - **Recommendations:** No remediation required.
6	Organic contaminants posing a risk to water pipes.	**Moderate**	- Elevated naphthalene identified at potable pipe depth of 0.75-1.35mbgl.

[44] BRE (2005)."Concrete in Aggressive Ground." Special Digest 1.

			- **Recommendations:** UU risk assessment to be completed. The site will likely require barrier piping.
7	Phytotoxic metals posing a risk to flora via root uptake.	**Very Low**	- No phytotoxic metals above generic criteria. - **Recommendations:** No remediation required.

Table 13-2: Summary Risk Table.

Remedial recommendations are presented in Section 14.

13 Recommendations and Remedial Strategy

The recommendations provided below are considered appropriate for the site based on the site investigation work undertaken. LKC should stress that no remediation, enabling works or designing works should take place until Regulatory approval has been obtained.

13.1 Remediation and Validation Recommendations

Table 14-1 details the further works and remedial recommendations / requirements.

PL	Remediation Requirements	Validation Requirements
ALL	Earthworks Inspections / Unexpected Contamination The relevant contractors should be briefed that during development works at the site should any unusual ground conditions and / or visual or olfactory evidence of contamination (including asbestos containing material) be encountered at the site, LKC and the Local Authority should be informed, and further assessment of the material may be required. Should asbestos be identified during groundworks, precautions should be taken to ensure the safety of the construction workers and nearby land users. It would be advisable to introduce an asbestos management strategy in line with CIRIA C733[45].	Log of work undertaken including photographs. Details of any sampling undertaken and validation of any potential additional remedial work.
1	As the made ground is relatively shallow the following options are given: Removal of all reworked topsoil / made ground from garden and soft landscaping and raise levels (as required) with suitably chemically validated topsoil.	Consignment notes confirming the removal of made ground. Photographic evidence of natural strata. Chemical validation of imported soils: See Table 14-2.

Table 14-1: Remediation and validation requirements
Notes: See Table 11-2 for pollutant linkage (PL) details.

[45] CIRIA (2014). "Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks". C733.

3	Gas Protection Measures Gas protection measures should be installed per UK guidance[46,47]. Measure to achieve CS2: • Passive subfloor or active subfloor ventilation system. • Methane and carbon dioxide resistant membrane installed as per manufacturer's instructions. • Ventilation of confined spaces within the building. • Well-constructed reinforced suspended, raft or cast in situ ground slab. • Minimum penetration of ground slab by services. All joints and penetrations to be sealed If the Local Planning Authority require measures to achieve CS3: • All types of floor slab as CS2. • Proprietary gas resistant membrane and passively ventilated or positively pressurised underfloor sub-space. • Oversite capping or blinding and in-ground venting layer. LKC advise that final foundation details should be provided to the Local Authority for review.	**Final CS and required precautionary gas protection measures to be agreed by Local Planning Authority before installation.** Supply and review of foundation designs. Photographic evidence of sub-floor void, ventilation and suitably sealed gas membrane. Validation of gas protection measures should be in line with CIRIA 735[48]
6	Potable Water Pipes It is recommended that a Water Pipeline Assessment is undertaken once the location and depth of potable water pipes are known.	Delivery Notes of Pipe Material. Photographs of the Installed Pipe.
2, 4, 7	No remediation anticipated with respect to PL2 (inhalation of vapours), PL4 (controlled waters) and PL7 (phytotoxicity).	N/A.
Grubbing Out of In-Ground Structures It is recommended that in-ground structures are grubbed out as part of the groundworks.		

Table 14-1 (continued): Remediation and validation requirements
Notes: See Table 11-2 for pollutant linkage (PL) details.

[46] CIRIA (2007). "Assessing Risks Posed by Hazardous Ground Gases to Buildings." CIRIA C665
[47] BSI (2015). "Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for new buildings." BS8485:2015.
[48] CIRIA (2014). "Good Practice on the Testing and Verification of Protection Systems for Building Against Hazardous Ground Gas". CIRIA C735.

Re-use of site won material To ensure material is compliant with appropriate waste regulations, any site won material re-used onsite should be in recourse to appropriate exemptions. A U1 and T5 exemption should be registered. This will allow the following to be used onsite or brought in for use onsite (refer to guidance for types of waste that can be used [49]): » 5,000 tonnes (*c.* 2,500m^3) treatment of crushed concrete / stone. » 1,000 tonnes (*c.* 500m^3) use of non-hazardous soil » 5,000 tonnes (*c.* 2,500m^3) use of clays, sand, gravel, brick, concrete, stone etc. » 50,000 tonnes (*c.* 25,000m^3) use of bituminous material to be used in roadways. A Materials Management Plan (MMP) with recourse to the CL:AIRE Code of Practice may be required if volumes exceed exemption limits. This must be registered **before** material movement starts onsite. If an MMP is required, this needs to be registered by a Qualified Person (QP) and there must be 'certainty of use' for any material re-used onsite or exported to site to ensure there is no 'sham recovery'. For all the above material will need to be tested at the rate and analytical suites presented in Table 14-2.
Topsoil Growing Medium The existing made ground is not expected to be a suitable growing medium given the nature of the soil and the undesirable material present (abundant glass, brick fragments, clinker and ceramics). A topsoil cover of approximately 150mm is recommended in gardens and soft landscaping areas.
Health and Safety Considerations In working with, removing or treating any contaminating material it is important that any potential risks associated with the actual site works are mitigated by good environmental management of the site during the remedial phases. Standard health and safety precautions (as per HSE guidance[50]) should be adopted by all workers involved with site enabling and construction works.

Table 14-1 (continued): Remediation and validation requirements
Notes: See Table 11-2 for pollutant linkage (PL) details.

13.2 Validation of Topsoil

Chemical validation of all imported soils to be used on site in gardens and soft landscaping areas should be undertaken. Imported soils should be accompanied by a certificate of analysis and source details.

A summary of the required imported material sampling requirements is presented in Table 14-2. Ideally, the material should be sampled at source to prevent double handling if soil fails. However, where this is not possible then material imported should be segregated based on source and soil type. Validation samples should be taken prior to placement in gardens to ensure suitability for use.

[49] https://www.gov.uk/guidance/waste-exemptions-using-waste
[50] HSE (1991). "Protection of Workers and the General Public During Development of Contaminated Land" London HMSO.

Material Type	Source	Suite of Analysis	Sampling Rate*
Topsoil	Greenfield	Suite A	Min. 3 samples per source. 1 sample per 50m^3
	Brownfield / Unknown	Suite B	
Subsoil	Brownfield / Unknown	Suite B	Min. 3 sample per source. 1 sample per 150m^3
	Site won natural material / greenfield	Suite A	

Table 14-2: Sampling requirements for imported soils.

Notes:

Suite A - Heavy metals, pH, water soluble sulphate, speciated PAH, soil organic matter and asbestos screen.

Suite B - Heavy metals, pH, water soluble sulphate, speciated PAH, phenol, total and free cyanide, soil organic matter, asbestos screen, banded petroleum hydrocarbons (TPH CWG), BTEX, MTBE.

*Minimum sampling rate of 3 samples per source.

Any soil with visual or olfactory evidence of hydrocarbons should be rejected.

In addition, it should be ensured that the matrix of the topsoil is suitable as a growing medium and no undesirable material is present (in line with BS3882[51]). LKC advise this information is provided by the supplier before material is imported onto site.

Imported material to be used in gardens will be compared against residential with plant uptake criteria (as used in the contamination risk assessment (Section 11-1)). Appropriate remedial target criteria are presented in Appendix F.

13.3 Site Completion Report

It is recommended that any remediation carried out on the site is validated by a third party and suitable documentary evidence provided in a Site Completion Report, such as photographs, consignment documents and analytical results. This should include as a minimum:

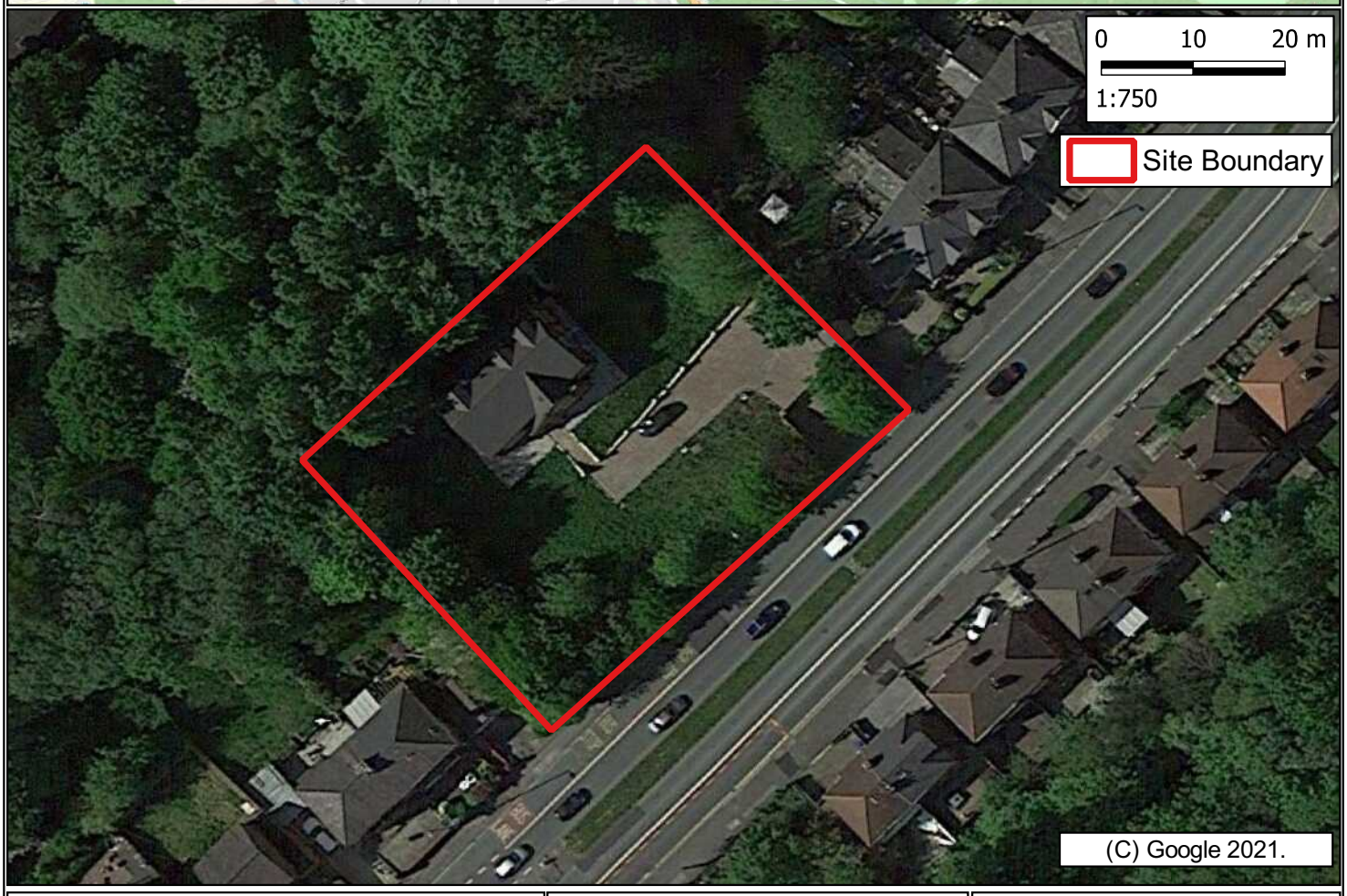
- Validation of gas protection measures installed.
- Provision of waste transfer documents.
- Validation of any made ground removal (photographic evidence that natural strata was reached).
- Verification testing of all imported soil for garden and soft landscaping areas.
- Information on the installation of protective pipes and / or sterile trenches.
- Details of any unexpected contamination identified onsite, suitably risk assessed and / or validated.

The Site Completion Report will assist the Local Authority in the discharge of any future relevant planning condition and will also be of use to solicitors acting on behalf of any prospective conveyancer who may have concerns over the former use of the site.

[51] BS (2015). "Specifications for Topsoil and Requirements for use." BS3882:2015.

Figures





Client: RH Kennedy Properties Ltd				Title: Site Location & Boundary Plan	LK CONSULT LIMITED
Site: 1161 Rochdale Road, Blackley				Scale (see scale bar): 1:10,000 & 1:750 @ A4	Figure: 1
Job No.: LKC 21 1140	Drawn By: EK	Checked By: BS	Drawn: Mar 2021		Revision:



0 10

SCALE (Metres)

Extract from: J.Kendal
Drawing Ref: Site Layout Plan, No.JPP/940_040 (july 2017)

KEY

Site Boundary

Sampling Locations and features annotated by LK Consult Ltd are approximate and are based upon observed measurements unless otherwise stated. Do not scale from this drawing and work from marked dimensions only. All dimensions and features should be confirmed on site by the Contractor. Where this drawing includes information provided to LK Consult Ltd by others, LK Consult Ltd gives no warranty, representation or assurance as to the accuracy of such information.

LK CONSULT LIMITED

Client: RH Kennedy Properties Ltd

Site: 1161 Rochdale Road, Blackley

Title: Proposed Development Plan

Job No.:	Scale (See Scale Bar):	Figure:	Revision:
LKC 21 1140	See Scale Bar	2	

Drawn By:	Checked By:	Drawn:
AC	EK	Apr 2021



Extract from: J.Kendal
Drawing Ref: Site Plan / Proposed House Development

0 10
SCALE (Metres)

KEY

- Site Boundary
- Window Sample Borehole (WS)
- Hand Dug Trial Pit (HD)

Sampling Locations and features annotated by LK Consult Ltd are approximate and are based upon observed measurements unless otherwise stated. Do not scale from this drawing and work from marked dimensions only. All dimensions and features should be confirmed on site by the Contractor. Where this drawing includes information provided to LK Consult Ltd by others, LK Consult Ltd gives no warranty, representation or assurance as to the accuracy of such information.

LK CONSULT LIMITED

Client: RH Kennedy Properties Ltd

Site: 1161 Rochdale Road, Blackley

Title: Site Investigation Location Plan

Job No.:	Scale (See Scale Bar):	Figure:	Revision:
LKC 21 1140	See Scale Bar	3	

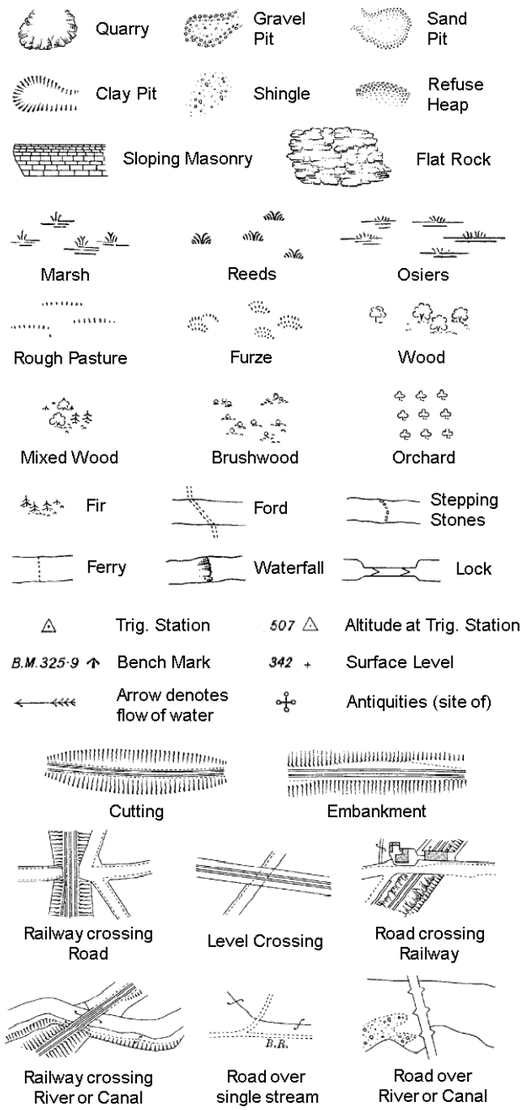
Drawn By:	Checked By:	Drawn:
AC	RW	Mar 2021

Appendix A

Historical Maps

Historical Mapping Legends

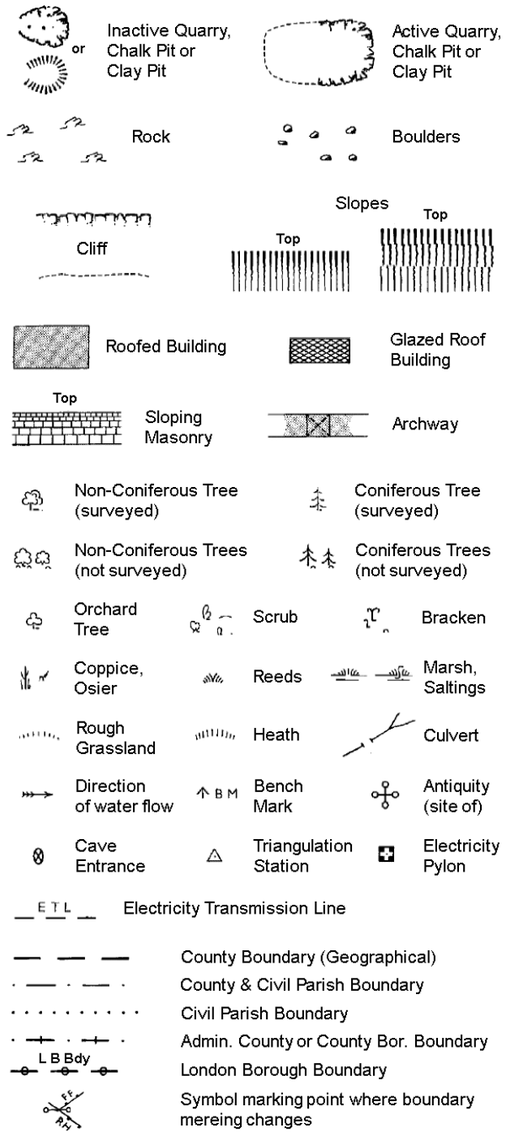
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

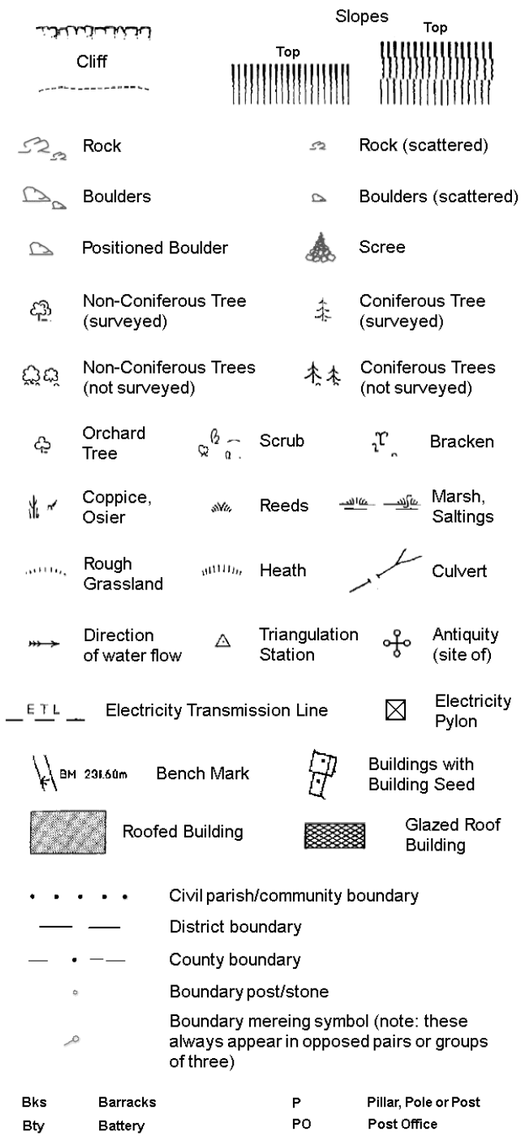
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

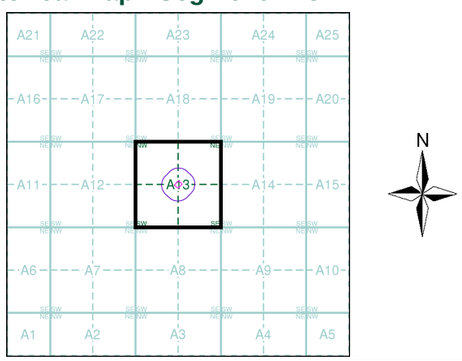
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

LK GROUP

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1893 - 1909	2
Lancashire And Furness	1:2,500	1909	3
Lancashire And Furness	1:2,500	1932	4
Ordnance Survey Plan	1:1,250	1951 - 1952	5
Ordnance Survey Plan	1:2,500	1952 - 1953	6
Ordnance Survey Plan	1:2,500	1955 - 1970	7
Ordnance Survey Plan	1:1,250	1959 - 1971	8
Supply of Unpublished Survey Information	1:1,250	1975	9
Ordnance Survey Plan	1:1,250	1977	10
Additional SIMs	1:1,250	1980 - 1981	11
Additional SIMs	1:1,250	1988 - 1989	12
Large-Scale National Grid Data	1:1,250	1992	13
Large-Scale National Grid Data	1:1,250	1995	14
Historical Aerial Photography	1:2,500	2000	15

Historical Map - Segment A13



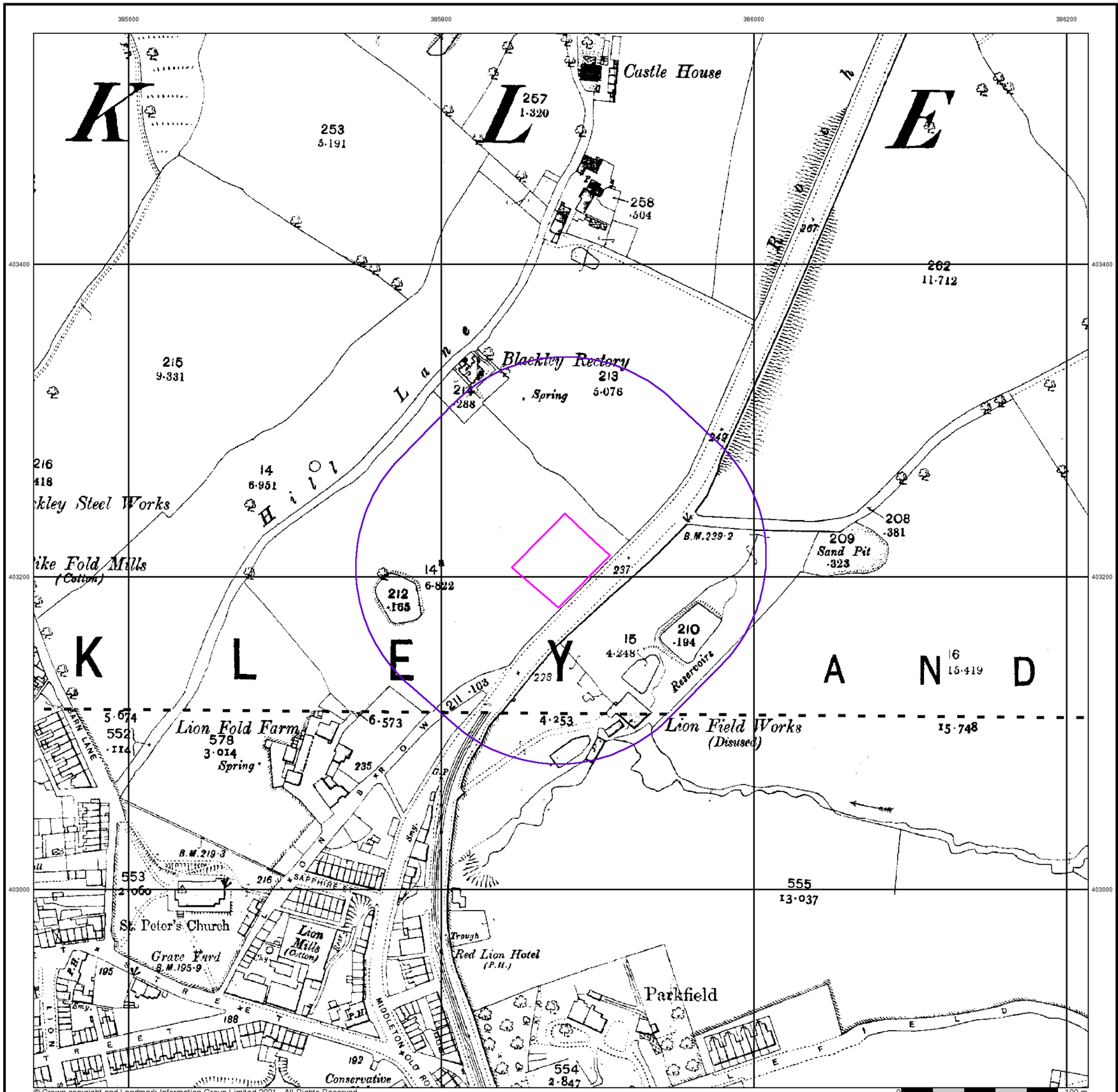
Order Details

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Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	100

Site Details

1161 Rochdale Road, MANCHESTER, M9 7FP

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0 100 m

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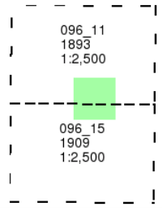
Lancashire And Furness

Published 1893 - 1909

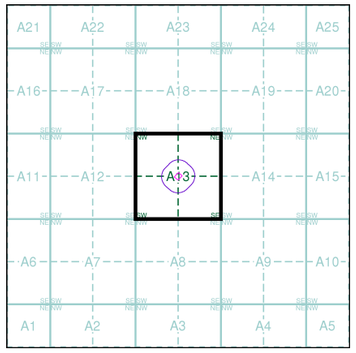
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



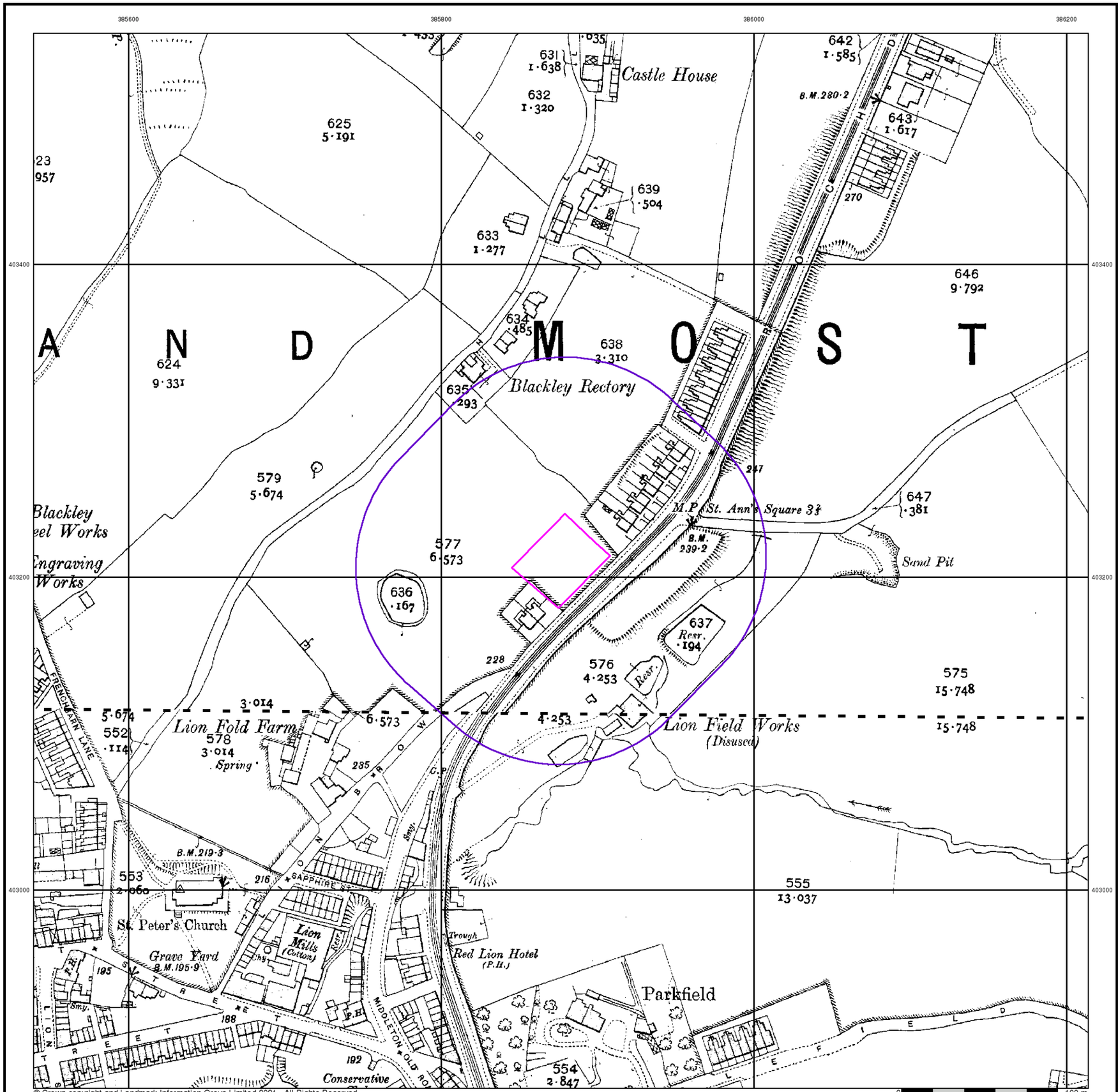
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Slice:	A
Site Area (Ha):	0.19
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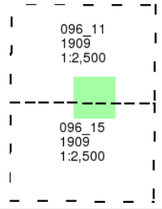
Lancashire And Furness

Published 1909

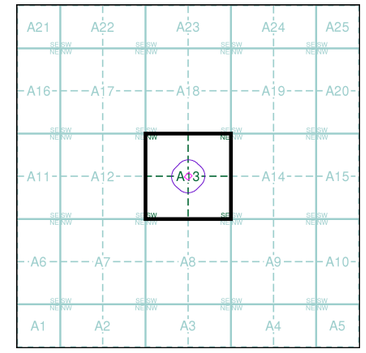
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

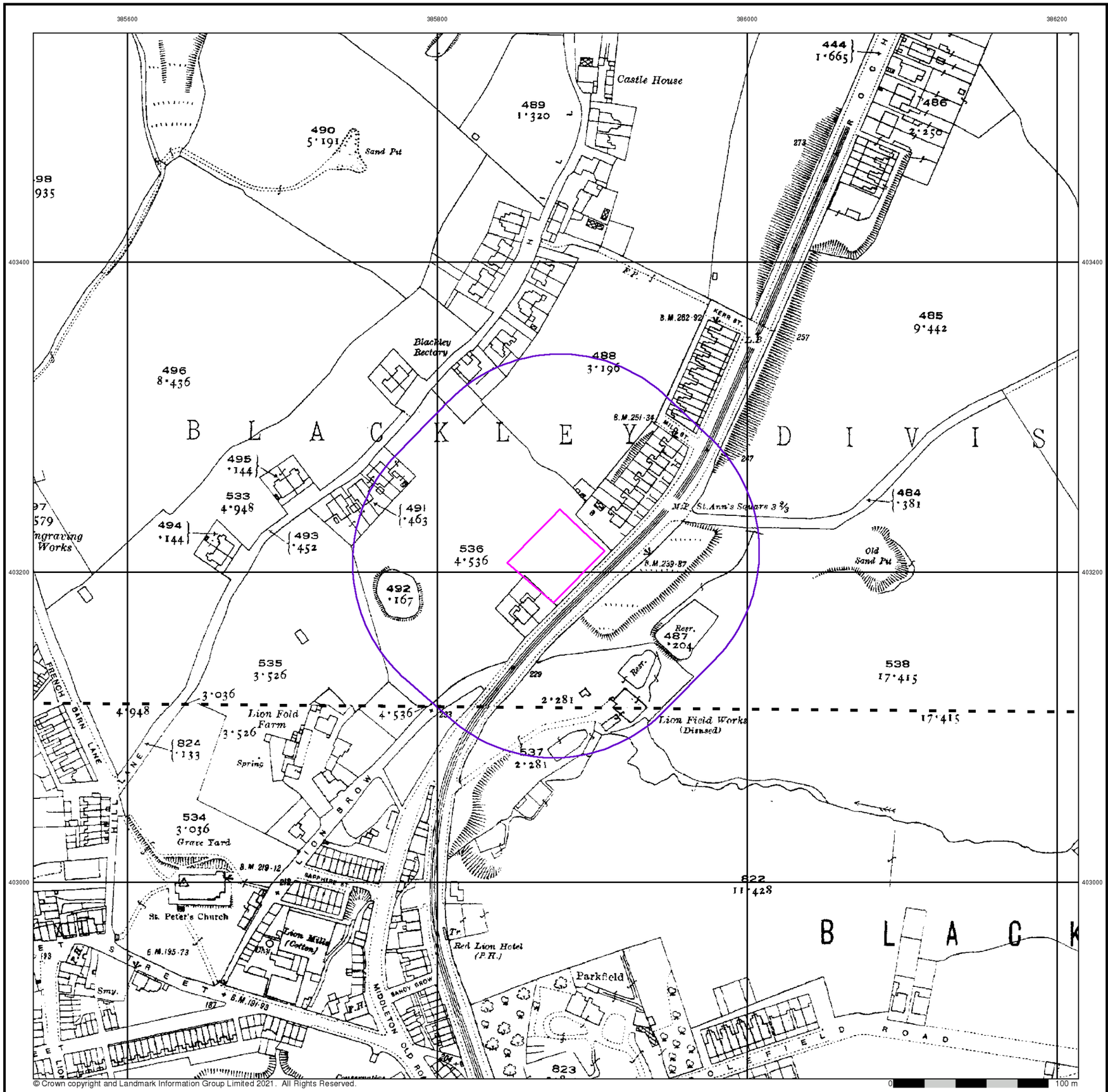


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Site Details

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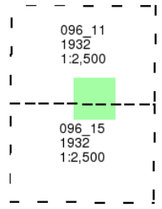
Lancashire And Furness

Published 1932

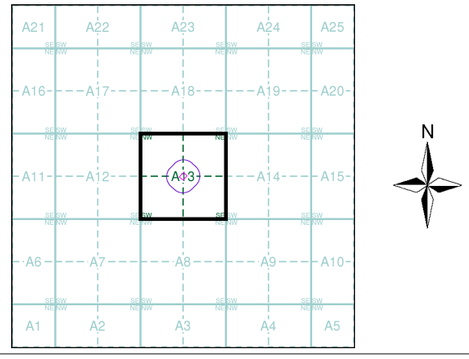
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Map Name(s) and Date(s)



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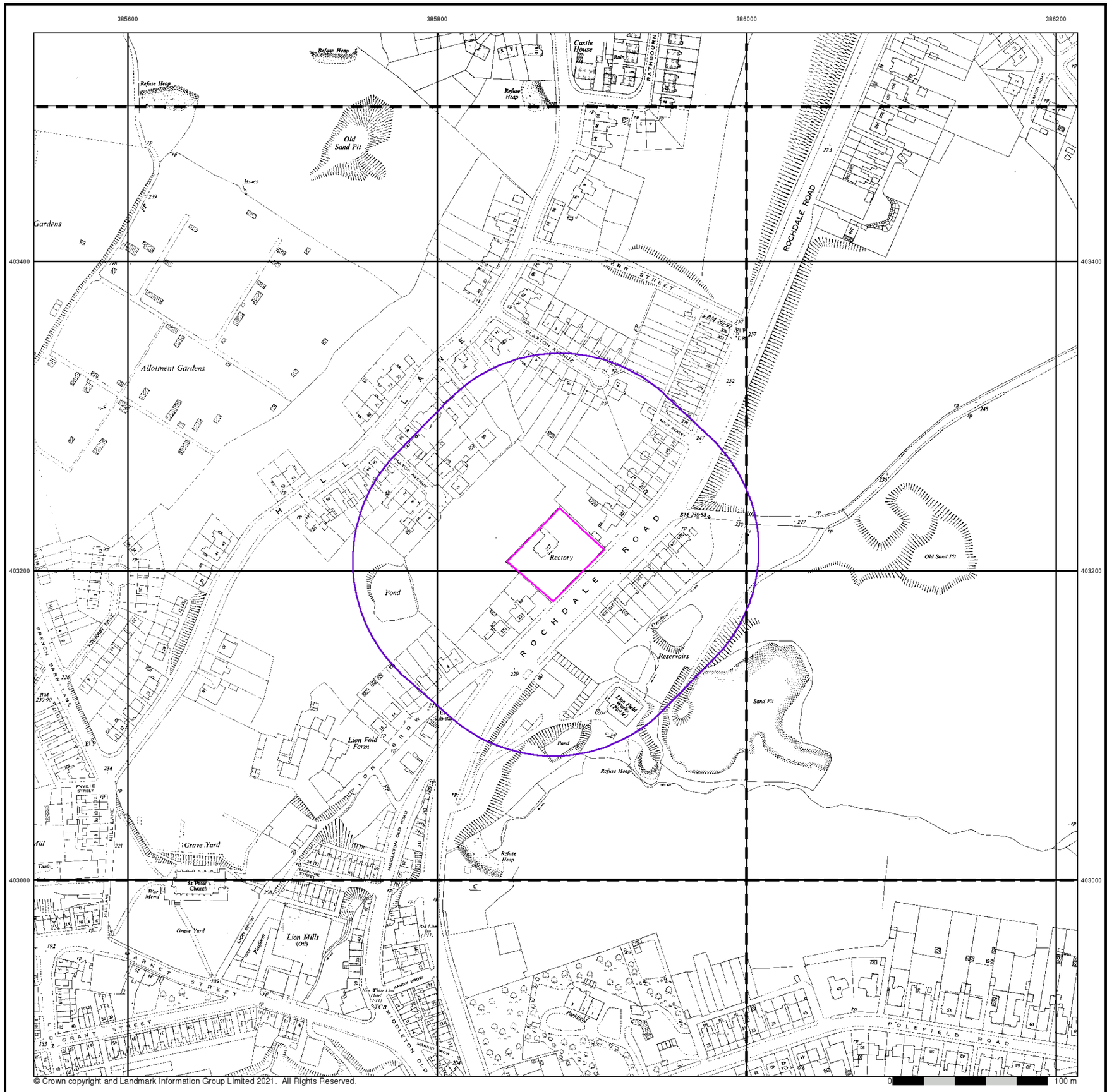


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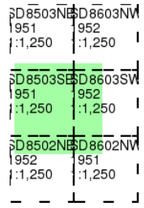
Ordnance Survey Plan

Published 1951 - 1952

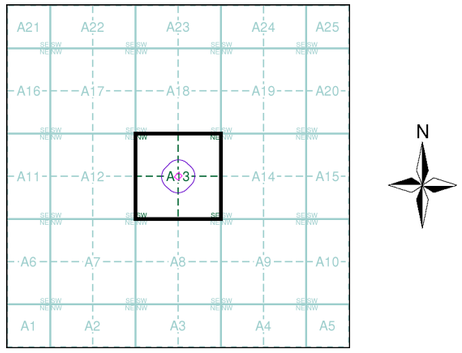
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



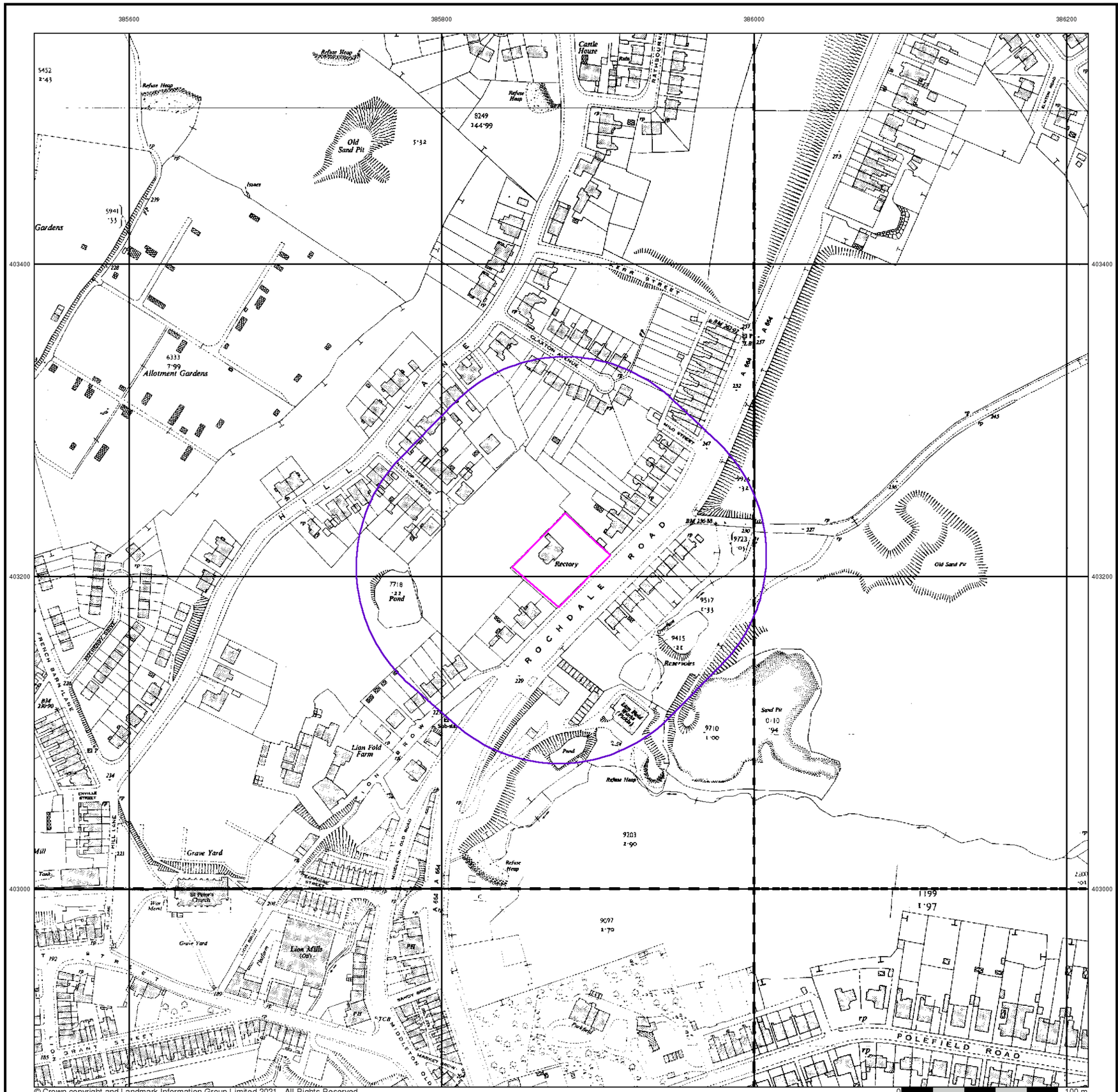
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National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	100

Site Details

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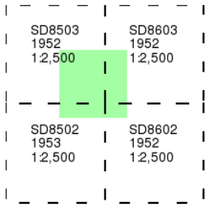
Ordnance Survey Plan

Published 1952 - 1953

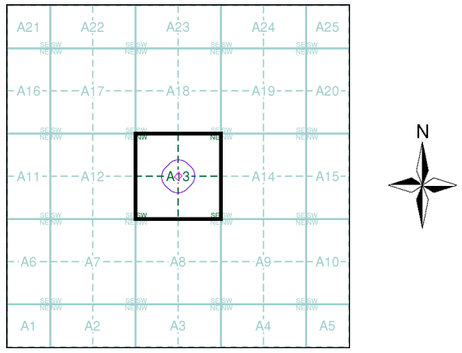
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Map Name(s) and Date(s)



Historical Map - Segment A13



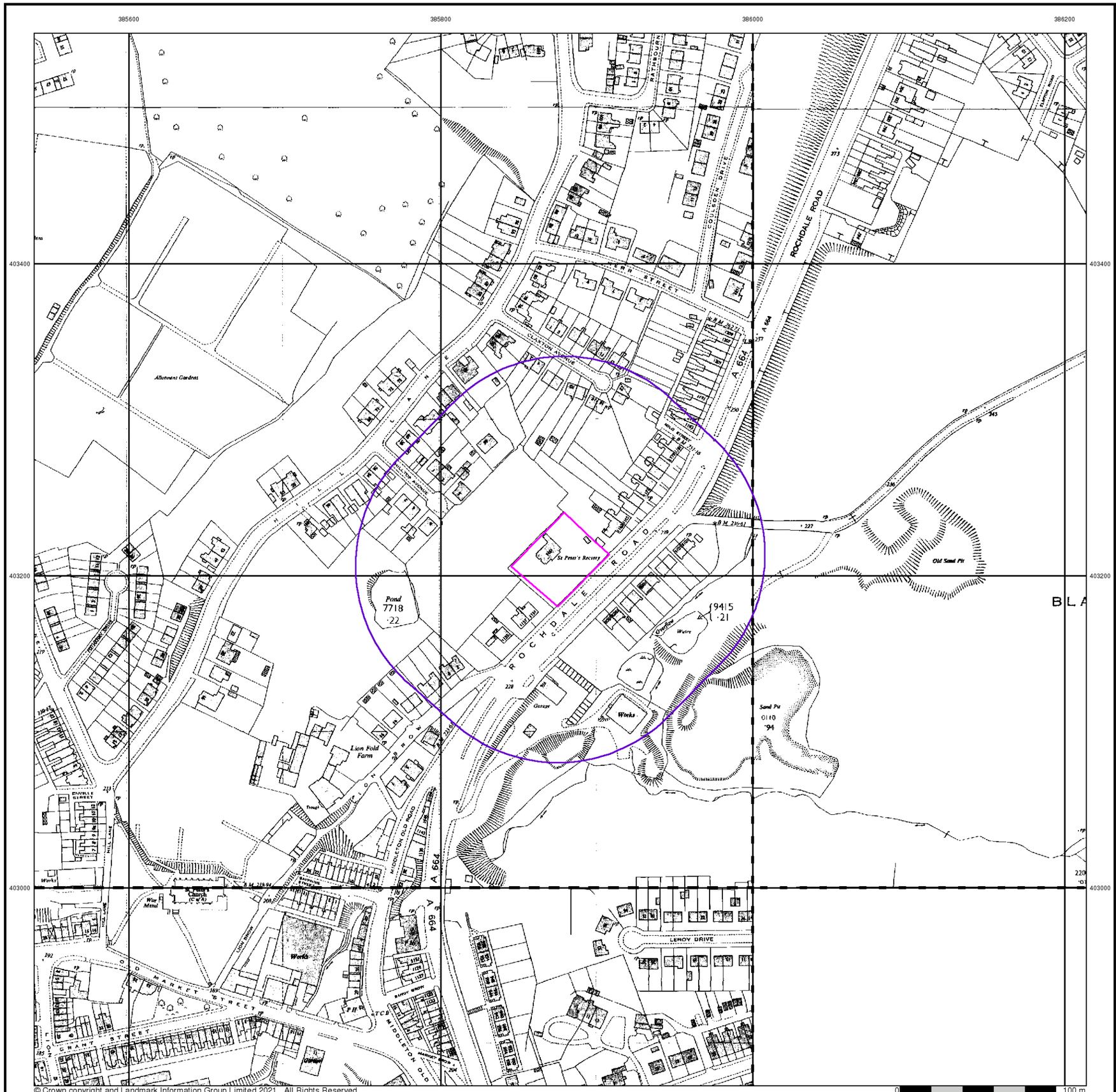
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National Grid Reference:	385880, 403210
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Site Area (Ha):	0.19
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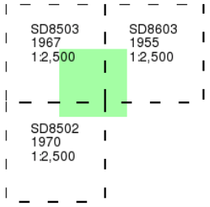
Ordnance Survey Plan

Published 1955 - 1970

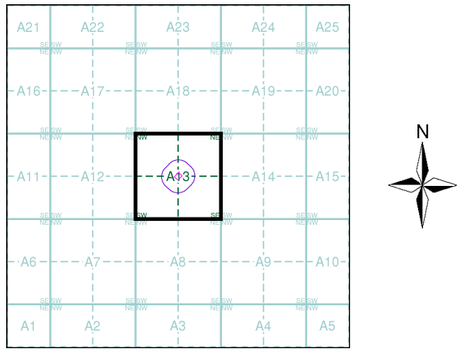
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Map Name(s) and Date(s)



Historical Map - Segment A13



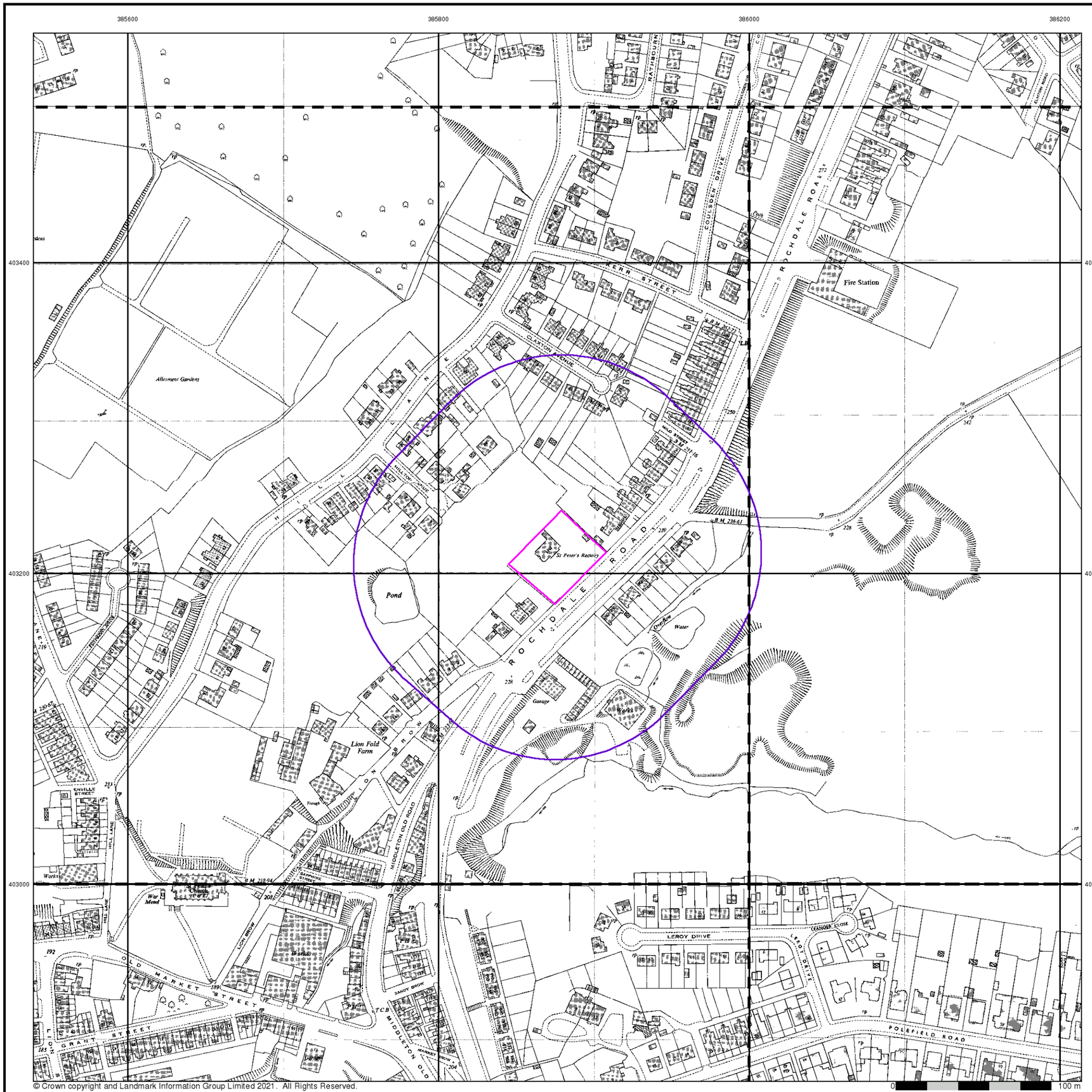
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Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	100

Site Details

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Ordnance Survey Plan

Published 1959 - 1971

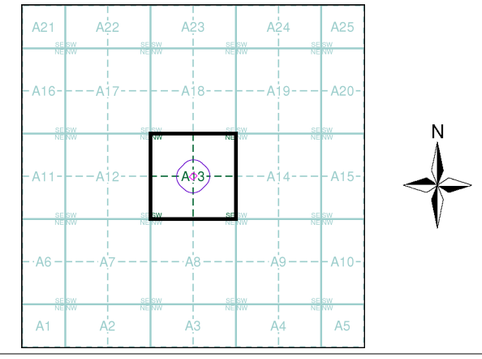
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SD8503NE 1963 1:1,250	SD8603NW 1967 1:1,250
SD8503SE 1964 1:1,250	SD8603SW 1967 1:1,250
SD8502NE 1959 1:1,250	SD8602NW 1971 1:1,250

Historical Map - Segment A13

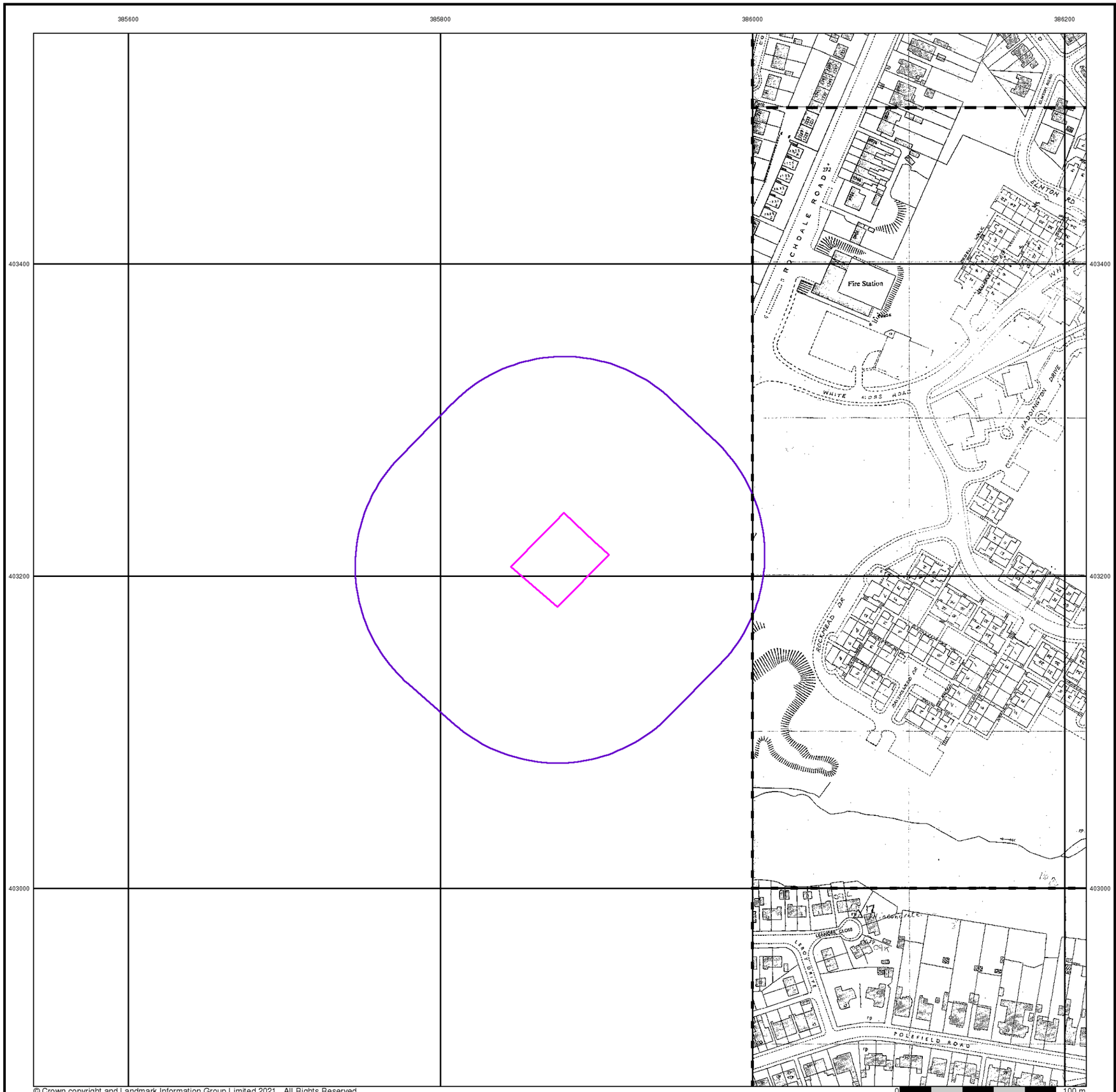


Order Details

Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	100

Site Details

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Supply of Unpublished Survey Information

Published 1975

Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

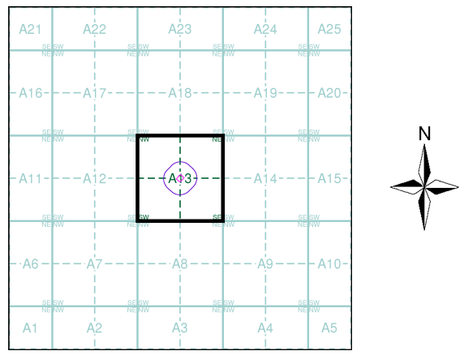
Map Name(s) and Date(s)

SD8603NW
1975
1:1,250

SD8603SW
1975
1:1,250

SD8602NW
1975
1:1,250

Historical Map - Segment A13



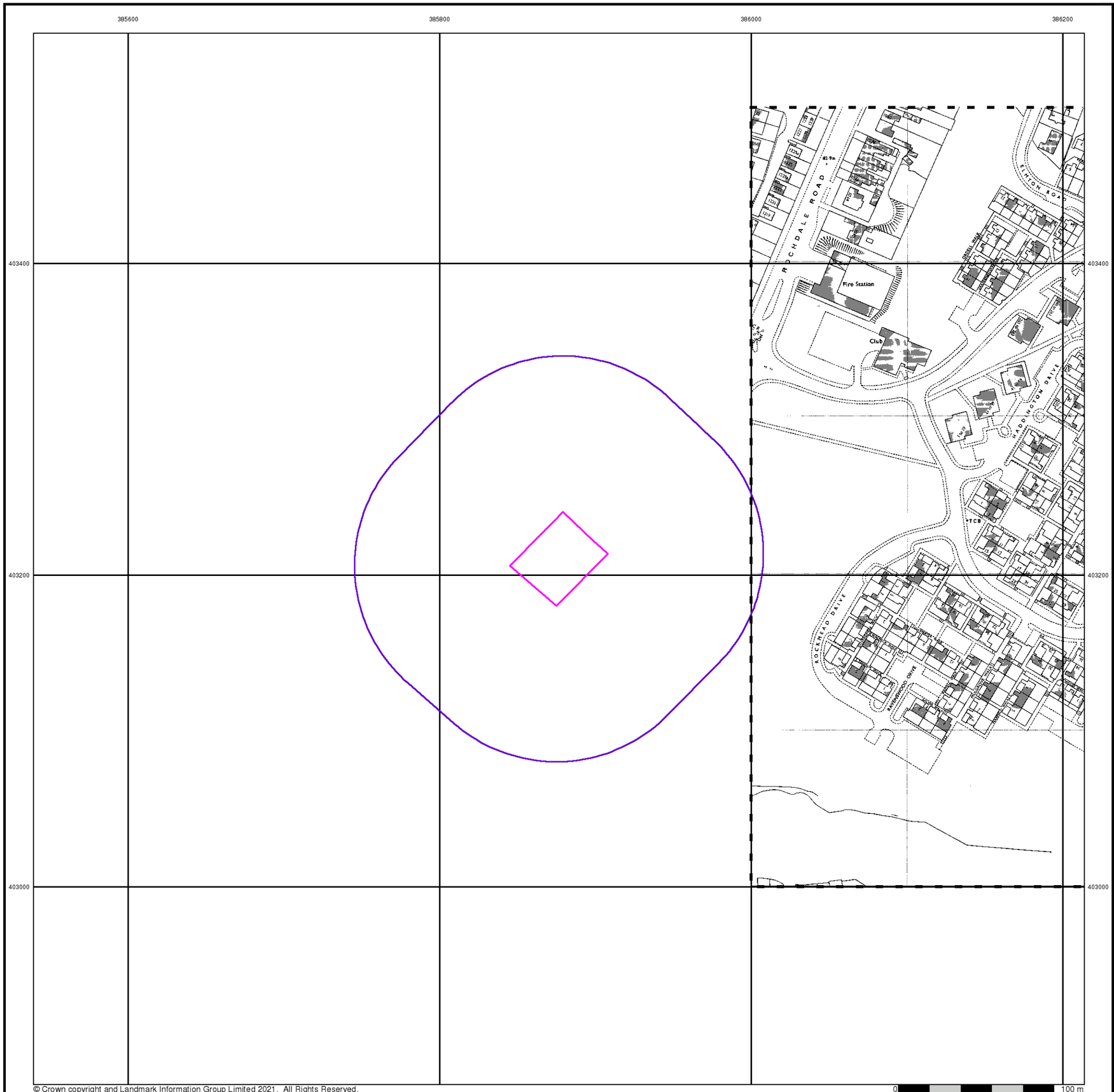
Order Details

Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	100

Site Details

1161 Rochdale Road, MANCHESTER, M9 7FP

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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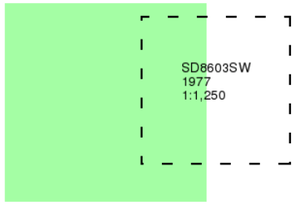
Ordnance Survey Plan

Published 1977

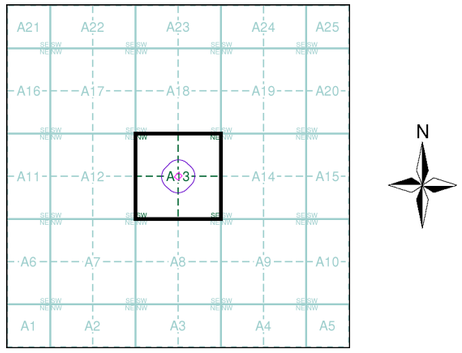
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



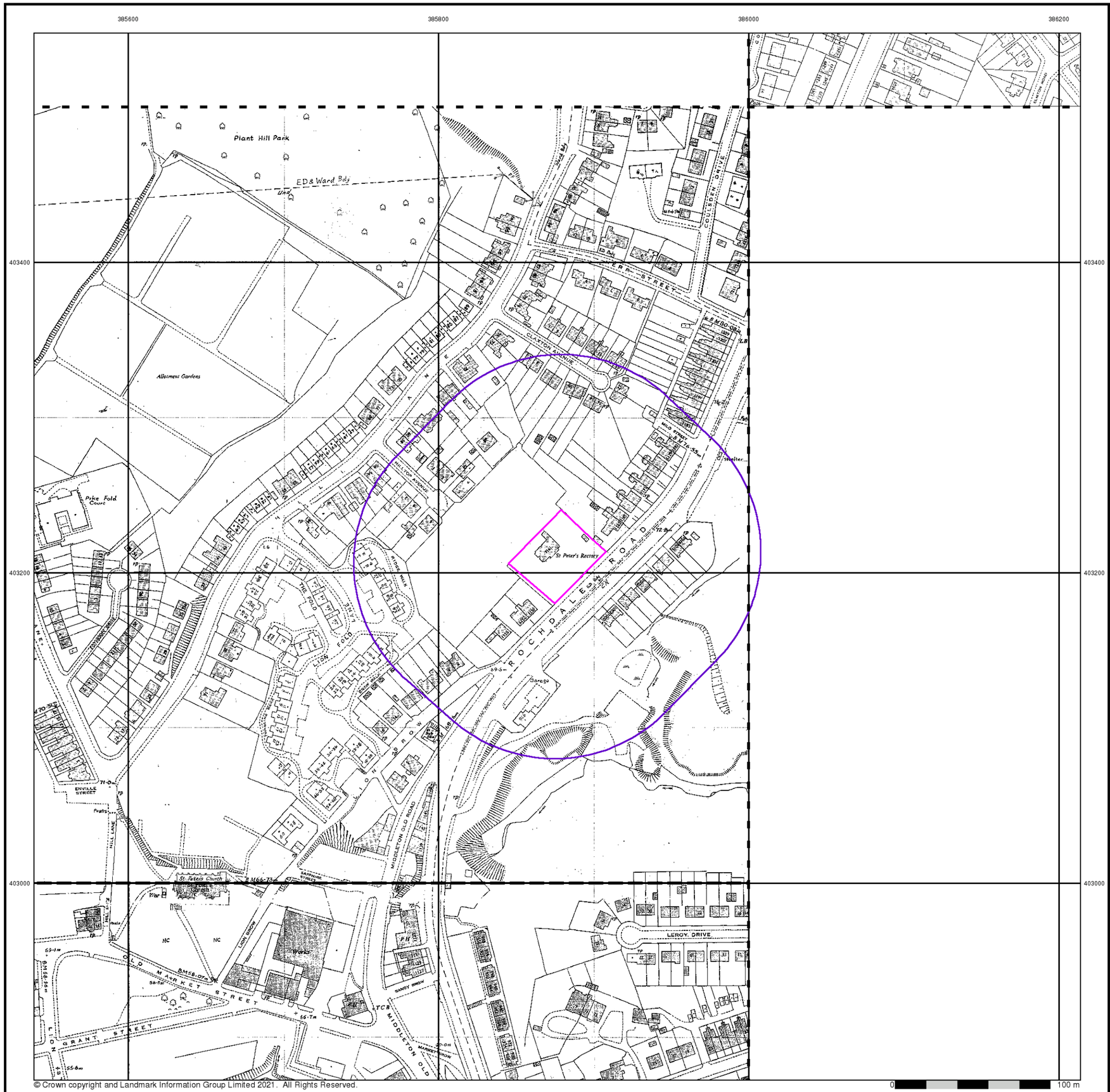
Order Details

Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
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Additional SIMs

Published 1980 - 1981

Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

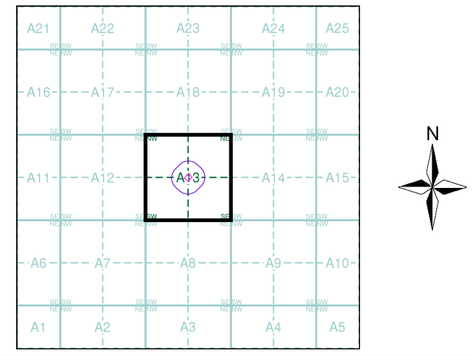
Map Name(s) and Date(s)

SD8603NW
1980
1:1,250

SD8503SE
1981
1:1,250

SD8502NE
1980
1:1,250

Historical Map - Segment A13

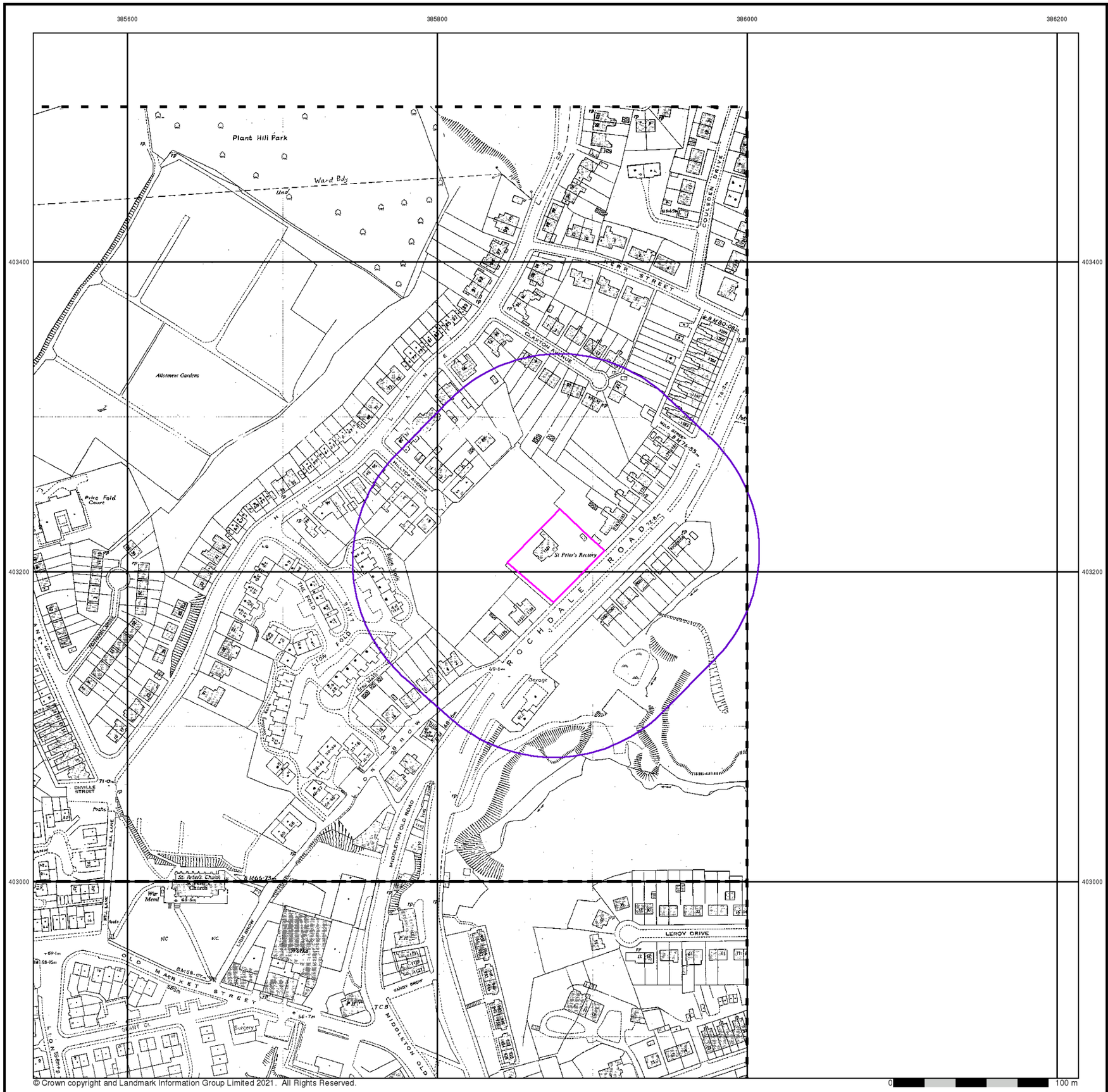


Order Details

Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	100

Site Details

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Additional SIMs

Published 1988 - 1989

Source map scale - 1:1,250

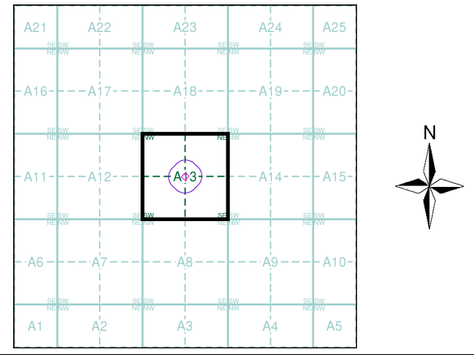
The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SD8503SE
1988
1:1,250

SD8502NE
1989
1:1,250

Historical Map - Segment A13



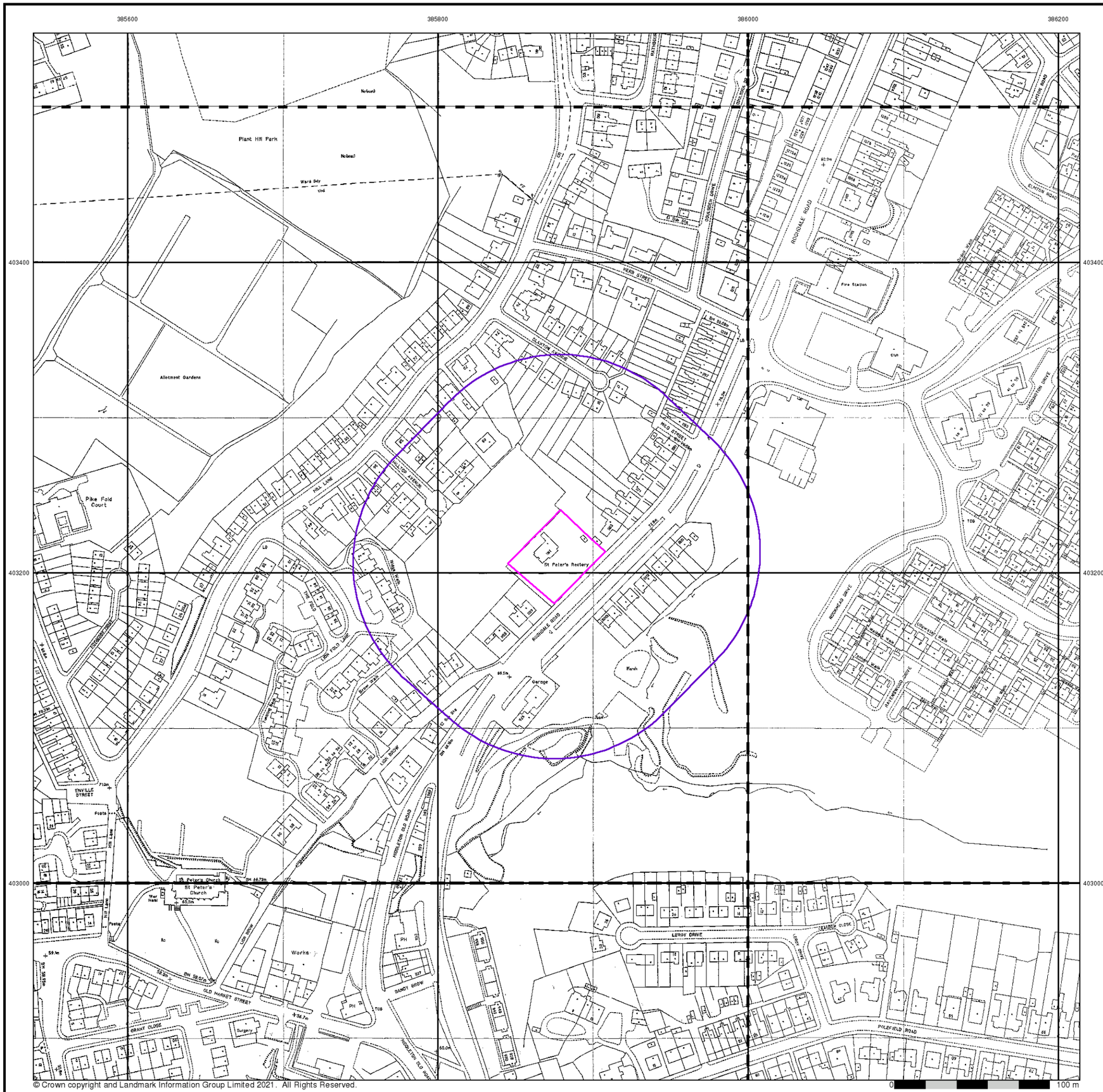
Order Details

Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
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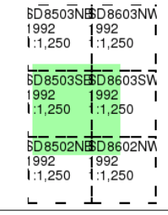
Large-Scale National Grid Data

Published 1992

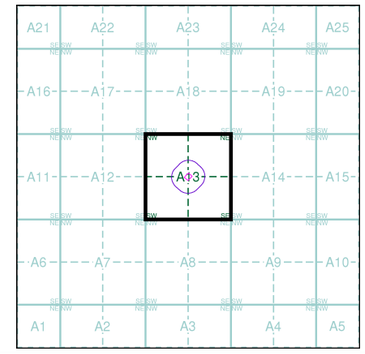
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

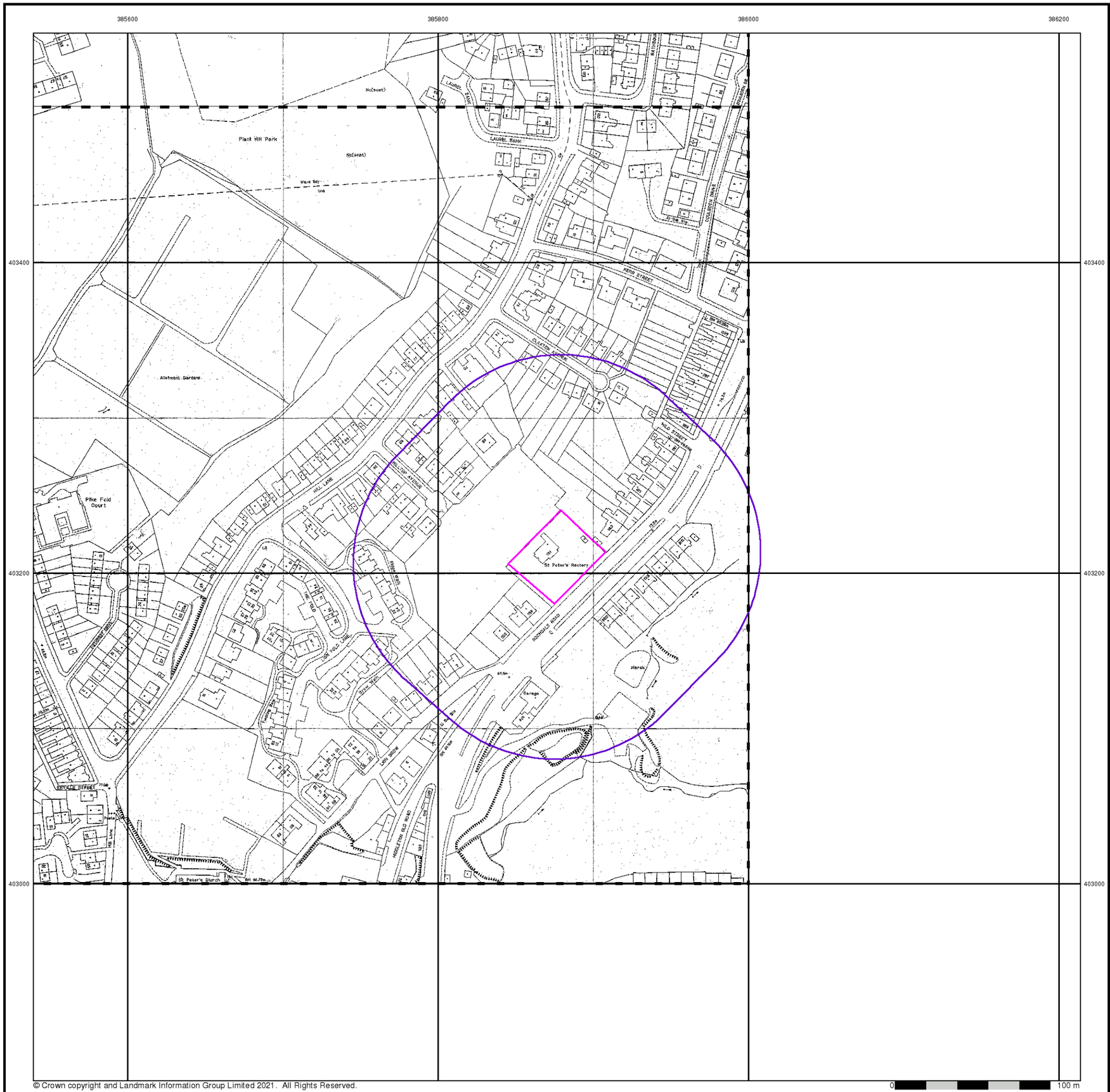


Order Details

Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	100

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Large-Scale National Grid Data

Published 1995

Source map scale - 1:1,250

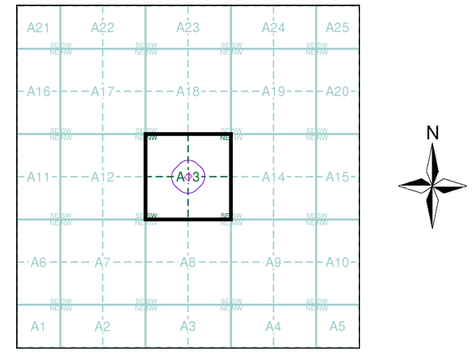
'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SD8503NE
1995
1:1,250

SD8503SE
1995
1:1,250

Historical Map - Segment A13



Order Details

Order Number:	274526983_1_1
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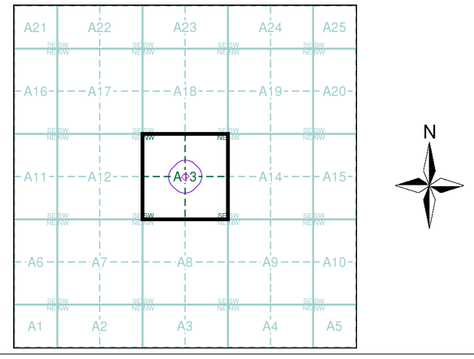


Historical Aerial Photography

Published 2000

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number:	274526983_1_1
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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Pylon
Electricity Transmission Line
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

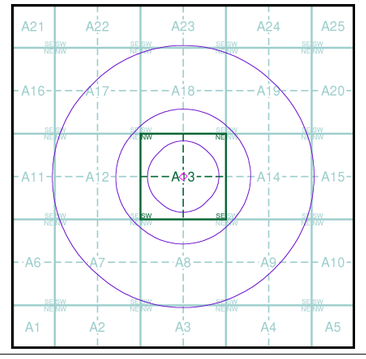
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894	5
Lancashire And Furness	1:10,560	1910	6
Lancashire And Furness	1:10,560	1923	7
Lancashire And Furness	1:10,560	1933	8
Lancashire And Furness	1:10,560	1938	9
Ordnance Survey Plan	1:10,000	1956	10
Ordnance Survey Plan	1:10,000	1966 - 1968	11
Manchester	1:25,000	1975	12
Ordnance Survey Plan	1:10,000	1978 - 1979	13
Ordnance Survey Plan	1:10,000	1982 - 1986	14
Ordnance Survey Plan	1:10,000	1990	15
10K Raster Mapping	1:10,000	1999	16
10K Raster Mapping	1:10,000	2006	17
VectorMap Local	1:10,000	2020	18

Historical Map - Slice A



Order Details

Order Number: 274526983_1_1
Customer Ref: LKC 21 1140
National Grid Reference: 385880, 403210
Slice: A
Site Area (Ha): 0.19
Search Buffer (m): 1000

Site Details

1161 Rochdale Road, MANCHESTER, M9 7FP

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Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Fireproof Building
- Prominent Fireproof Building
- Non-fireproof Building
- Non-fireproof Building (non-dwelling)
- Factory, mill, and flour mill, with chimneys
- Factory, mill, and flour mill, without chimneys
- Power Station, drawn to scale
- Hydroelectric Power Station
- Radio Station, drawn to scale
- Telephone Station, drawn to scale
- Abandoned Open-pit Mine or Quarry
- Open-pit Salt Mine
- Pit
- Oil Deposit or Well
- Oil Seepage
- Tailings Pile
- Fuel Storage Tanks
- Natural Gas Tank
- Bench Mark
- Drill Hole
- Burial Mound
- Triangulation Point on Burial Mound
- Single-track Railroad
- Double-track Railroad and Station Building
- Coniferous Forest
- Deciduous Forest
- Mixed Forest
- Lawns
- Citrus Orchard
- Wet Ground
- Scattered Vegetation

243,8 Values for prominent elevations

186.0 Numbers for spot elevations, depth soundings, contour lines, etc.

0,2 Velocity of the current, width of river bed, depth of river

Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (–)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Partly Demolished Buildings
- Demolished Buildings
- Built-Up Area with Fireproof Buildings Predominant
- Built-Up Area with Non-Fireproof Buildings Predominant
- Individual Fireproof Building
- Prominent Industrial Building
- Individual Dwelling, Fireproof
- Ruins of an Individual Dwelling
- Factory or Mill Chimney
- Factory or Mill with Chimney (бум.)
- Factory or Mill without Chimney (скип.)
- Mine or Open Pit Mine (медн.)
- Operating Shaft or Mine (кам. уг.)
- Non-Operating Shaft or Mine
- Salt Mine (сол.)
- Tailings Pile
- Pit (– 1.7)
- Stone Quarry (гл. пес. кам.)
- Gas Pump or Service Station
- Fuel Storage or Natural Gas Tank
- Oil or Natural Gas Derrick
- Small Hydroelectric Power Station
- Power Station
- Transformer Station (б.тр.)
- Cemetery
- Burial Mound (height in metres) (+ 8.1)
- Triangulation Point on Burial Mound (95.7)
- Triangulation Point (92.6)
- Bench Mark (52.1)
- Bench Mark (monumented) (71.1)
- Telegraph Office
- Telephone Station
- Radio Station
- Radio Tower
- Airfield or Seaplane Base
- Landing Strip
- Main Highway (Cut, Fill, Km Post, Plantings, Telegraph/Telephone Lines)
- Highway under Construction
- Improved Dirt Road (former truck road) (Width of Road, Steep Grade)
- Double-track Railroad with First Class Station (Small Bridge, Pipe (Culvert), Tunnel)
- Dismantled Railroad
- Railroad Under Construction
- Shore Embankment
- River or Ditch with Embankment (+ 2.4)
- Direction and velocity of current (Water Gauge, 135.1, Water Level Mark)
- Well (К. 125.0 гл.8м (г.-сол.))
- Water Reservoir or Rain Water Pit (вдхр.)
- Spring (156.2 кл.)
- Isobath with value (20)
- Heavy (Index) Contour Line
- Contour Line and Value (20)
- Half Contour Line
- Spot Elevation Value (347.1)
- Coniferous
- Deciduous
- Mixed
- Scrub

Key to Numbers on Mapping

SD80_Manchester

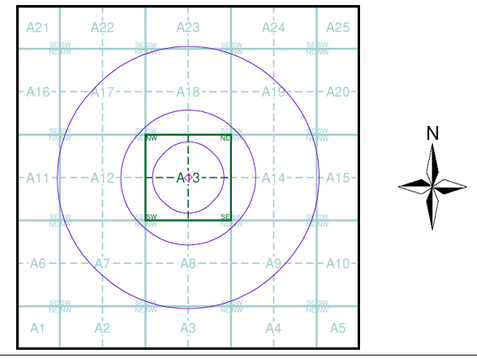
No.	Description
165	Post Office

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894	5
Lancashire And Furness	1:10,560	1910	6
Lancashire And Furness	1:10,560	1923	7
Lancashire And Furness	1:10,560	1933	8
Lancashire And Furness	1:10,560	1938	9
Ordnance Survey Plan	1:10,000	1956	10
Ordnance Survey Plan	1:10,000	1966 - 1968	11
Manchester	1:25,000	1975	12
Ordnance Survey Plan	1:10,000	1978 - 1979	13
Ordnance Survey Plan	1:10,000	1982 - 1986	14
Ordnance Survey Plan	1:10,000	1990	15
10K Raster Mapping	1:10,000	1999	16
10K Raster Mapping	1:10,000	2006	17
VectorMap Local	1:10,000	2020	18

Russian Map - Slice A



Order Details

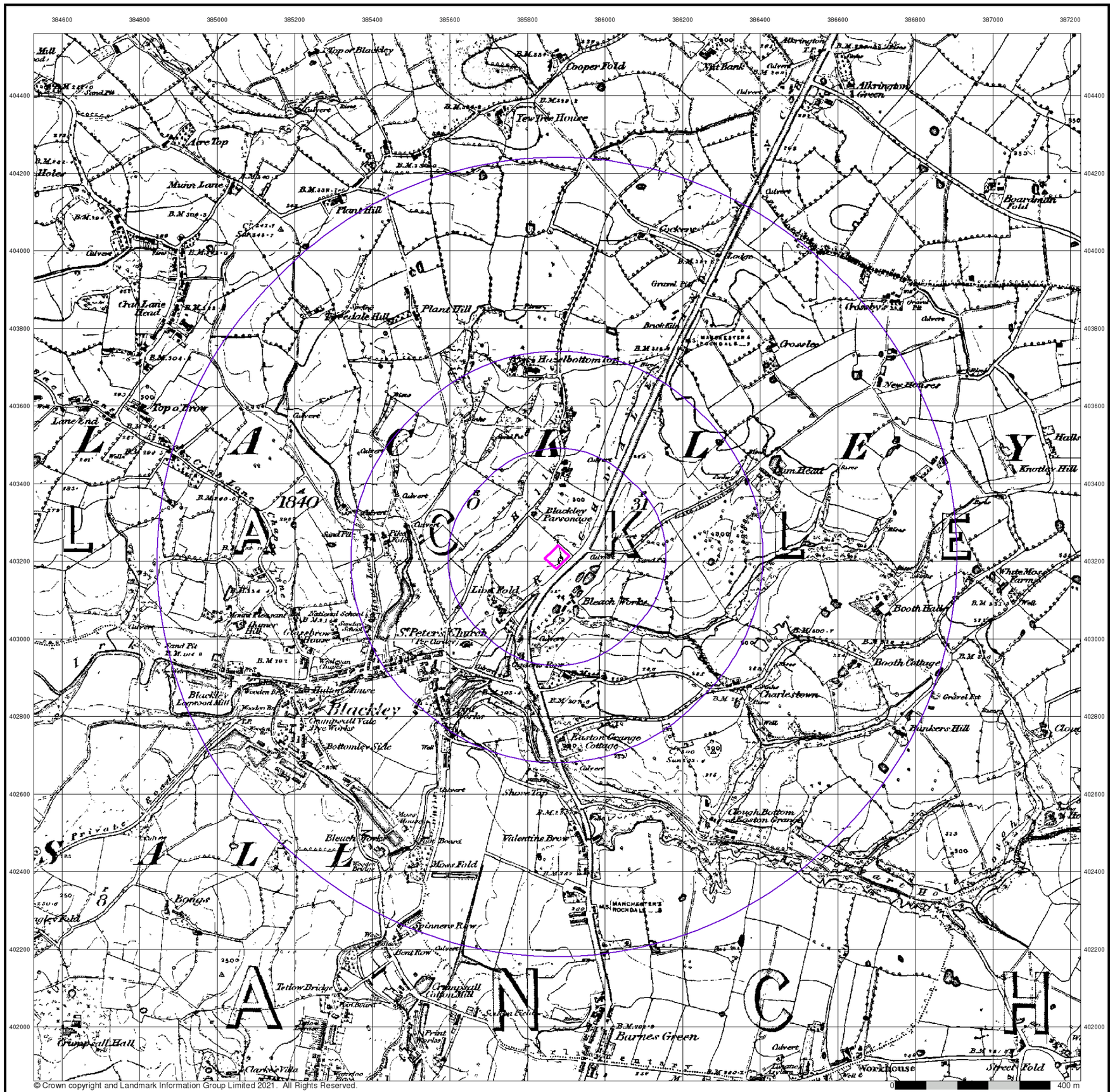
Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
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Search Buffer (m):	1000

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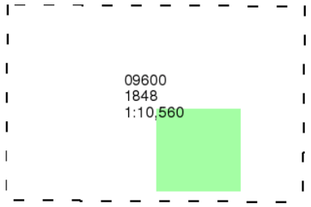
Lancashire And Furness

Published 1848

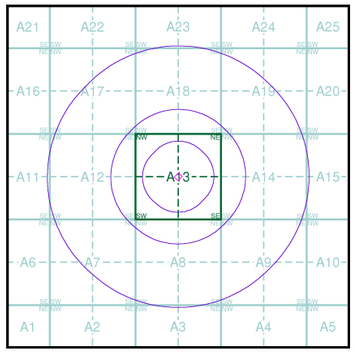
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



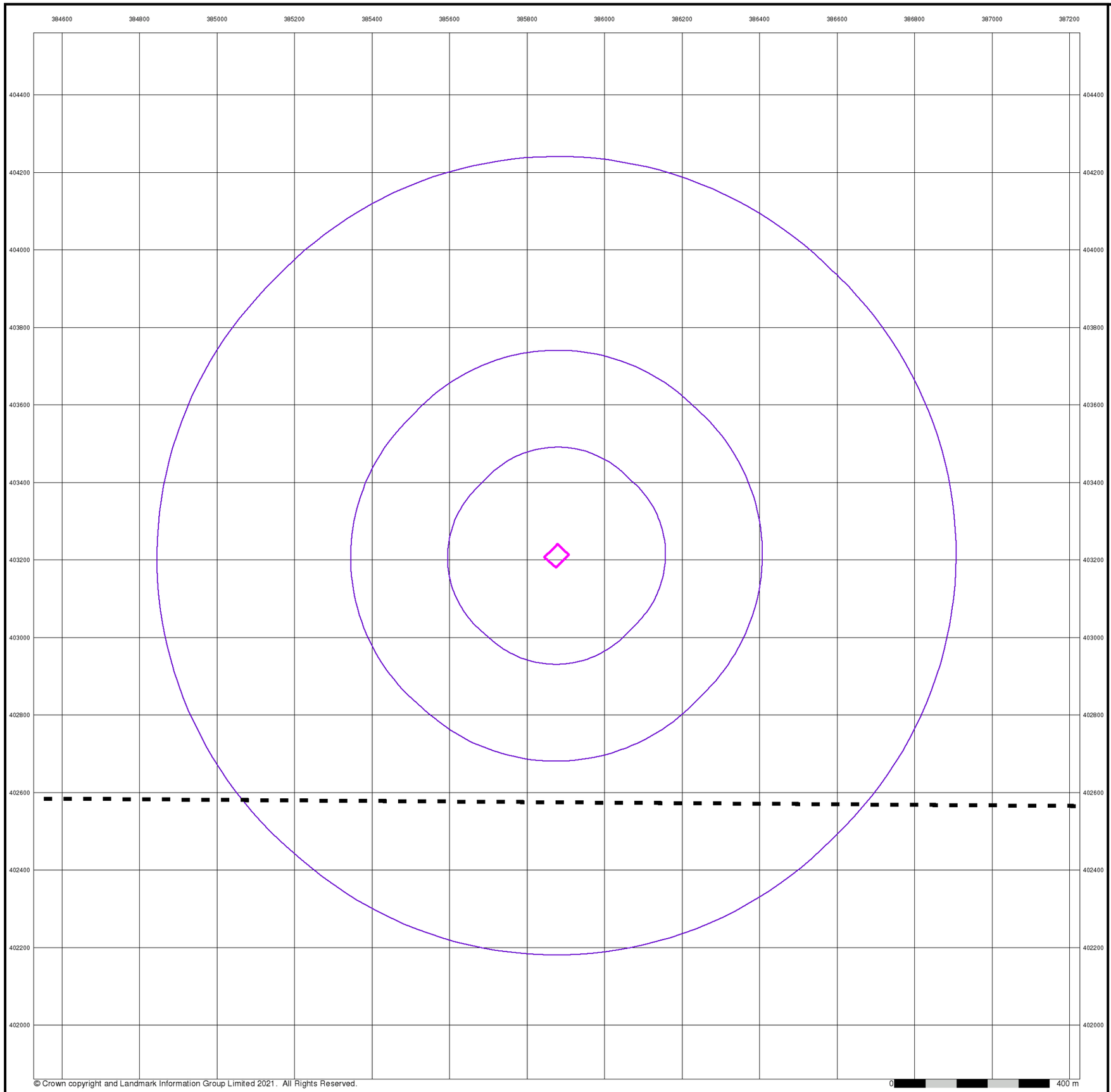
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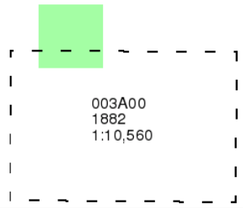
Cheshire

Published 1882

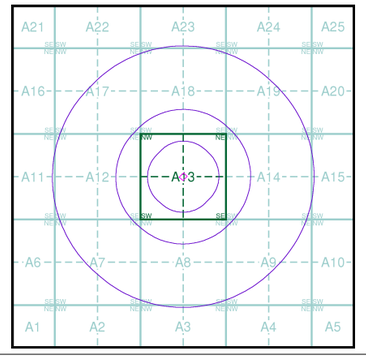
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

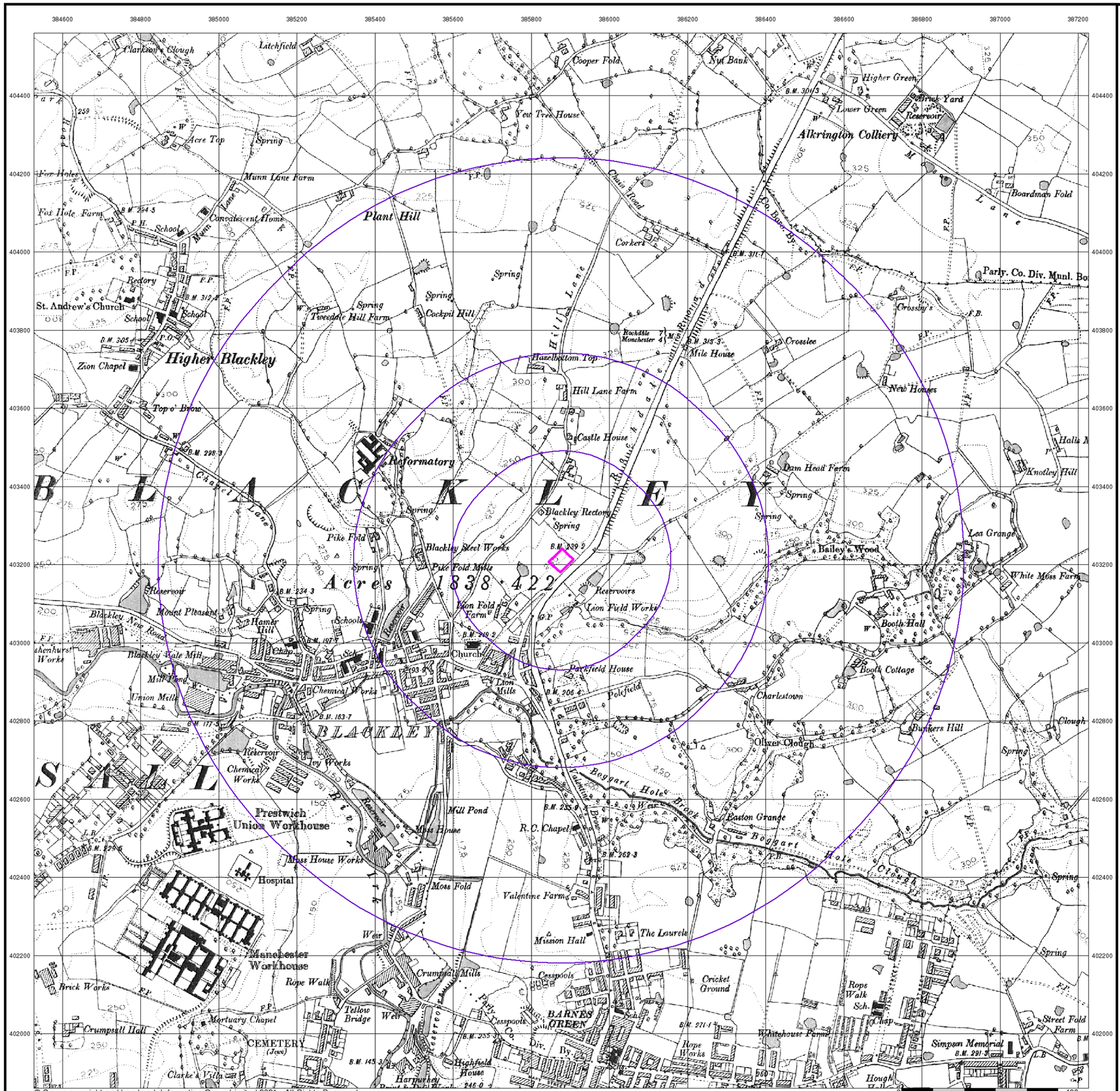
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Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
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Search Buffer (m):	1000

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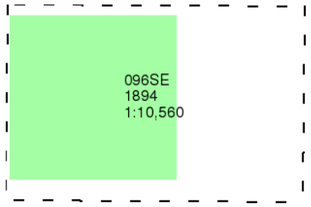
Lancashire And Furness

Published 1894

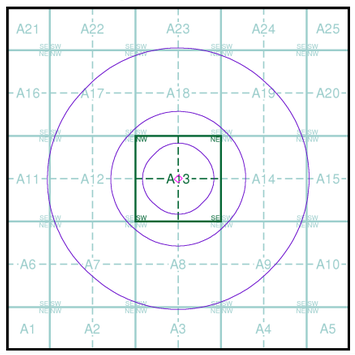
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



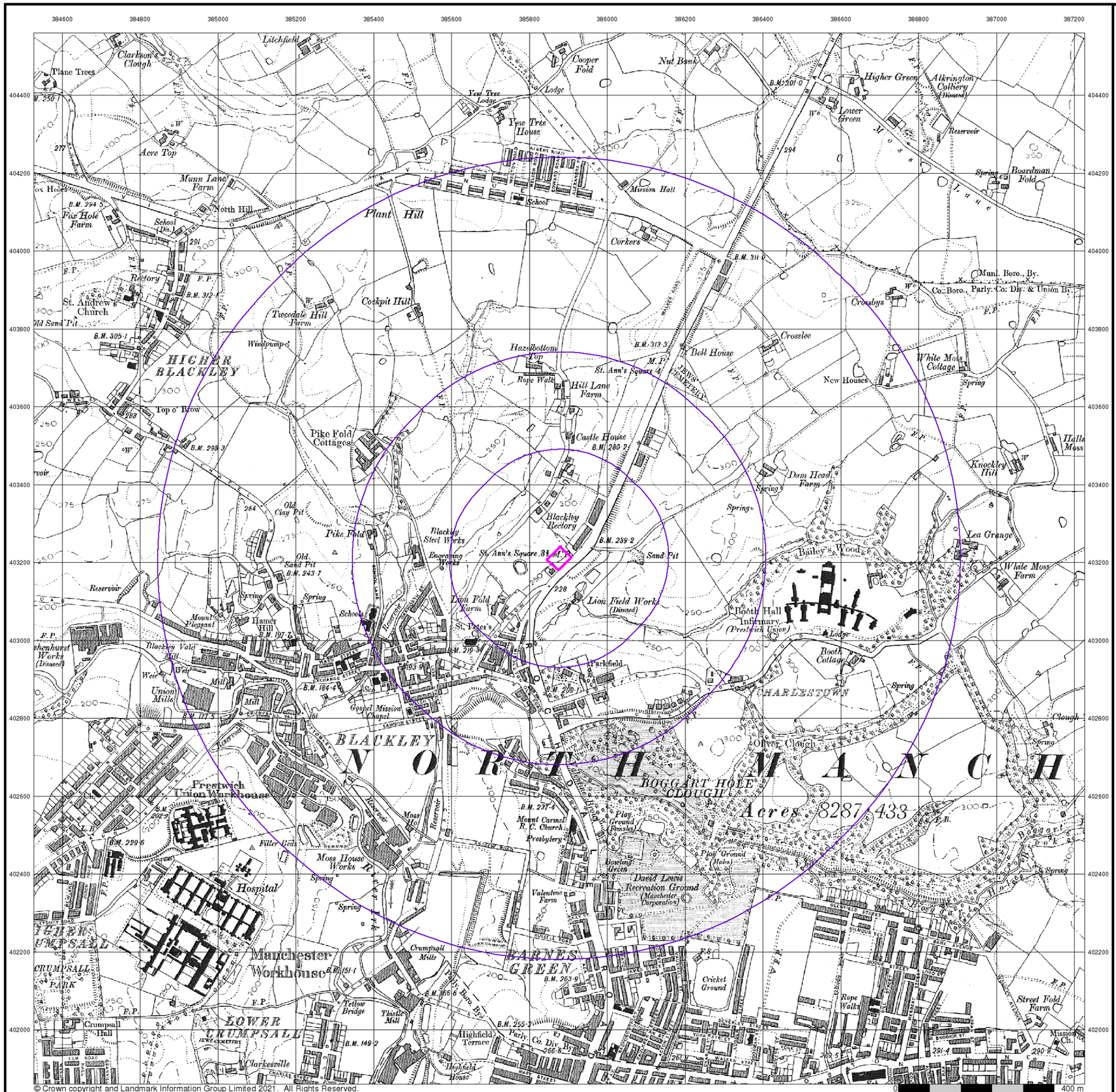
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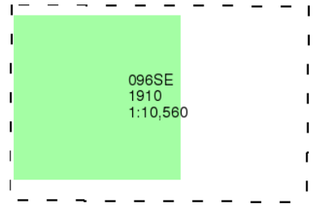
Lancashire And Furness

Published 1910

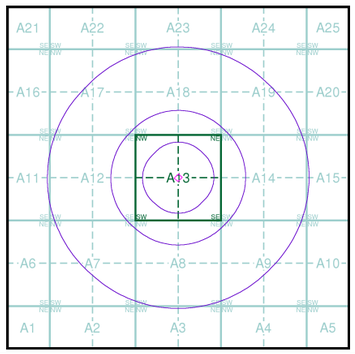
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Map Name(s) and Date(s)



Historical Map - Slice A



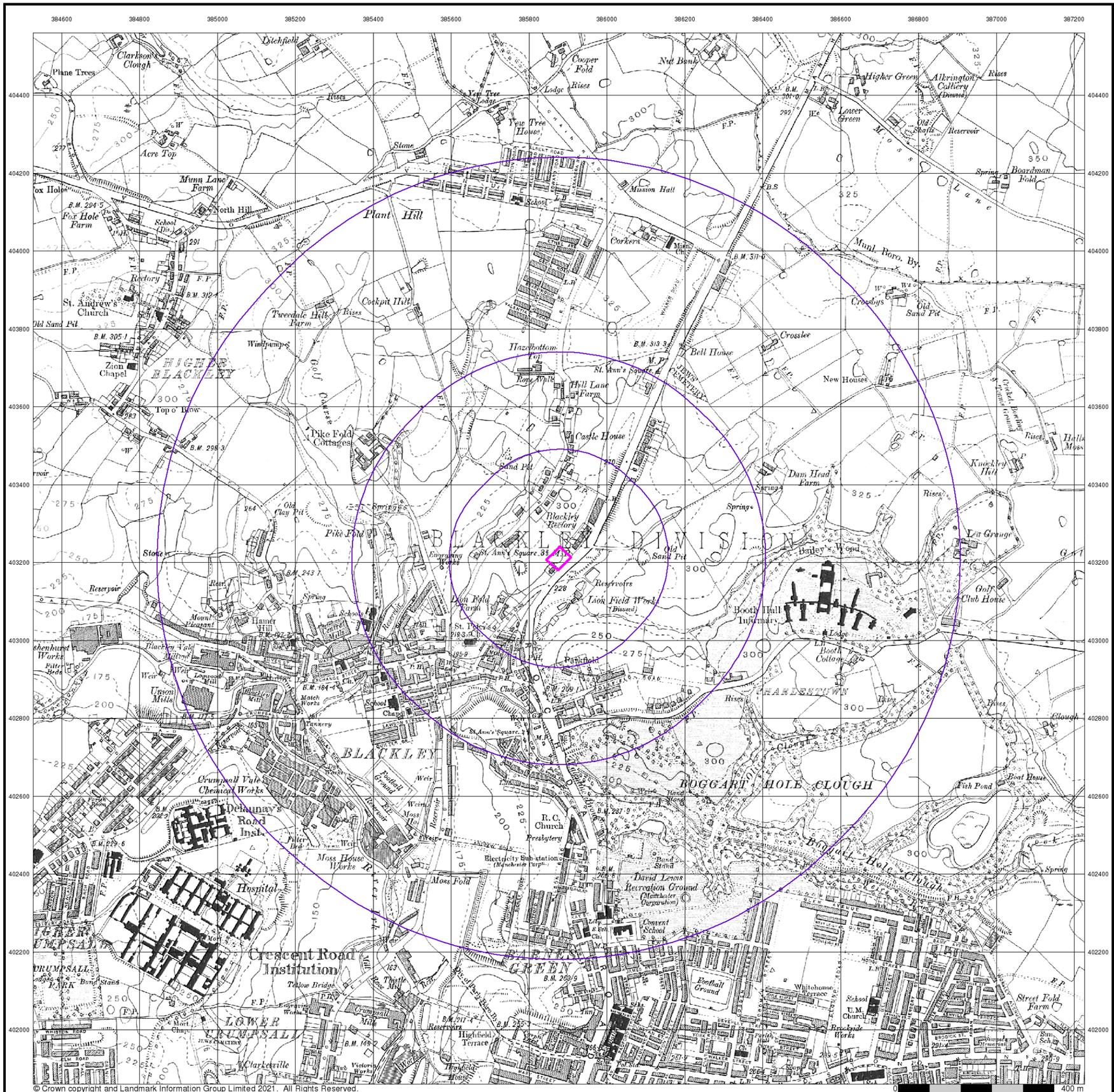
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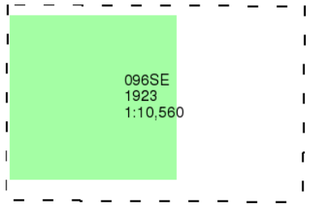
Lancashire And Furness

Published 1923

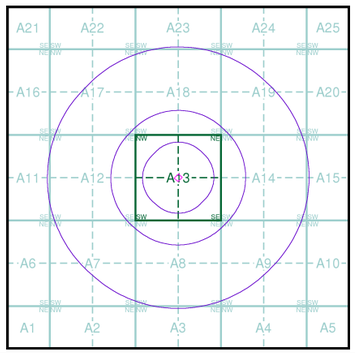
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



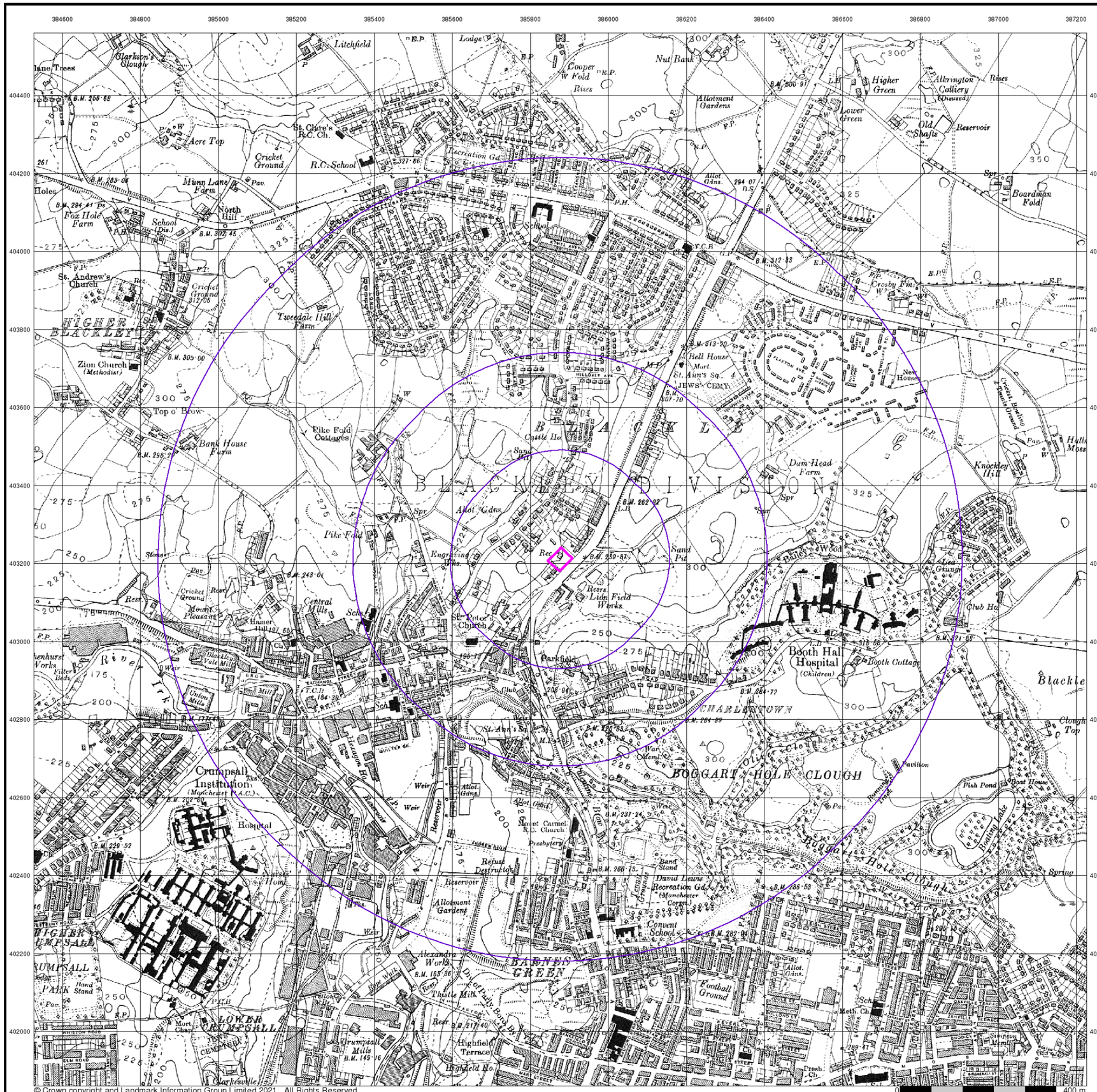
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Lancashire And Furness

Published 1933

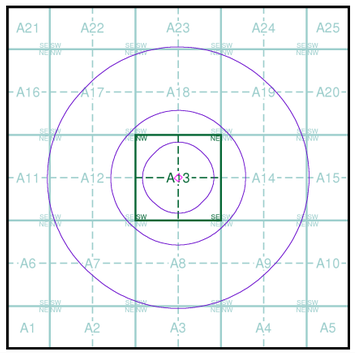
Source map scale - 1:10,560

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Map Name(s) and Date(s)

096SE
1933
1:10,560

Historical Map - Slice A



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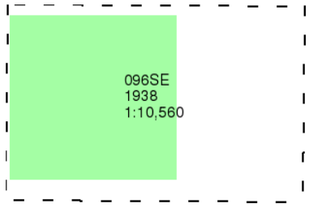
Lancashire And Furness

Published 1938

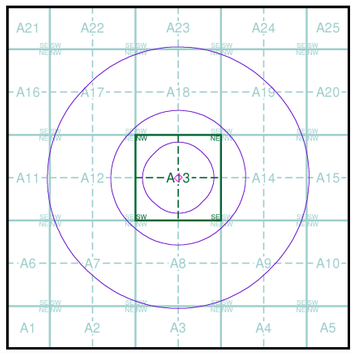
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

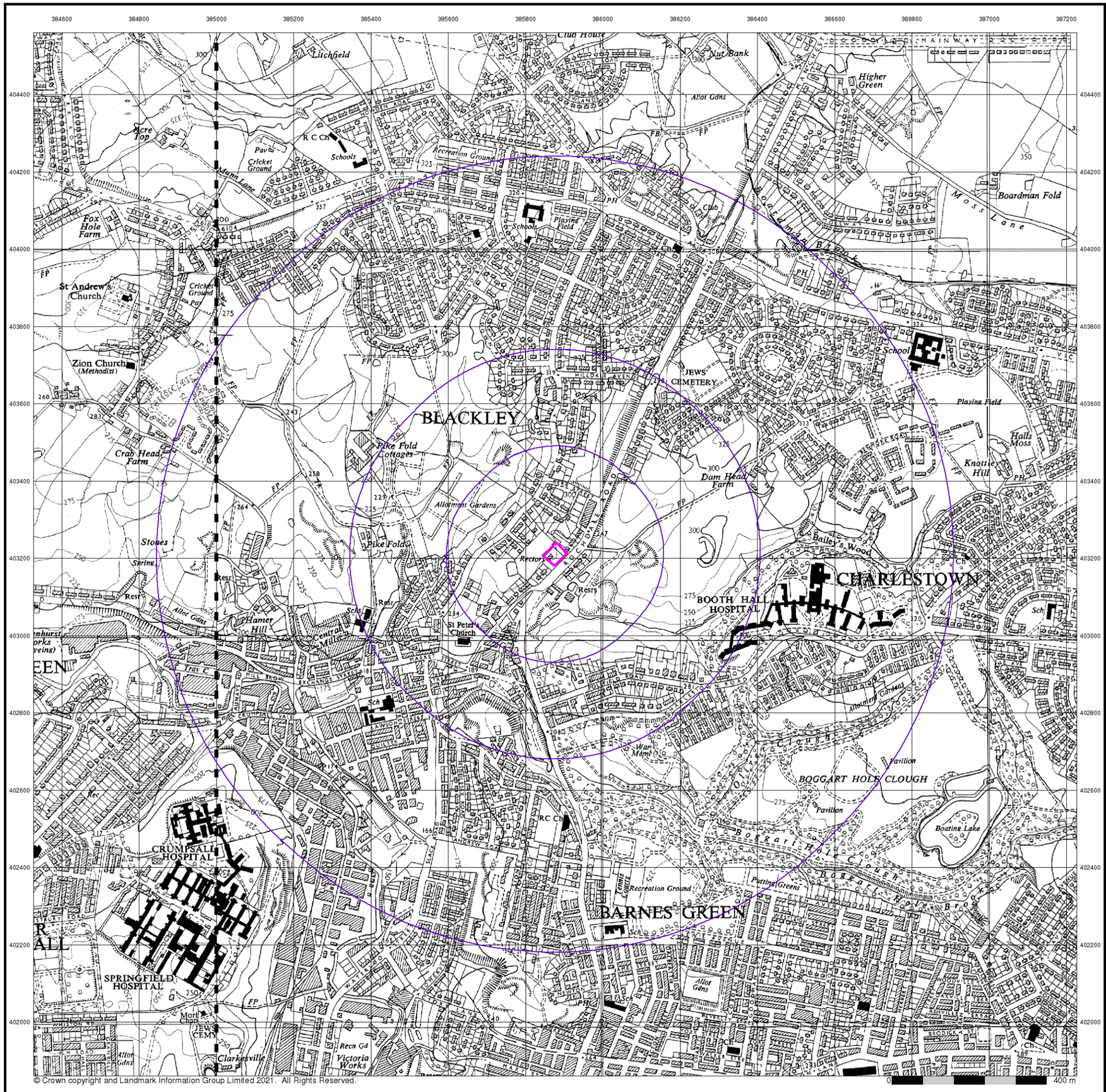
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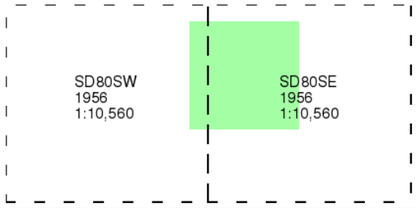
Ordnance Survey Plan

Published 1956

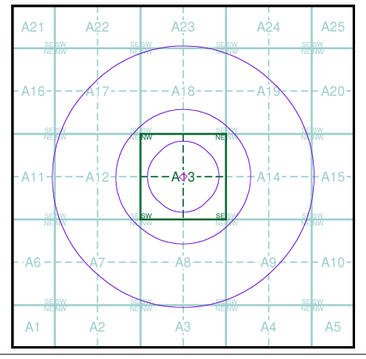
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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National Grid Reference:	385880, 403210
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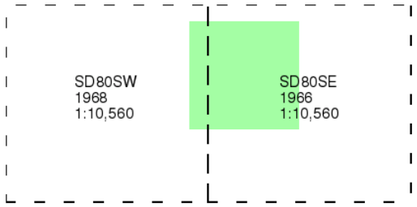
Ordnance Survey Plan

Published 1966 - 1968

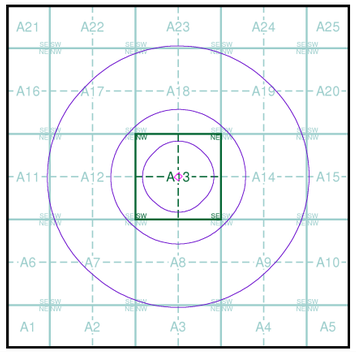
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Map Name(s) and Date(s)



Historical Map - Slice A



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Manchester

Published 1975

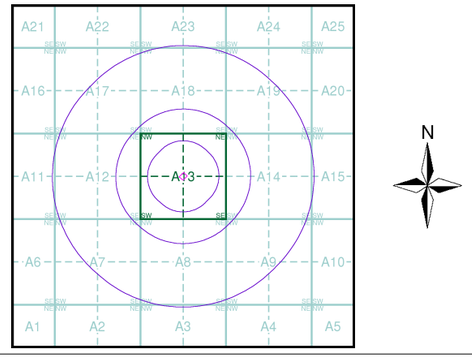
Source map scale - 1:25,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A



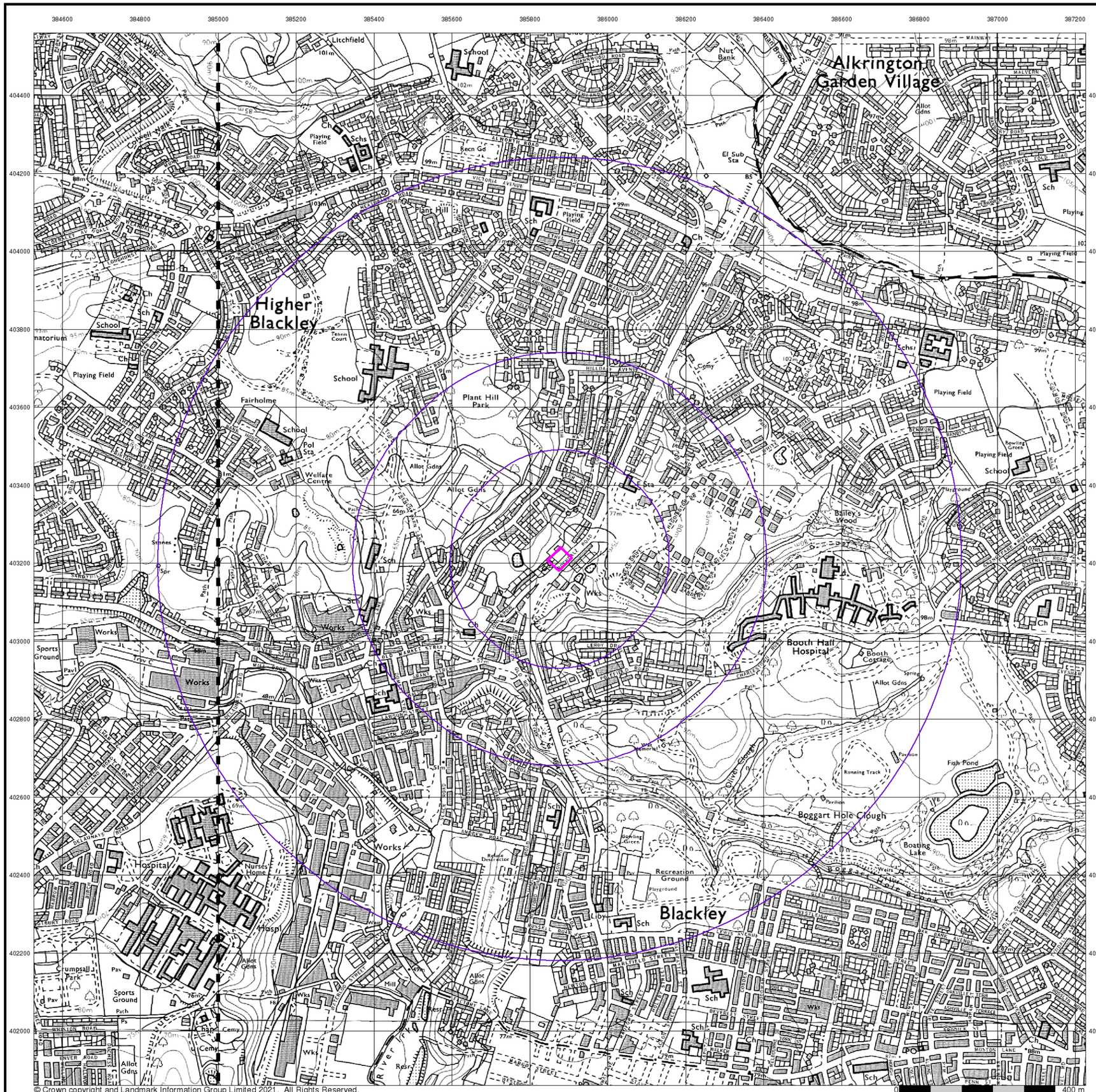
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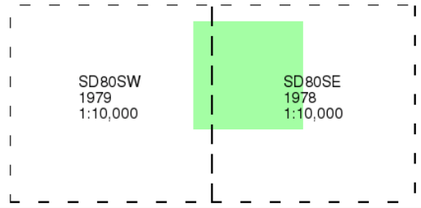
Ordnance Survey Plan

Published 1978 - 1979

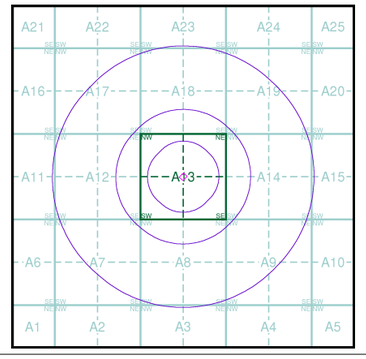
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



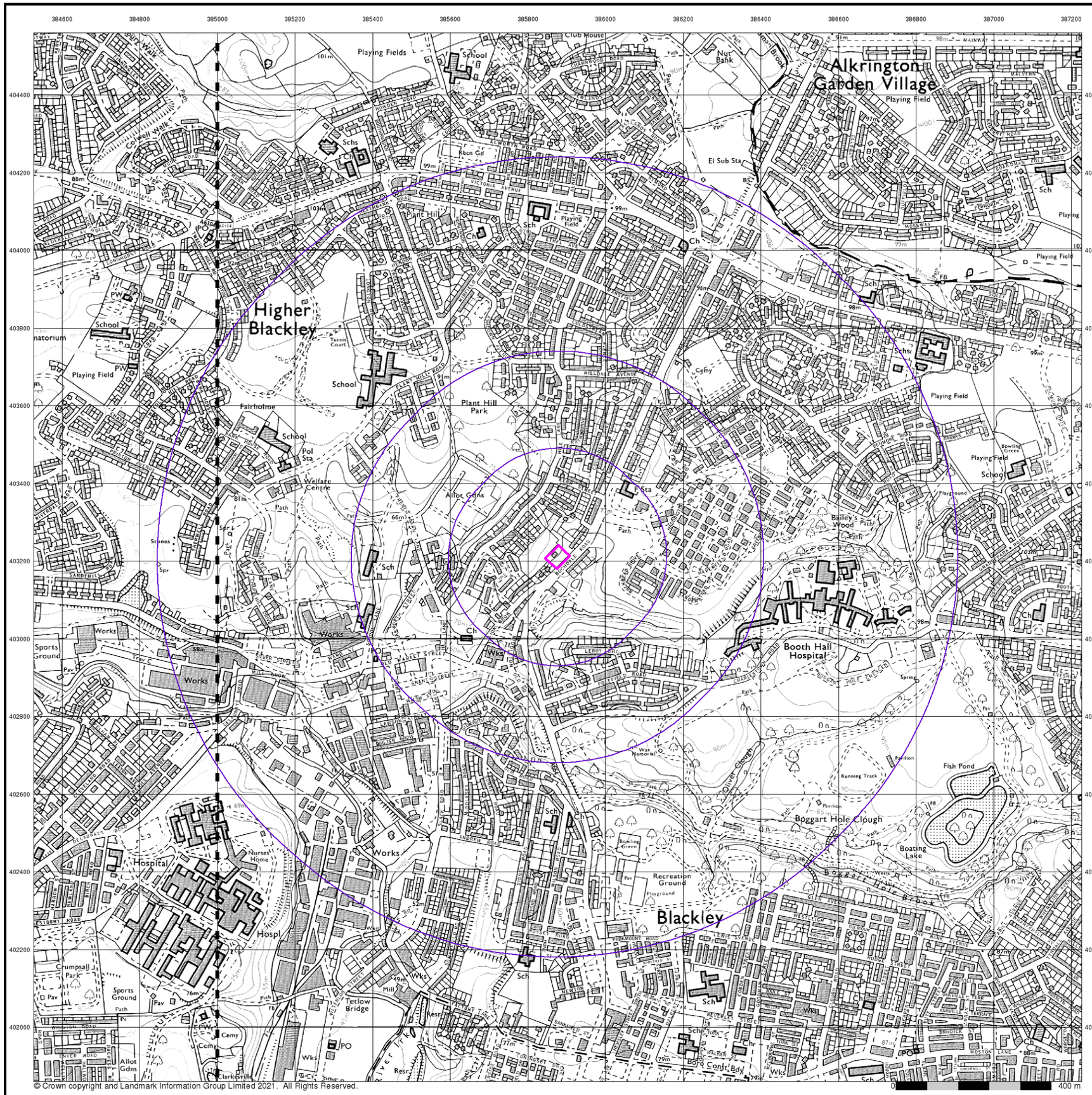
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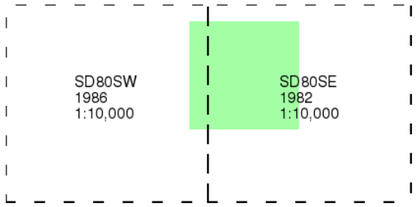
Ordnance Survey Plan

Published 1982 - 1986

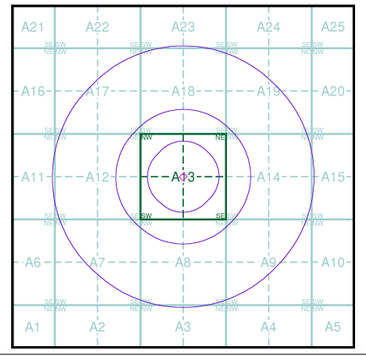
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Map Name(s) and Date(s)



Historical Map - Slice A



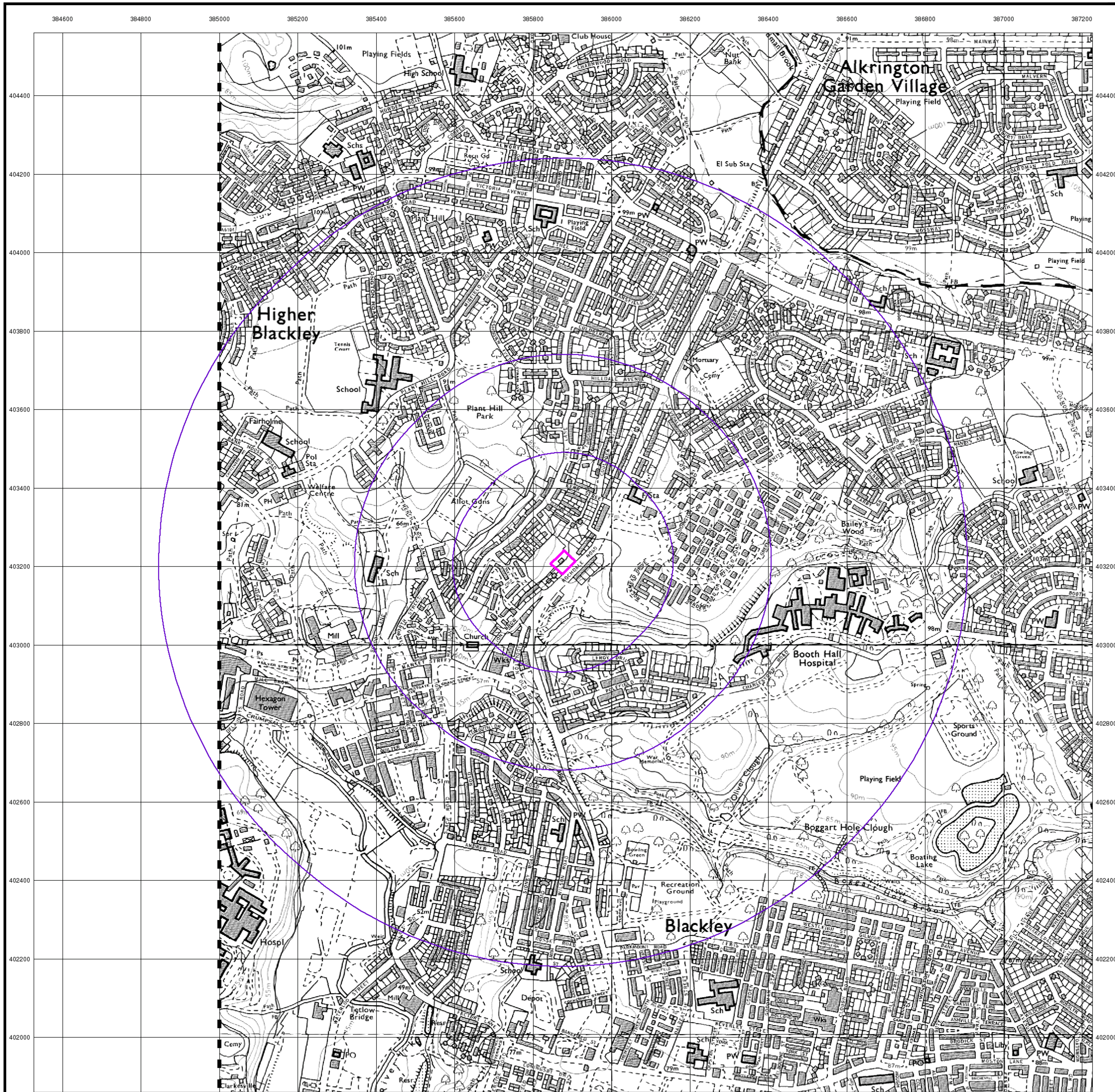
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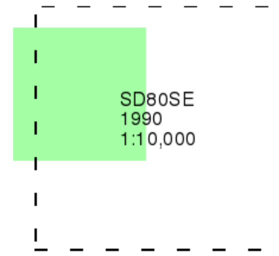
Ordnance Survey Plan

Published 1990

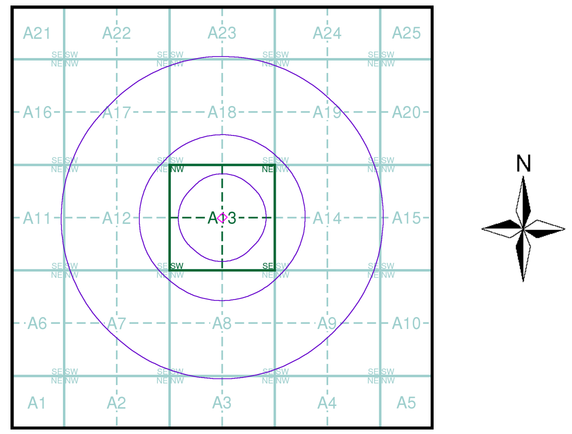
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 274526983_1_1
Customer Ref: LKC 21 1140
National Grid Reference: 385880, 403210
Slice: A
Site Area (Ha): 0.19
Search Buffer (m): 1000

Site Details

1161 Rochdale Road, MANCHESTER, M9 7FP

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



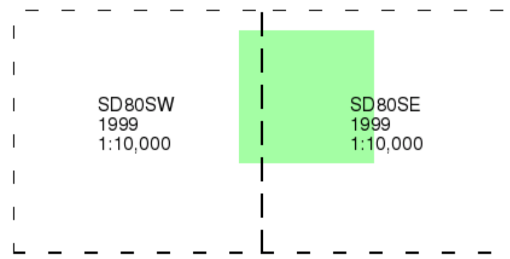
10k Raster Mapping

Published 1999

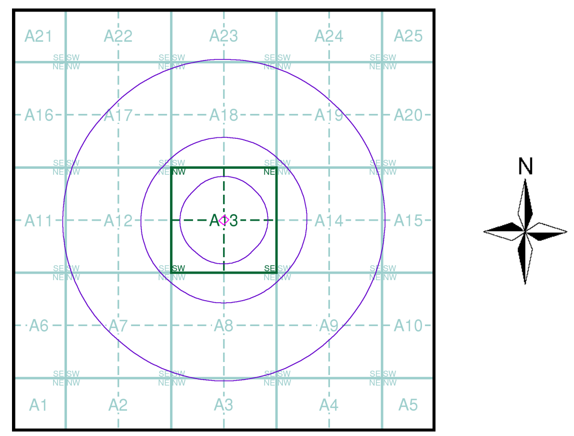
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	1000

Site Details

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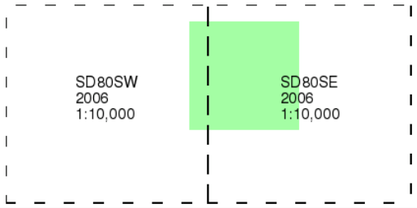
10k Raster Mapping

Published 2006

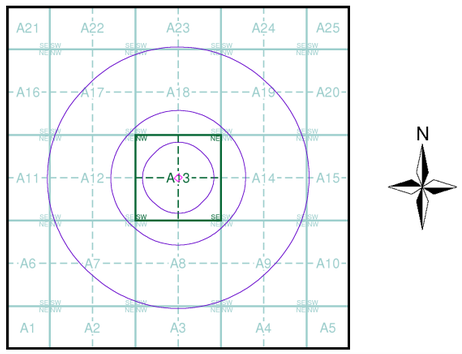
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

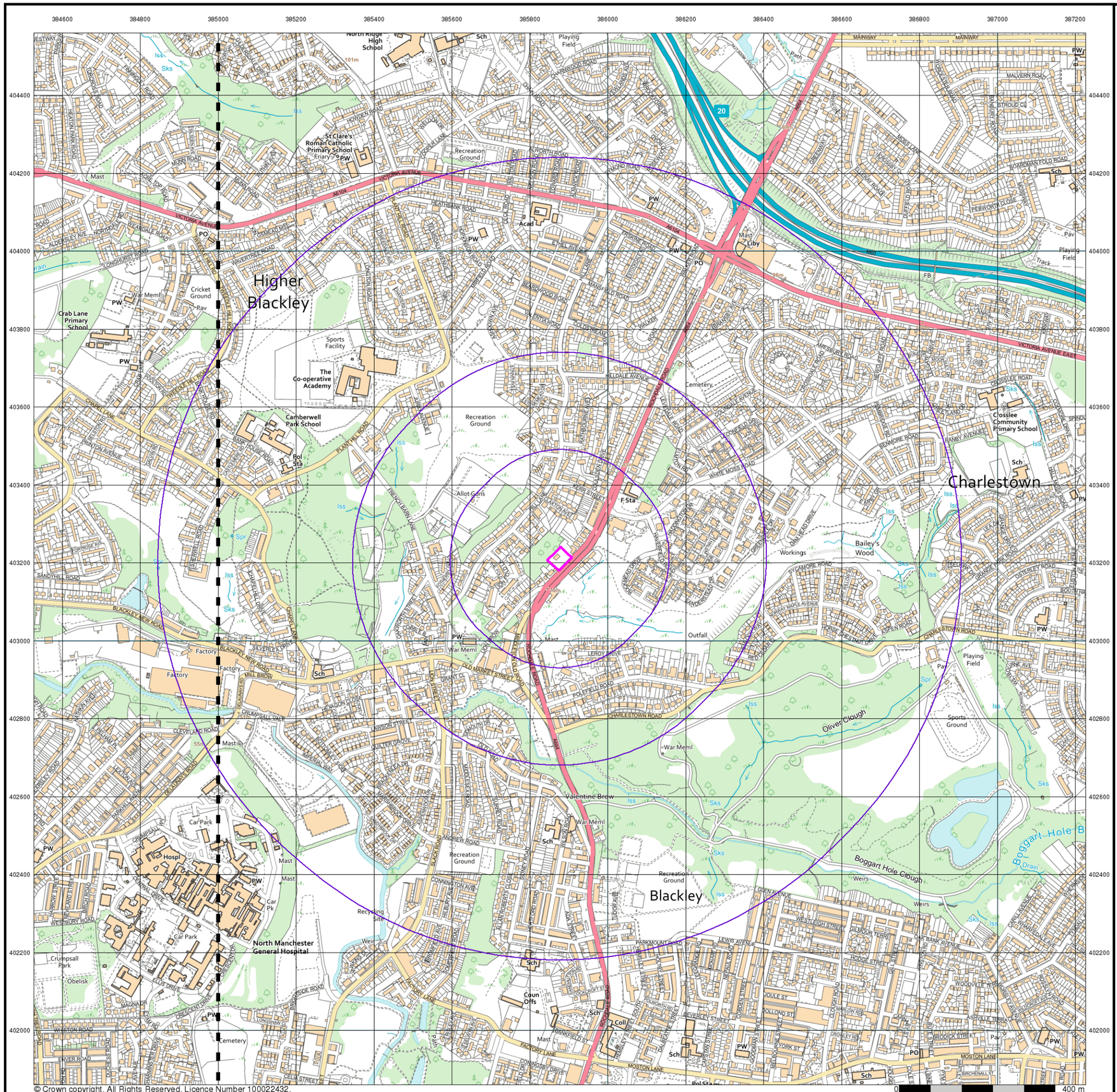
Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
Search Buffer (m):	1000

Site Details

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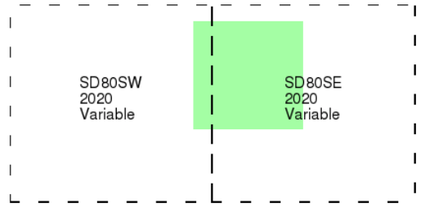
VectorMap Local

Published 2020

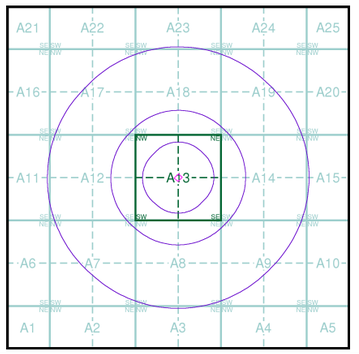
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	274526983_1_1
Customer Ref:	LKC 21 1140
National Grid Reference:	385880, 403210
Slice:	A
Site Area (Ha):	0.19
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Site Details

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Tel: 0844 844 9952
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Appendix B

Envirocheck Report

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
274526983_1_1

Customer Reference:
LKC 21 1140

National Grid Reference:
385880, 403210

Slice:
A

Site Area (Ha):
0.19

Search Buffer (m):
1000

Site Details:

1161 Rochdale Road
MANCHESTER
M9 7FP

Client Details:

L Consult
LK Consult Ltd
Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	27
Hazardous Substances	-
Geological	33
Industrial Land Use	39
Sensitive Land Use	50
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Useful Contacts	58

Introduction

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

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Report Version v53.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 4			11	21
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 12		1		3
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 12		Yes		
Pollution Incidents to Controlled Waters	pg 12				2
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances	pg 13				7
River Quality	pg 14				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 14				6 (*8)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 17	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 17	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 18		10	14	50

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 27		1	1	3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 28	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 28		3	8	8
Potentially Infilled Land (Water)	pg 29		3	13	58
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 33	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 33	Yes	Yes		Yes
BGS Recorded Mineral Sites	pg 35		3	2	4
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 37	Yes	n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 37	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 37	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 37	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 37	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 38	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 39		10	14	28
Fuel Station Entries	pg 43		1		3
Points of Interest - Commercial Services	pg 43		7	3	8
Points of Interest - Education and Health	pg 45				4
Points of Interest - Manufacturing and Production	pg 45			5	11
Points of Interest - Public Infrastructure	pg 47		9		10
Points of Interest - Recreational and Environmental	pg 48		1		5
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 50			1	1
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves	pg 50			1	
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 50	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	0	1	385877 403200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (NW)	0	1	385877 403210
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	0	1	385900 403210
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	2	1	385850 403200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (S)	40	1	385900 403150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	43	1	385950 403210
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	46	1	385800 403200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	75	1	385950 403150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	93	1	386000 403210
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	131	1	385877 403050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	133	1	385900 403050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	134	1	385750 403300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	143	1	385750 403100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	146	1	386000 403100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	151	1	385950 403050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (SW)	151	1	385800 403050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	156	1	385700 403150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	169	1	385750 403350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (NW)	173	1	385700 403300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	178	1	385800 403400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	180	1	385700 403100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	181	1	385750 403050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	182	1	386050 403100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	182	1	385850 403000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	196	1	385650 403210
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	206	1	385750 403400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	224	1	386100 403100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	231	1	385877 402950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	232	1	385900 402950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	240	1	385700 403400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	246	1	385600 403210
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	251	1	385700 403000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	252	1	385600 403150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	253	1	386100 403050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	276	1	385700 403450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	281	1	385877 402900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	282	1	385900 402900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	291	1	385600 403050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	291	1	385950 402900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	301	1	385550 403150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	307	1	386000 402900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	311	1	385650 403450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	313	1	385600 403400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	321	1	385600 403000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	346	1	385600 403450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	354	1	385750 402850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	361	1	386250 403100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	374	1	385700 402850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	383	1	385550 403450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	388	1	385950 402800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	393	1	386300 403200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	401	1	386000 402800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	417	1	385550 403500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	425	1	385450 403050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	431	1	385850 402750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	437	1	385800 402750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	446	1	385400 403210
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (NE)	446	1	386200 403550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	449	1	386000 402750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (W)	458	1	385400 403100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (NE)	458	1	386300 403450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	481	1	385877 402700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	496	1	385350 403200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	496	1	385350 403210
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	498	1	385350 403250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (W)	499	1	385350 403150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Middleton Old Rd/Market S, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0267 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Boggarts Hole Brook **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A8NW (S)	344	2	385750 402860
2	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Booth Hall Road, Sso, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0120 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8NW (S)	373	2	385830 402810
2	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Booth Hall Road, Sso, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0121 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	373	2	385830 402810
3	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Blackley Sso, Middleton Old Road/Rochdale Road, Blackley, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982716 Permit Version: 1 Effective Date: 28th November 1994 Issued Date: Not Supplied Revocation Date: 16th June 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	423	2	385690 402800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Booth Hall Road, Manchester Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993772 Permit Version: 1 Effective Date: 21st June 2005 Issued Date: 21st June 2005 Revocation Date: 26th June 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	433	2	385812 402752
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Outside 167 Charlestown Road Cso, Charlestown Road, Manchester Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993782 Permit Version: 1 Effective Date: 21st June 2005 Issued Date: 21st June 2005 Revocation Date: 26th June 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook Trib Irk **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	434	2	385811 402751
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Charlestown Road Cso 114 Charlestown Road, ., ., Manchester, M9 7br Authority: Environment Agency, North West Region Catchment Area: Irk Reference: Npswqd006371 Permit Version: 1 Effective Date: 29th April 2009 Issued Date: 29th April 2009 Revocation Date: 31st March 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	436	2	385807 402750
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Outside 130&132 Charlestown Rd Cso, Charlestown Road, Manchester Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993793 Permit Version: 1 Effective Date: 21st June 2005 Issued Date: 21st June 2005 Revocation Date: 26th June 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook Trib Of Irk **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	436	2	385810 402750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Charlestown Road Cso 114 Charlestown Road, ., ., Manchester, M9 7br Authority: Environment Agency, North West Region Catchment Area: Irk Reference: Npswqd006371 Permit Version: 2 Effective Date: 1st April 2018 Issued Date: 12th March 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	441	2	385810 402745
5	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Lion St/Grant St, Sso, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0154 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	462	2	385540 402860
6	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Charlestown Rd/Polefield, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0132 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	492	2	386250 402860
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Charlstown Rd, Charlestown, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0124 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Boggart Hole Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14SW (E)	582	2	386440 402980

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mill Brow/Blackley New Road Cso Rear Of Hexagon Tower, ., Crumsall Vale, Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982717 Permit Version: 2 Effective Date: 4th December 2019 Issued Date: 4th December 2019 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: A Culverted Section River Irk **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	726	2	385204 402866
8	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mill Brow/Blackley New Road Cso Rear Of Hexagon Tower, ., Crumsall Vale, Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016993671 Permit Version: 1 Effective Date: 9th January 2020 Issued Date: 9th January 2020 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Culverted Trib Of River Irk **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	730	2	385205 402856
9	**Discharge Consents** Operator: Manchester City Council Property Type: FOOD+BEVERAGE SERVICES/CAFE/RESTAURANT/PUB Location: Public Conveniences & Parks Cafe Boggart Hall Clough, Rochdale Rd, Manchester, Lancashire Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0171/1344 Permit Version: 1 Effective Date: 25th February 1971 Issued Date: 25th February 1971 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Leven **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A8SE (SE)	732	2	386210 402530
10	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mill Brow/Blackley New Road Cso Rear Of Hexagon Tower, ., Crumsall Vale, Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0112 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 25th January 2005 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 10m	A12SW (SW)	750	2	385170 402880

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mill Brow/Blackley New Road Cso Rear Of Hexagon Tower, ., Crumsall Vale, Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982717 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 3rd December 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A12SW (SW)	755	2	385160 402890
10	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mill Brow/Blackley New Road Cso Rear Of Hexagon Tower, ., Crumsall Vale, Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0269 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status:** **Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A12SW (SW)	757	2	385160 402885
11	**Discharge Consents** Operator: Mr H Downs Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: Old Houses At Home, Bottomly Side, Blackely, Manchester, M9 8ep Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 01m/957 Permit Version: 1 Effective Date: 26th October 1963 Issued Date: 26th October 1963 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unknown **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	758	2	385337 402645
12	**Discharge Consents** Operator: Ici Chemicals & Polymers Ltd Property Type: MAKING OF CHEMICALS + CHEMICAL PRODUCTS Location: Ici Works Swo, Crumpsall, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991421 Permit Version: 1 Effective Date: 1st April 1992 Issued Date: Not Supplied Revocation Date: 1st April 1992 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status:** **Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	804	2	385330 402590

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mill Brow/Blackley New Road Cso Rear Of Hexagon Tower, ., Crumsall Vale, Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0112 Permit Version: 2 Effective Date: 26th January 2005 Issued Date: Not Supplied Revocation Date: 8th January 2020 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	806	2	385150 402800
14	**Discharge Consents** Operator: Qds Environmental Limited Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Hexagon Tower Main Car Park Crumpsall Vale, ., Blackley, Manchester, M9 8ep Authority: Environment Agency, North West Region Catchment Area: Irk Reference: Npswqd002604 Permit Version: 1 Effective Date: 21st May 2008 Issued Date: 21st May 2008 Revocation Date: 30th November 2008 Discharge Type: Trade Effluent Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	822	2	385199 402699
15	**Discharge Consents** Operator: Qds Environmental Limited Property Type: Mobile Plant Location: Hexagon Tower Main Car Park Crumpsall Vale, ., Blackley, Manchester, M9 8ep Authority: Environment Agency, North West Region Catchment Area: Irk Reference: Npswq000920 Permit Version: 1 Effective Date: 21st May 2008 Issued Date: 21st May 2008 Revocation Date: 30th November 2008 Discharge Type: Discharge Of Other Matter-Ground Water Discharge Environment: Underground Water Receiving Water: Groundwaters **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	845	2	385210 402650
15	**Discharge Consents** Operator: Qds Environmental Limited Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Hexagon Tower Main Car Park Crumpsall Vale, ., Blackley, Manchester, M9 8ep Authority: Environment Agency, North West Region Catchment Area: Irk Reference: Npswqd000920 Permit Version: 1 Effective Date: 21st May 2008 Issued Date: 21st May 2008 Revocation Date: 30th November 2008 Discharge Type: Trade Effluent Discharge Environment: Underground Water Receiving Water: Groundwaters **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	845	2	385210 402650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Discharge Consents** Operator: French Barn Lane Horticultural Society Property Type: FARMS (NOT HOUSE)/CROP + ANIMAL REARING/PLANT NURSERY Location: French Barn Lane Allotments, French Barn Lane, Blackley, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991084 Permit Version: 1 Effective Date: 25th February 1986 Issued Date: Not Supplied Revocation Date: 1st July 1991 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Lapsed (under Environment Act 1995, Schedule 23)** Positional Accuracy: Approximate location provided by supplier	A12SW (W)	871	2	385000 403000
17	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Cleveland Rd Delaunay Rd Cso 288nj Delaunays Road, ., ., Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0078 Permit Version: 3 Effective Date: 25th June 2018 Issued Date: 25th June 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	879	2	385056 402820
18	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Cleveland Rd Delauneys Rd Cso 281kk Delauneys Road, ., ., Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0078 Permit Version: 2 Effective Date: 26th November 2004 Issued Date: 26th November 2004 Revocation Date: 24th June 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	889	2	385050 402810
18	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Cleveland Rd Delauneys Rd Cso 281kk Delauneys Road, ., ., Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0078 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 25th November 2004 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	889	2	385040 402830

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Cleveland Rd Delauneys Rd Cso 281kk Delauneys Road, ., ., Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 01MAN0117 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: 1st January 1995 Revocation Date: 23rd May 2005 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	933	2	385001 402811
18	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Cleveland Rd Delauneys Rd Cso 281kk Delauneys Road, ., ., Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993738 Permit Version: 2 Effective Date: 2nd July 2018 Issued Date: 2nd July 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	934	2	385000 402810
18	**Discharge Consents** Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: Cleveland Rd/Delauneys Road, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 01man0117 Permit Version: 2 Effective Date: 14th April 2009 Issued Date: 14th April 2009 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	934	2	385000 402810
18	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Cleveland Rd Delauneys Rd Cso 281kk Delauneys Road, ., ., Manchester, M9 8gq Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993738 Permit Version: 1 Effective Date: 24th May 2005 Issued Date: 24th May 2005 Revocation Date: 1st July 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Irk **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	934	2	385000 402810

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Local Authority Pollution Prevention and Controls** Name: Blackley Service Station Location: 976 Rochdale Road, Blackley, MANCHESTER, Lancashire, M9 7EP Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/PFS/RM/011/06 Dated: 18th June 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A13SW (S)	75	3	385858 403107
20	**Local Authority Pollution Prevention and Controls** Name: Booth Hall Childrens Hospital Location: Charlestown Road, Blackley, MANCHESTER, Lanacashire, M9 2AA Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/9/91 Dated: 28th April 1993 Process Type: Local Authority Air Pollution Control Description: PG5/1Clinical waste incineration processes under 1 tonne an hour **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	663	3	386560 403100
21	**Local Authority Pollution Prevention and Controls** Name: Save Service Station (Blackley) Location: Slack Road, Blackley, MANCHESTER, Lancashire, M9 3AW Authority: Manchester City Council, Environmental Health Department Permit Reference: PFS/32/98/02 Dated: 16th December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorisation revoked** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	852	3	385513 402410
22	**Local Authority Pollution Prevention and Controls** Name: Tesco Petrol Station Blackley Location: Victoria Avenue East, Blackley, Manchester, M9 6hp Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/PFS/RM/053/11 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	954	3	386518 403949
	Nearest Surface Water Feature	A13SE (SE)	55	-	385937 403166
23	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Pollution Found Incident Date: 9th February 1996 Incident Reference: 96610259 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	534	2	385500 402800
24	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Sewerage Systems Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Storm Sewage Note: Boggart Hole Cloug Incident Date: 20th May 1995 Incident Reference: 95611173 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: High Flow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	890	2	386000 402300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**Registered Radioactive Substances** Name: Its Testing Services (Uk) Limited Location: Po Box 42, Hexagon House, Blackley, Manchester, M9 8ZS Authority: Environment Agency, North West Region Permit Reference: Bz1820 Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Authorisation certificate surrendered by operator** Positional Accuracy: Manually positioned within the geographical locality	A12SE (SW)	539	2	385384 402929
25	**Registered Radioactive Substances** Name: Its Testing Services (Uk) Limited Location: Po Box 42,Hexagon House,, Manchester, M9 8ZS Authority: Environment Agency, North West Region Permit Reference: Bz1846 Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Authorisation certificate surrendered by operator** Positional Accuracy: Manually positioned within the geographical locality	A12SE (SW)	539	2	385384 402929
26	**Registered Radioactive Substances** Name: Booth Hall Childrens Hospital Location: Charlestown Road, Blackley, MANCHESTER, Greater Manchester, M9 7AA Authority: Environment Agency, North West Region Permit Reference: AE5888 Dated: 31st March 1991 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation either revoked or cancelled** Positional Accuracy: Automatically positioned to the address	A14SE (E)	658	2	386555 403100
27	**Registered Radioactive Substances** Name: Zeneca Specialities Location: Hexagon House, Blackley, MANCHESTER, Greater Manchester, M9 8ZS Authority: Environment Agency, North West Region Permit Reference: AQ7437 Dated: 16th March 1995 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation either revoked or cancelled** Positional Accuracy: Manually positioned to the address or location	A7NW (SW)	794	2	385137 402848
27	**Registered Radioactive Substances** Name: Avecia Ltd Location: Po Box 42, Hexagon House, Manchester, M9 8zs Authority: Environment Agency, North West Region Permit Reference: Bw6116 Dated: 1st December 2003 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Authorisation either revoked or cancelled** Positional Accuracy: Manually positioned to the address or location	A7NW (SW)	799	2	385125 402861
27	**Registered Radioactive Substances** Name: Avecia Ltd Location: PO Box 42, Hexagon House, Blackely, MANCHESTER, M9 8ZS Authority: Environment Agency, North West Region Permit Reference: BG4372 Dated: 15th July 1999 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Registration under the Act of an open source which is also the subject of an authorisation **Status: Authorisation either revoked or cancelled** Positional Accuracy: Manually positioned to the address or location	A7NW (SW)	808	2	385120 402850
27	**Registered Radioactive Substances** Name: Avecia Ltd Location: Hexagon House, Blackely, MANCHESTER, M9 8ZS Authority: Environment Agency, North West Region Permit Reference: BG4399 Dated: 15th July 1999 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A7NW (SW)	811	2	385120 402845

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Irk GQA Grade: River Quality E Reach: Wince Bk To Moston Bk Estimated Distance (km): 10.3 Flow Rate: Flow less than 2.5 cumecs Flow Type: River Year: 2000	A7NE (SW)	838	2	385296 402574
28	**Water Abstractions** Operator: Avecia Ltd Licence Number: 2569005012 Permit Version: 101 Location: Borehole At Blackley, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 1000 Yearly Rate (m3): 1000 Details: Licence Holders Land At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st July 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12SW (W)	898	2	385001 402901
29	**Water Abstractions** Operator: British Cables Company Limited Licence Number: 2569005044 Permit Version: 106 Location: 2 Boreholes At Blackley, Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th October 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SW (W)	989	2	384890 402950
29	**Water Abstractions** Operator: Bt Cables Limited Licence Number: 2569005044 Permit Version: 105 Location: 2 Boreholes At Blackley, Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th October 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SW (W)	989	2	384890 402950
29	**Water Abstractions** Operator: Manchester Cables Ltd Licence Number: 2569005044 Permit Version: 104 Location: 2 Boreholes At Blackley, Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th May 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SW (W)	989	2	384890 402950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**Water Abstractions** Operator: Belden (Uk) Ltd Licence Number: 2569005044 Permit Version: 103 Location: 2 Boreholes At Blackley, Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th November 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SW (W)	989	2	384890 402950
29	**Water Abstractions** Operator: Belden (Uk) Ltd Licence Number: 2569005044 Permit Version: 102 Location: 2 Boreholes At Blackley, Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 909 Yearly Rate (m3): 318181 Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 3rd April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SW (W)	989	2	384890 402950
	Water Abstractions Operator: British Cables Company Limited Licence Number: 2569005044 Permit Version: 106 Location: Boreholes X 2 At Blackley Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th October 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11SE (W)	1255	2	384610 402990
	Water Abstractions Operator: Bt Cables Limited Licence Number: 2569005044 Permit Version: 105 Location: Boreholes X 2 At Blackley Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th October 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11SE (W)	1255	2	384610 402990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Manchester Cables Ltd Licence Number: 2569005044 Permit Version: 104 Location: Boreholes X 2 At Blackley Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th May 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11SE (W)	1255	2	384610 402990
	Water Abstractions Operator: Belden (Uk) Ltd Licence Number: 2569005044 Permit Version: 103 Location: Boreholes X 2 At Blackley Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th November 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11SE (W)	1255	2	384610 402990
	Water Abstractions Operator: Belden (Uk) Ltd Licence Number: 2569005044 Permit Version: 102 Location: 2 Boreholes At Blackley, Manchester $121 Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 3rd April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11SE (W)	1255	2	384610 402990
	Water Abstractions Operator: Centertex (U K) Limited Licence Number: 2569005008 Permit Version: Not Supplied Location: Reservoir Fed By Surface Drainage, & Spring, KINGSBRIDGE ROAD Authority: Environment Agency, North West Region Abstraction: Manufacturing Abstraction Type: Not Supplied Source: River Daily Rate (m3): 409 Yearly Rate (m3): 102285 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1722	2	385500 401500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Balfour Beatty Major Projects Licence Number: 2569005059 Permit Version: Not Supplied Location: MIDDLETON, CR7 7XA Authority: Environment Agency, North West Region Abstraction: Dust Suppression Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 240 Yearly Rate (m3): 40000 Details: The River Irk; Construction; Type: Abstraction; Status: Current Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Unknown	A22NW (NW)	1923	2	384900 404895
	Water Abstractions Operator: Costain Building & Civil Engineering Licence Number: 2569005057 Permit Version: Not Supplied Location: River Irk, Middleton, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Dust Suppression Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 20 Yearly Rate (m3): 4000 Details: Licence Status: Expired Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NW)	1974	2	384996 405006
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A13NW (NW)	0	4	385873 403215
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A13SE (NW)	0	4	385877 403210
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A13SE (NW)	0	4	385877 403210
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (NW)	0	4	385873 403215
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SE (NW)	0	4	385877 403210

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 119.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SE (SE)	55	5	385937 403166
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SE (SE)	86	5	385934 403120
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 94.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SE (S)	89	5	385920 403105
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SE (S)	89	5	385920 403105
34	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (S)	146	5	385846 403038
35	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SE (SE)	160	5	385975 403056
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 229.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SE (SE)	161	5	385978 403058

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (S)	162	5	385841 403022
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (S)	166	5	385838 403019
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 184.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (S)	170	5	385833 403017
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NW (W)	279	5	385586 403307
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (SW)	339	5	385696 402893
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 429.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SE (SE)	343	5	386192 403022
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 277.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A8NW (S)	353	5	385736 402856
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 251.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (W)	359	5	385488 403240
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (W)	359	5	385488 403240

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 144.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A8NW (SW)	360	5	385690 402872
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 87.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (W)	365	5	385485 403257
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 138.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (W)	365	5	385485 403257
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 107.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (NW)	432	5	385457 403393
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 115.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (W)	433	5	385430 403326
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 107.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (SW)	459	5	385429 403014
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 316.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A8NW (SW)	479	5	385579 402805
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A8NW (S)	487	5	385853 402695
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 149.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A8NE (S)	511	5	385921 402671

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (SW)	549	5	385377 402919
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 108.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A9NW (SE)	587	5	386355 402835
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A8NE (S)	599	5	386053 402609
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 211.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A8NE (S)	599	5	386053 402609
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 221.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (SW)	601	5	385341 402881
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	648	5	386555 403252
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	652	5	386558 403254
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 209.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A9NW (SE)	683	5	386399 402739
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 457.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A9NW (SE)	683	5	386399 402739

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	692	5	386598 403257
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 78.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	692	5	386598 403257
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 88.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A9NW (SE)	745	5	386299 402569
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A9SW (SE)	757	5	386231 402513
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	764	5	386671 403235
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 70.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	766	5	386673 403236
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	766	5	386673 403236
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 95.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	771	5	386678 403235
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 139.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A7SE (SW)	772	5	385516 402497

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A9SW (SE)	783	5	386256 402497
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A9SW (SE)	783	5	386256 402497
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A9SW (SE)	784	5	386259 402497
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A9SW (SE)	785	5	386261 402497
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 510.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A7NE (SW)	786	5	385296 402644
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A9SW (SE)	792	5	386270 402495
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	801	5	386703 403304
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	805	5	386709 403291
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.0 Watercourse Level: Underground Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A9SW (SE)	809	5	386295 402489

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 671.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Boggart Hole Brook Catchment Name: Mersey Primacy: 1	A9SW (SE)	816	5	386306 402488
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (W)	817	5	385031 403145
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 274.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (W)	821	5	385032 403100
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A7NW (SW)	822	5	385144 402780
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SE (E)	827	5	386733 403161
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 117.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A9SW (SE)	832	5	386261 402443
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	833	5	386733 403320
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	833	5	386734 403319
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SE (E)	839	5	386745 403171

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SE (E)	843	5	386749 403170
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SE (E)	843	5	386749 403170
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	893	5	385038 402826
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SE (E)	895	5	386802 403190
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SE (E)	895	5	386802 403190
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	895	5	385037 402823
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A7NW (SW)	895	5	385039 402819
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 635.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A7SE (SW)	895	5	385427 402406
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SE (E)	897	5	386804 403195

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 985.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A7NW (SW)	897	5	385037 402819
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	915	5	386822 403220
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 85.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	935	5	386836 403328
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 74.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	943	5	386847 403288

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
104	**Historical Landfill Sites** Licence Holder: Not Supplied Location: White Moss Road, Blackley, Manchester, Greater Manchester Name: Land off White Moss Road Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16308 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F003	A13SE (SE)	76	2	385953 403145
105	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Higher Blackley, Manchester, Greater Manchester Name: Land at Pike Fold Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16307 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F043	A12NE (W)	348	2	385503 403264
106	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Plant Hill Road, Higher Blackley, Manchester, Greater Manchester Name: Land at Tweedle Hill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16274 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F002	A17SE (NW)	590	2	385375 403563
107	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Blackley, Manchester, Greater Manchester Name: Land at Factory Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16361 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F018	A8SW (S)	735	2	385752 402456
108	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Symond Raod, Blackley, Manchester, Greater Manchester Name: Land to the rear of Symond Road Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16236 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F026	A19NW (NE)	951	2	386304 404091

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Manchester City Council - Had landfill data but passed it to the relevant environment agency		0	6	385877 403210
109	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A13SE (SE)	96	-	385961 403131
110	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A13NE (E)	150	-	386057 403231
111	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A13NW (NW)	237	-	385762 403446
112	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A13NW (N)	325	-	385750 403539
113	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A12NE (W)	348	-	385498 403226
114	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A8NW (SW)	354	-	385708 402869
115	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A13NW (NW)	366	-	385624 403503
116	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A12NE (W)	404	-	385458 403321
117	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A8NE (S)	420	-	386024 402788
118	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A8NE (S)	421	-	386048 402797
119	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A14NW (E)	477	-	386384 403226
120	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A12SW (W)	708	-	385138 403191
121	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A19NW (NE)	759	-	386225 403916
122	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A7SE (SW)	864	-	385334 402507
123	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A17NE (NW)	866	-	385342 403920
124	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1986	A12NW (W)	868	-	384979 403249

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
125	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1986	A12SW (W)	893	-	384953 403186
126	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A18NW (N)	901	-	385590 404093
127	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1990	A18NE (N)	936	-	386104 404149
128	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A13SE (SE)	22	-	385906 403180
129	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A13SE (SE)	66	-	385924 403137
130	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A13SE (SE)	73	-	385958 403161
131	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A13NE (NE)	274	-	386030 403470
132	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (SE)	302	-	386107 402986
133	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (S)	305	-	385968 402891
134	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A13NW (N)	318	-	385795 403547
135	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A14NW (E)	346	-	386250 403261
136	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (SE)	358	-	386209 403021
137	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A13NE (NE)	374	-	386213 403429
138	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A12NE (W)	374	-	385486 403309
139	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A12SE (W)	388	-	385472 403103
140	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13NW (NW)	399	-	385625 403548
141	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A14SW (E)	421	-	386318 403120
142	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A19SW (NE)	469	-	386234 403553
143	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A8NW (SW)	500	-	385571 402784
144	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SE (W)	524	-	385329 403120

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
145	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NE (W)	553	-	385294 403241
146	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A14NW (NE)	580	-	386435 403455
147	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A18SE (N)	581	-	386001 403809
148	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A12NE (W)	584	-	385305 403426
149	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12NE (NW)	586	-	385344 403510
150	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NE (W)	590	-	385275 403356
151	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A18SW (N)	616	-	385842 403855
152	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A14SW (SE)	620	-	386462 402936
153	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A8NW (SW)	630	-	385573 402628
154	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NE (W)	637	-	385209 403217
155	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NW (W)	652	-	385199 403291
156	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SE (NW)	676	-	385364 403680
157	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A14SE (E)	677	-	386568 403065
158	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SW (NE)	701	-	386434 403676
159	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A14SE (E)	701	-	386597 403089
160	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SW (NE)	708	-	386412 403710
161	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SW (NE)	711	-	386476 403640
162	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SW (NE)	712	-	386437 403688
163	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SW (NE)	723	-	386483 403651
164	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A7NE (SW)	746	-	385374 402628
165	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A18NW (N)	749	-	385586 403929

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
166	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A12SW (SW)	755	-	385166 402879
167	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A14SE (SE)	760	-	386596 402892
168	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A14SE (E)	768	-	386615 402915
169	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A12SW (W)	801	-	385046 403156
170	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A17NE (NW)	805	-	385514 403958
171	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A17SE (NW)	806	-	385219 403713
172	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A18NW (N)	813	-	385719 404037
173	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A14NE (E)	818	-	386669 403514
174	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A18NW (N)	819	-	385856 404059
175	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A18NW (N)	823	-	385799 404059
176	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SW (NW)	832	-	385124 403620
177	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A19SW (NE)	846	-	386438 403876
178	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SE (NE)	874	-	386640 403689
179	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NW (SW)	876	-	385132 402699
180	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (W)	877	-	385026 402895
181	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (W)	880	-	385021 402899
182	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14NE (E)	885	-	386743 403505
183	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SE (NE)	886	-	386640 403713
184	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SE (E)	892	-	386728 403562
185	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NW (SW)	892	-	385084 402742
186	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A14NE (E)	894	-	386756 403497

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
187	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19NW (NE)	896	-	386447 403933
188	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A8SW (S)	898	-	385651 402312
189	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14NE (E)	900	-	386751 403526
190	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A14NE (E)	908	-	386791 403420
191	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A18NW (N)	927	-	385551 404107
192	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NW (SW)	937	-	385076 402672
193	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A17SW (NW)	939	-	385114 403794
194	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A12SW (W)	951	-	384898 403120
195	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A18NE (N)	956	-	386087 404173
196	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SE (NE)	968	-	386728 403726
197	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A17NE (NW)	971	-	385236 403968
198	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A9NE (SE)	978	-	386719 402668
199	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1894	A18NW (N)	984	-	385679 404204
200	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1910	A19SE (NE)	990	-	386740 403749
201	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (W)	1000	-	384884 402930

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A13SE (NW)	0	1	385877 403210
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (NW)	0	1	385877 403210
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (NW)	0	1	385873 403215
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (SE)	31	1	385916 403176
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (SE)	153	1	386000 403089
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (S)	187	1	385947 403008
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (SE)	211	1	386000 403011

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12SE (W)	586	1	385297 403001
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8SW (S)	678	1	385777 402509
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19SW (NE)	753	1	386527 403641
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	763	1	386635 403442
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SW (W)	868	1	385000 403011
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19NW (NE)	892	1	386364 403989

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7NW (SW)	917	1	385192 402563
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8SW (S)	939	1	385691 402259
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (E)	946	1	386798 402894
202	**BGS Recorded Mineral Sites** Site Name: Blackley Sand Pit Location: Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 207279 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Collyhurst Sandstone Formation Commodity: Silica Sand Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	117	1	385966 403106
203	**BGS Recorded Mineral Sites** Site Name: Blackley Parsonage Sand Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96903 Type: Opencast **Status: Ceased** Operator: Individual'S Name Withheld Operator Location: Not Supplied Periodic Type: Triassic Geology: Chester Formation (Chester Pebble Beds) Commodity: Silica Sand Positional Accuracy: Located by supplier to within 10m	A13NE (E)	183	1	386090 403220
203	**BGS Recorded Mineral Sites** Site Name: Blackley Parsonage Sand Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96903 Type: Opencast **Status: Ceased** Operator: Individual'S Name Withheld Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A13NE (E)	183	1	386090 403220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
204	**BGS Recorded Mineral Sites** Site Name: Haze Bottom Top Sand Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96905 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A13NW (N)	331	1	385751 403545
205	**BGS Recorded Mineral Sites** Site Name: Pike Fold Sand Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96904 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A12NE (W)	488	1	385363 403274
206	**BGS Recorded Mineral Sites** Site Name: Pike Fold Clay Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96919 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Permian Geology: Manchester Marls Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12NE (W)	615	1	385243 403330
207	**BGS Recorded Mineral Sites** Site Name: Pike Fold Sand Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96918 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A12SW (W)	699	1	385147 403197
208	**BGS Recorded Mineral Sites** Site Name: Crosslee Gravel Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96900 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary, Devensian Geology: Till, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	767	1	386247 403913
209	**BGS Recorded Mineral Sites** Site Name: Blackley Sand Pit Location: Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96909 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A12SW (W)	993	1	384881 402970

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13SE (NW)	0	7	385877 403210
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	385877 403210
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	385877 403210
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	385877 403210
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	385877 403210
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	385877 403212
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	112	1	385898 403071
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	117	1	385922 403073
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	144	1	385911 403041
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	150	1	385759 403331
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	159	1	385955 403042
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	170	1	386032 403098
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	237	1	386085 403369
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	385877 403210
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	385877 403210
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	385883 403208
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	65	1	385932 403146
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	385877 403210

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (NW)	0	1	385877 403210

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
210	**Contemporary Trade Directory Entries** Name: Texaco Location: 976, Rochdale Road, Manchester, M9 7EP Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (S)	75	-	385858 403107
210	**Contemporary Trade Directory Entries** Name: Blakeley Service Station Location: 976, Rochdale Road, Manchester, M9 7EP Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	75	-	385858 403107
210	**Contemporary Trade Directory Entries** Name: Texaco Location: Rochdale Road, Manchester, Greater Manchester, M9 7EP Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	78	-	385856 403105
211	**Contemporary Trade Directory Entries** Name: Ben Kilcourse Location: 30, Middleton Old Road, Manchester, M9 8DS Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	173	-	385785 403033
211	**Contemporary Trade Directory Entries** Name: Blackley Exhaust & Motor Services Location: 53, Middleton Old Road, Manchester, M9 8DS Classification: Exhaust & Shock Absorber Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	178	-	385768 403039
211	**Contemporary Trade Directory Entries** Name: Contact Tyre Location: 53 Middleton Old Road, Manchester, Greater Manchester, M9 8DS Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	194	-	385756 403028
212	**Contemporary Trade Directory Entries** Name: Stephen Umukoro Location: 17, Tumbling Bank, MANCHESTER, M9 6AU Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	183	-	385699 403097
212	**Contemporary Trade Directory Entries** Name: Erodita Bart Domestic Cleaning Location: 17, Tumbling Bank, Manchester, M9 6AU Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	183	-	385699 403097
213	**Contemporary Trade Directory Entries** Name: Solar Blinds Location: 8, Haverfield Road, Manchester, M9 6NY Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	200	-	386107 403198
214	**Contemporary Trade Directory Entries** Name: Blackley Bodywork Location: Hill La, Manchester, M9 6PW Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (N)	244	-	385884 403484
215	**Contemporary Trade Directory Entries** Name: Recycle Office Furniture Ltd Location: Lion Works, Old Market Street, Manchester, M9 8FY Classification: Office Furniture & Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	284	-	385713 402947
216	**Contemporary Trade Directory Entries** Name: Lion Works Location: Unit 7, Lion Works, Old Market Street, Manchester, M9 8FY Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	305	-	385696 402934

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
216	**Contemporary Trade Directory Entries** Name: Recycle My Office Location: Unit 3-7 Lion Works, Old Market Street - Blackley Village, Manchester, Greater Manchester, M9 8FY Classification: Office Furniture & Equipment **Status:** **Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SW (SW)	305	-	385696 402934
216	**Contemporary Trade Directory Entries** Name: Lion Forge Location: Old Market St, Blackley, Manchester, Lancashire, M9 8FY Classification: Gate Manufacturers **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SW (SW)	330	-	385666 402926
216	**Contemporary Trade Directory Entries** Name: Blackley Car Sales Location: 9-11 old market street, blackley, Manchester, M9 8DT Classification: Car Dealers **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SW (SW)	339	-	385647 402930
217	**Contemporary Trade Directory Entries** Name: J Bacon & Co Haulage Ltd Location: 53, Middleton Old Road, Manchester, M9 8DS Classification: Road Haulage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A8NW (S)	328	-	385773 402869
217	**Contemporary Trade Directory Entries** Name: Ferguson Recyclers Scrap Metal Location: 17, Middleton Old Road, Manchester, M9 8DS Classification: Recycling Services **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	340	-	385781 402854
218	**Contemporary Trade Directory Entries** Name: Crumpsall Plastics & Engineering Ltd Location: French Barn Lane, Manchester, M9 6PB Classification: Engineers - General **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	330	-	385516 403204
219	**Contemporary Trade Directory Entries** Name: Trade N Save Location: 1095, Rochdale Road, Manchester, M9 7FW Classification: Fireplaces & Mantelpieces **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (S)	360	-	385830 402823
220	**Contemporary Trade Directory Entries** Name: Tyres R Us Location: Old Market St, Manchester, Lancashire, M9 8DY Classification: Tyre Dealers **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SW (SW)	370	-	385572 402958
220	**Contemporary Trade Directory Entries** Name: Tyres-R-Us Location: 9-11 Old Market St, Manchester, M9 8DT Classification: Tyre Dealers **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SW (SW)	395	-	385540 402956
221	**Contemporary Trade Directory Entries** Name: Blackley Village Supplies Location: 67 Old Market St, Blackley, Manchester, M9 8DX Classification: Joinery Manufacturers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	474	-	385468 402920
221	**Contemporary Trade Directory Entries** Name: Halpin & Stanley Ltd Location: 1-3, Domett Street, Manchester, M9 8DF Classification: Clothing & Fabrics - Manufacturers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	478	-	385465 402917

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
222	**Contemporary Trade Directory Entries** Name: J E Ward Location: 9, Old Road, Manchester, M9 8BF Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	492	-	385598 402775
223	**Contemporary Trade Directory Entries** Name: Caritas Diocese Of Salford Location: Apartment 1, 73, Old Market Street, Manchester, M9 8DX Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	533	-	385405 402908
224	**Contemporary Trade Directory Entries** Name: The Iron Lady Ironing Service Location: 64, Old Road, Manchester, M9 8BS Classification: Ironing & Home Laundry Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (S)	542	-	385724 402660
225	**Contemporary Trade Directory Entries** Name: Jewish Cemetery Location: 1106, Rochdale Road, Manchester, M9 6FQ Classification: Cemeteries & Crematoria **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	560	-	386186 403709
226	**Contemporary Trade Directory Entries** Name: Rentawasher Location: Glenwyn Av, Manchester, M9 6JE Classification: Washing Machines - Servicing & Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	603	-	386365 403606
227	**Contemporary Trade Directory Entries** Name: Trimega Location: Hexagon Tower,Quilter Gr, Manchester, Lancashire, M9 8DE Classification: Laboratories **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SW)	607	-	385446 402750
228	**Contemporary Trade Directory Entries** Name: All Done Cleaning Contracts Location: 2, Courtfield Avenue, Manchester, M9 6RT Classification: Cleaning Services - Commercial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	652	-	385816 403889
228	**Contemporary Trade Directory Entries** Name: Energy Brokers Location: 21, Beardwood Road, Manchester, M9 6RW Classification: Energy Efficient Products and Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	661	-	385799 403896
229	**Contemporary Trade Directory Entries** Name: Booth Hall Childrens Hospital Location: Charlestown Road, Manchester, M9 7AA Classification: Hospitals **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	657	-	386555 403105
230	**Contemporary Trade Directory Entries** Name: Marcins Technical Support Ltd Location: 35, Amesbury Road, Manchester, M9 6JQ Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	787	-	386449 403784
231	**Contemporary Trade Directory Entries** Name: Process Treatments Ltd Location: Hexagon Tower, Crumpsall Vale, Manchester, M9 8GQ Classification: Lubricating Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	799	-	385127 402856
231	**Contemporary Trade Directory Entries** Name: Randox Testing Services Location: Hexagon Tower,Crumpsall Vale, Manchester, Greater Manchester, M9 8GQ Classification: Medical & Dental Laboratories **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	800	-	385127 402856

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
231	**Contemporary Trade Directory Entries** Name: Smartkem Location: Hexagon Tower,Crumpsall Vale, Manchester, Greater Manchester, M9 8GQ Classification: Laboratories **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	800	-	385127 402856
231	**Contemporary Trade Directory Entries** Name: Siteco Ltd Location: Hexagon Tower,Crumpsall Vale, Manchester, Greater Manchester, M9 8GQ Classification: Lighting Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	800	-	385127 402856
232	**Contemporary Trade Directory Entries** Name: Save Service Station Location: Slack Road, Manchester, Lancashire, M9 8AW Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	852	-	385513 402410
233	**Contemporary Trade Directory Entries** Name: Smartkem Location: Delaunays Rd, Manchester, Lancashire, M9 8FP Classification: Chemical Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A12SW (W)	861	-	385024 402949
233	**Contemporary Trade Directory Entries** Name: British Cables Company Location: Delaunays Road, Manchester, M9 8FP Classification: Wire Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	861	-	385024 402949
233	**Contemporary Trade Directory Entries** Name: Tonge & Young Ltd Location: Blackley New Rd, Manchester, M9 8ER Classification: Dyers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12SW (W)	878	-	384996 402984
234	**Contemporary Trade Directory Entries** Name: Epos Direct Location: 67, Victoria Avenue, Manchester, M9 0RD Classification: Cash Registers & Check-Out Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	862	-	385972 404097
234	**Contemporary Trade Directory Entries** Name: Eposdirect.Co.Uk Location: 67, Victoria Avenue, Manchester, Lancashire, M9 0RD Classification: Cash Registers & Check-Out Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NE (N)	863	-	385973 404098
235	**Contemporary Trade Directory Entries** Name: Goodluck Cleaning Services Location: 2, Sherwell Road, Manchester, M9 8JB Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NW (W)	870	-	384999 403404
236	**Contemporary Trade Directory Entries** Name: P P L Engineering Location: Delaunays Road, Manchester, M9 8FP Classification: Precision Engineers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A7NW (SW)	875	-	385058 402826
237	**Contemporary Trade Directory Entries** Name: Bill Howarth Location: 17, Slack Road, Manchester, M9 8AW Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A7SE (SW)	916	-	385510 402340

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
238	**Contemporary Trade Directory Entries** Name: Tesco Petrol Station Location: Victoria Avenue E Blackley Manchester, Manchester, Greater Manchester, M9 6HP Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	916	-	386395 403997
239	**Contemporary Trade Directory Entries** Name: Chambers & Perkins Location: 1194-1196, Rochdale Road, Manchester, M9 6FR Classification: Cleaning Materials & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	927	-	386347 404041
240	**Contemporary Trade Directory Entries** Name: A 3 Scrap Metal Collections Location: 30, Symond Road, Manchester, M9 6GS Classification: Scrap Metal Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NE (N)	962	-	386189 404151
241	**Contemporary Trade Directory Entries** Name: Howcan Location: 17, Slack Road, Manchester, M9 8AW Classification: Recycling Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	962	-	385454 402316
242	**Contemporary Trade Directory Entries** Name: Jamal Motors Location: 165, Waterloo Street, Manchester, M9 8AN Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	982	-	385490 402278
242	**Contemporary Trade Directory Entries** Name: D M Tyres & Exhaust Mechanics Bodywork Location: 165, Waterloo Street, Manchester, M9 8AN Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (S)	984	-	385490 402275
243	**Fuel Station Entries** Name: Blackley Service Station Location: 976, Rochdale Road , Blackley , Manchester, Greater Manchester, M9 7EP Brand: Texaco Premises Type: Petrol Station **Status: Open** Positional Accuracy: Automatically positioned to the address	A13SW (S)	76	-	385858 403107
244	**Fuel Station Entries** Name: Blackley Service Station Location: Slack Road , Blackley , Manchester, Greater Manchester, M9 8AW Brand: Unbranded Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	852	-	385513 402410
245	**Fuel Station Entries** Name: Avenue Self Serve Location: 1357, Rochdale Road , , Manchester, Greater Manchester, M9 6QT Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	869	-	386300 404000
246	**Fuel Station Entries** Name: Tesco Blackley Automat Location: Victoria Avenue East , Blackley , Manchester, Greater Manchester, M9 6HP Brand: Tesco Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A19NW (NE)	934	-	386518 403921
247	**Points of Interest - Commercial Services** Name: Car Wash Location: 976 Rochdale Road, Manchester, M9 7EP Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13SW (S)	75	8	385858 403107

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
248	**Points of Interest - Commercial Services** Name: Ben Kilcourse Location: 30 Middleton Old Road, Manchester, M9 8DS Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	172	8	385786 403034
248	**Points of Interest - Commercial Services** Name: Ben Kilcourse Location: 30 Middleton Old Road, Manchester, M9 8DS Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	173	8	385785 403033
248	**Points of Interest - Commercial Services** Name: Blackley Exhaust & Motor Services Location: 53 Middleton Old Road, Manchester, M9 8DS Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	178	8	385768 403039
249	**Points of Interest - Commercial Services** Name: Autoglaze Location: 33 Leroy Drive, Manchester, M9 7EW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	225	8	385901 402958
249	**Points of Interest - Commercial Services** Name: Nationwide Autoglazing Location: 33 Leroy Drive, Manchester, M9 7EW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	225	8	385901 402958
249	**Points of Interest - Commercial Services** Name: Autoglaze Location: 33 Leroy Drive, Manchester, M9 7EW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	225	8	385901 402957
250	**Points of Interest - Commercial Services** Name: Lion Forge Manufacturing Location: Lion Mill, Old Market Street, Manchester, M9 8FY Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A13SW (SW)	284	8	385713 402947
250	**Points of Interest - Commercial Services** Name: Dalar Manufacturing Location: Lion Mill, Old Market Street, Manchester, M9 8FY Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A13SW (SW)	284	8	385713 402947
251	**Points of Interest - Commercial Services** Name: Ferguson Recyclers Scrap Metal Location: 17a Middleton Old Road, Manchester, M9 8DS Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A8NW (S)	336	8	385785 402857
252	**Points of Interest - Commercial Services** Name: Marcins Technical Support Ltd Location: 35 Amesbury Road, Manchester, M9 6JQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A19SW (NE)	787	8	386449 403784
253	**Points of Interest - Commercial Services** Name: Howcan Location: 17 Slack Road, Manchester, M9 8AW Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A7SE (SW)	917	8	385509 402340
253	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M9 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A7SE (SW)	929	8	385456 402352

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
253	**Points of Interest - Commercial Services** Name: Jamal Motors Location: 165 Waterloo Street, Manchester, M9 8AN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (S)	982	8	385490 402278
253	**Points of Interest - Commercial Services** Name: Jamal Motors Location: 165 Waterloo Street, Manchester, M9 8AN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (S)	982	8	385490 402278
253	**Points of Interest - Commercial Services** Name: D M Tyres & Exhaust Mechanics Bodywork Location: 165 Waterloo Street, Manchester, M9 8AN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (S)	984	8	385490 402275
254	**Points of Interest - Commercial Services** Name: A3 Scrap Metal Collections Location: 30 Symond Road, Manchester, M9 6GS Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A18NE (N)	962	8	386189 404151
254	**Points of Interest - Commercial Services** Name: A 3 Scrap Metal Collections Location: 30 Symond Road, Manchester, M9 6GS Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A18NE (N)	962	8	386189 404151
255	**Points of Interest - Education and Health** Name: Booth Hall Hospital Location: Booth Hall Childrens Hospital, Charlestown Road, Manchester, Lancashire, M9 7AB Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A14SW (E)	524	8	386401 403038
256	**Points of Interest - Education and Health** Name: Booth Hall Children's Hospital Location: Charlestown Road, Manchester, M9 7AA Category: Health Practitioners and Establishments Class Code: Accident & Emergency Department Positional Accuracy: Positioned to address or location	A14SE (E)	657	8	386555 403105
256	**Points of Interest - Education and Health** Name: Booth Hall Children's Hospital Location: Charlestown Road, Manchester, M9 7AA Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A14SE (E)	657	8	386555 403105
256	**Points of Interest - Education and Health** Name: Booth Hall Childrens Hospital Location: Charlestown Road, Manchester, M9 7AA Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A14SE (E)	657	8	386555 403105
257	**Points of Interest - Manufacturing and Production** Name: Works Location: M9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A13SW (SW)	273	8	385713 402961
257	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	279	8	385711 402955
258	**Points of Interest - Manufacturing and Production** Name: Works Location: M9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	334	8	385512 403212

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
258	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	352	8	385494 403188
258	**Points of Interest - Manufacturing and Production** Name: Works Location: M9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	356	8	385490 403188
259	**Points of Interest - Manufacturing and Production** Name: Tank Location: M9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14SW (E)	619	8	386526 403187
259	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	619	8	386526 403187
260	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	661	8	385536 402613
261	**Points of Interest - Manufacturing and Production** Name: Tank Location: M9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A7NE (SW)	718	8	385284 402759
261	**Points of Interest - Manufacturing and Production** Name: Tanks Location: M9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	718	8	385284 402759
261	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	722	8	385289 402747
262	**Points of Interest - Manufacturing and Production** Name: The Granite Xchange Location: 1148a Rochdale Road, Manchester, M9 6FQ Category: Extractive Industries Class Code: Stone Quarrying and Preparation Positional Accuracy: Positioned to address or location	A19SW (NE)	748	8	386266 403880
263	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	865	8	385025 402933
263	**Points of Interest - Manufacturing and Production** Name: Works Location: M9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A12SW (W)	884	8	384999 402952
264	**Points of Interest - Manufacturing and Production** Name: Tank Location: M8 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A7NW (SW)	937	8	384988 402830

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
264	**Points of Interest - Manufacturing and Production** Name: Tank Location: M8 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A7NW (SW)	946	8	384976 402834
265	**Points of Interest - Public Infrastructure** Name: Texaco Location: 976 Rochdale Road, Manchester, M9 7EP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	75	8	385858 403107
265	**Points of Interest - Public Infrastructure** Name: Blackley Service Station Location: 976 Rochdale Road, Manchester, M9 7EP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	75	8	385858 403107
265	**Points of Interest - Public Infrastructure** Name: Blackley Service Station Location: 976 Rochdale Road, Manchester, M9 7EP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	75	8	385858 403107
265	**Points of Interest - Public Infrastructure** Name: Blakeley Service Station Location: 976 Rochdale Road, Manchester, M9 7EP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	75	8	385858 403107
265	**Points of Interest - Public Infrastructure** Name: Blackley Service Station Location: 976 Rochdale Road, Manchester, M9 7EP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	75	8	385858 403107
265	**Points of Interest - Public Infrastructure** Name: Texaco Location: 976 Rochdale Road, Manchester, M9 7EP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	76	8	385858 403107
265	**Points of Interest - Public Infrastructure** Name: Blackley Service Station Location: Blackley Service Station, Rochdale Road, Manchester, Greater Manchester, M9 7EG Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	76	8	385858 403107
266	**Points of Interest - Public Infrastructure** Name: Blackley Fire Station Location: Fire Station 1058-1060, Rochdale Road, Manchester, M9 7EQ Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A13NE (NE)	221	8	386050 403383
266	**Points of Interest - Public Infrastructure** Name: Greater Manchester County Fire Service Location: Fire Station 1058-1060, Rochdale Road, Manchester, M9 7EQ Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A13NE (NE)	222	8	386051 403384
267	**Points of Interest - Public Infrastructure** Name: Jewish Cemetery Location: 1106 Rochdale Road, Manchester, M9 6FQ Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to address or location	A18SE (NE)	560	8	386186 403709
267	**Points of Interest - Public Infrastructure** Name: Jewish Cemetery Location: 1106 Rochdale Road, Manchester, M9 6FQ Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to address or location	A18SE (NE)	560	8	386186 403709

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
267	**Points of Interest - Public Infrastructure** Name: Cemetery Location: M9 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	599	8	386275 403690
268	**Points of Interest - Public Infrastructure** Name: Spoil Heap Location: M9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	661	8	386568 403230
268	**Points of Interest - Public Infrastructure** Name: Spoil Heap Location: M9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	661	8	386568 403231
269	**Points of Interest - Public Infrastructure** Name: Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	693	8	385190 402981
269	**Points of Interest - Public Infrastructure** Name: Cemetery Location: M9 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	699	8	385184 402980
270	**Points of Interest - Public Infrastructure** Name: Plant Hill Police Station Location: Police Station, Plant Hill Road, Manchester, M9 8LU Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A12NW (W)	718	8	385170 403450
271	**Points of Interest - Public Infrastructure** Name: Tesco Blackley Automat Location: Victoria Avenue East, Blackley, Manchester, M9 Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19NW (NE)	934	8	386518 403921
271	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Station Location: Victoria Avenue E Blackley Manchester, Manchester, M9 6HP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A19NW (NE)	956	8	386519 403950
272	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	193	8	386081 403297
273	**Points of Interest - Recreational and Environmental** Name: Skatepark Location: M9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	543	8	385632 403724
274	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	639	8	385684 403849
274	**Points of Interest - Recreational and Environmental** Name: Playground Location: Ashdown Avenue, M9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	639	8	385684 403849

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
275	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	840	8	386704 402948
276	**Points of Interest - Recreational and Environmental** Name: Playground Location: Tudor Avenue, M9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	871	8	386080 402334

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
277	**Ancient Woodland** Name: Not Supplied Reference: 1415949 Area(m²): 30909.13 Type: Ancient and Semi-Natural Woodland	A14SW (E)	428	9	386307 403062
278	**Ancient Woodland** Name: Boggart Hole Clough Reference: 1105587 Area(m²): 264193.06 Type: Ancient and Semi-Natural Woodland	A8NE (S)	548	9	385928 402635
279	**Local Nature Reserves** Name: Boggart Hole Clough Multiple Area: N Area (m2): 743984.96 Source: Natural England Designation Date: 21st November 2007	A8NE (S)	398	9	385967 402793
280	**Nitrate Vulnerable Zones** Name: River Irk (Moston Brook To River Irwell) Nvz Description: Surface Water Source: Environment Agency, Head Office	A13SE (NW)	0	4	385877 403210

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	Annually
Salford City Council - Environmental Health Department	November 2013	Annual Rolling Update
Bury Metropolitan Borough Council - Environmental Health Department	October 2013	Annual Rolling Update
Tameside Metropolitan Borough Council - Environmental Health Department	October 2017	Annual Rolling Update
Rochdale Metropolitan Borough Council - Environmental Health Department	October 2017	Annually
Oldham Metropolitan Borough Council - Environmental Health Department	September 2013	Annual Rolling Update
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - North West Region	January 2021	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - North West Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Environment Agency - North West Region	January 2021	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Variable
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Variable
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Variable
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Not Applicable
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Annual Rolling Update
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Annual Rolling Update
Oldham Metropolitan Borough Council - Environmental Health Department	March 2015	Annual Rolling Update
Salford City Council - Environmental Health Department	March 2015	Annual Rolling Update
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Variable
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Variable
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Oldham Metropolitan Borough Council - Environmental Health Department	September 2013	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	October 2020	
Pollution Incidents to Controlled Waters		
Environment Agency - North West Region	January 2000	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Environment Agency - North West Region	June 2016	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually

Agency & Hydrological	Version	Update Cycle
Substantiated Pollution Incident Register Environment Agency - North West Region - South Area	January 2021	Quarterly
Water Abstractions Environment Agency - North West Region	January 2021	Quarterly
Water Industry Act Referrals Environment Agency - North West Region	October 2017	Quarterly
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	October 2019	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	September 2020	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	September 2020	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	September 2020	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	September 2020	Quarterly
Flood Defences Environment Agency - Head Office	September 2020	Quarterly
OS Water Network Lines Ordnance Survey	September 2020	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water Suitability Environment Agency - Head Office	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Data Currency

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	October 2019	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - North West Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - North West Region - South Area	January 2021	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North West Region - South Area	January 2021	Quarterly
Local Authority Landfill Coverage		
Bury Metropolitan Borough Council	May 2000	Not Applicable
Manchester City Council - Planning Department	May 2000	Not Applicable
Oldham Metropolitan Borough Council	May 2000	Not Applicable
Rochdale Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Salford City Council - Environmental Health Department	May 2000	Not Applicable
Tameside Metropolitan Borough Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Bury Metropolitan Borough Council	May 2000	Not Applicable
Manchester City Council - Planning Department	May 2000	Not Applicable
Oldham Metropolitan Borough Council	May 2000	Not Applicable
Rochdale Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Salford City Council - Environmental Health Department	May 2000	Not Applicable
Tameside Metropolitan Borough Council	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Bury Metropolitan Borough Council	February 2016	Variable
Manchester City Council - Planning Department	February 2016	Variable
Oldham Metropolitan Borough Council	February 2016	Variable
Rochdale Metropolitan Borough Council	February 2016	Variable
Tameside Metropolitan Borough Council - Planning and Building Control	February 2016	Variable
Salford City Council	June 2016	Variable
Planning Hazardous Substance Consents		
Bury Metropolitan Borough Council	February 2016	Variable
Manchester City Council - Planning Department	February 2016	Variable
Oldham Metropolitan Borough Council	February 2016	Variable
Rochdale Metropolitan Borough Council	February 2016	Variable
Tameside Metropolitan Borough Council - Planning and Building Control	February 2016	Variable
Salford City Council	June 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry		
British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	November 2020	Bi-Annually
CBSCB Compensation District		
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability		
Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain		
British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	January 2021	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2021	Quarterly
Gas Pipelines National Grid	January 2021	
Points of Interest - Commercial Services PointX	March 2021	Quarterly
Points of Interest - Education and Health PointX	March 2021	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2021	Quarterly
Points of Interest - Public Infrastructure PointX	March 2021	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2021	Quarterly
Underground Electrical Cables National Grid	December 2020	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt		
Bury Metropolitan Borough Council	June 2020	As notified
Manchester City Council	June 2020	As notified
Oldham Metropolitan Borough Council	June 2020	As notified
Rochdale Metropolitan Borough Council	June 2020	As notified
Salford City Council	June 2020	As notified
Tameside Metropolitan Borough Council	June 2020	As notified
Areas of Unadopted Green Belt		
Bury Metropolitan Borough Council	June 2020	As notified
Manchester City Council	June 2020	As notified
Oldham Metropolitan Borough Council	June 2020	As notified
Rochdale Metropolitan Borough Council	June 2020	As notified
Salford City Council	June 2020	As notified
Tameside Metropolitan Borough Council	June 2020	As notified
Areas of Outstanding Natural Beauty		
Natural England	January 2021	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	February 2021	Bi-Annually
Marine Nature Reserves		
Natural England	July 2019	Bi-Annually
National Nature Reserves		
Natural England	January 2021	Bi-Annually
National Parks		
Natural England	April 2017	Bi-Annually
Nitrate Sensitive Areas		
Natural England	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Environment Agency - Head Office	December 2017	Bi-Annually
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	
Ramsar Sites		
Natural England	August 2020	Bi-Annually
Sites of Special Scientific Interest		
Natural England	February 2021	Bi-Annually
Special Areas of Conservation		
Natural England	July 2020	Bi-Annually
Special Protection Areas		
Natural England	February 2021	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Manchester City Council - Environmental Health Department** PO Box 463, Town Hall Extension, Albert Square, Manchester, Greater Manchester, M60 3NY	Telephone: 0161 234 4884 / 234 4873. Fax: 0161 234 4508 Website: www.manchester.gov.uk
4	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Manchester City Council - Planning Department** Town Hall, Manchester, Greater Manchester, M60 2LA	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
7	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
8	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
9	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
10	**Manchester City Council** Town Hall, Albert Square, Manchester, Greater Manchester, M60 2JT	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
11	**Bury Metropolitan Borough Council** Craig House, Bank Street, Bury, Lancashire, BL9 0DN	Telephone: 0161 253 5000 Fax: 0161 705 5290 Website: www.bury.gov.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Appendix C

Historical BGS Boreholes

GEO-RESEARCH LTD.
CALE STREET, CALE GREEN,
STOCKPORT, CHESHIRE SD80SE 1007

Borehole No. 13
Sheet No. 1
Date Commenced 31st. December 1963
Date Completed 6th. January. 1964
Scale ¼ inch = 1 foot..

CONTRACT: Rochdale Road Relief Sewer. 8591
LOCATION: Manchester. 0320

Stratum	Legend	Thick-ness	Depth	Sample No.	N Value	Level	Remarks
			G.L.				
Dark top soil.		0'6"	0'6"				Moist
Gravel fill.		0'9"	1'3"				
Granite sets bound by asphalt.		1'0"	2'3"				
Concrete.		0'9"	3'0"				
Brown sandy clay.			4'0"	D1			Moist
		2'0"	5'0"				Water added
Very dense gravel.			5'6"	D2			
		1'6"	6'6"				
Medium clayey brown sand.			7'6"	D3			Water added Fairly moist
		4'6"	11'0"				Borehole @ 11'0"
Cobbles of Old Rochdale Rd.		0'3"	11'3"				Casing @ 7'0"
Coarse sand and gravel.			13'0"	D4			5.15pm. 31/12/63 Standing level 9'0" 8.15am. 2/1/64 Standing level 10'6" W1 10'6"
		6'9"	18'0"				Very moist

Continued on sheet 2.

GEO-RESEARCH LTD.
CALE STREET, CALE GREEN,
STOCKPORT, CHESHIRE

SD80SE 1007

Borehole No. 13
Sheet No. 2
Date Commenced 31st. December 196
Date Completed 6th. January. 1964.
Scale ¼ inch = 1 foot.

CONTRACT: Rochdale Road Relief Sewer.

LOCATION: Manchester.

Stratum	Legend	Thick-ness	Depth	Sample No.	N Value	Level	Remarks
			18'0"				
Fine brown silty sand			20'0"	D5			Wet but no standing water Water added
		30'0"	48'0"				Borehole @ 4[illegible] Casing @ 48'0" 5.15pm. 2/1/[illegible] standing le[illegible]
Gravel and cobbles.			49'0"	D6			8.15am. 3/1/[illegible] standing le[illegible] W2. 3'[illegible]
		4'0"	52'0"				Water ad[illegible]
Continued. on sheet 3.							

Appendix D

Zetica UXO Unexploded Bomb Risk Map

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Location: M9 7FP,
Map Centre: 385945,403278



LEGEND

High: Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.

Moderate: Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.

Low: Areas indicated as having 15 bombs per 1000acre or less.

miltary | **industry** | **UXO find**

transport | **dock** | **Luftwaffe targets**

utilities | **Bombing decoy** | **other**

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: **(https://zeticauxo.com/downloads-and-resources/risk-maps/)**

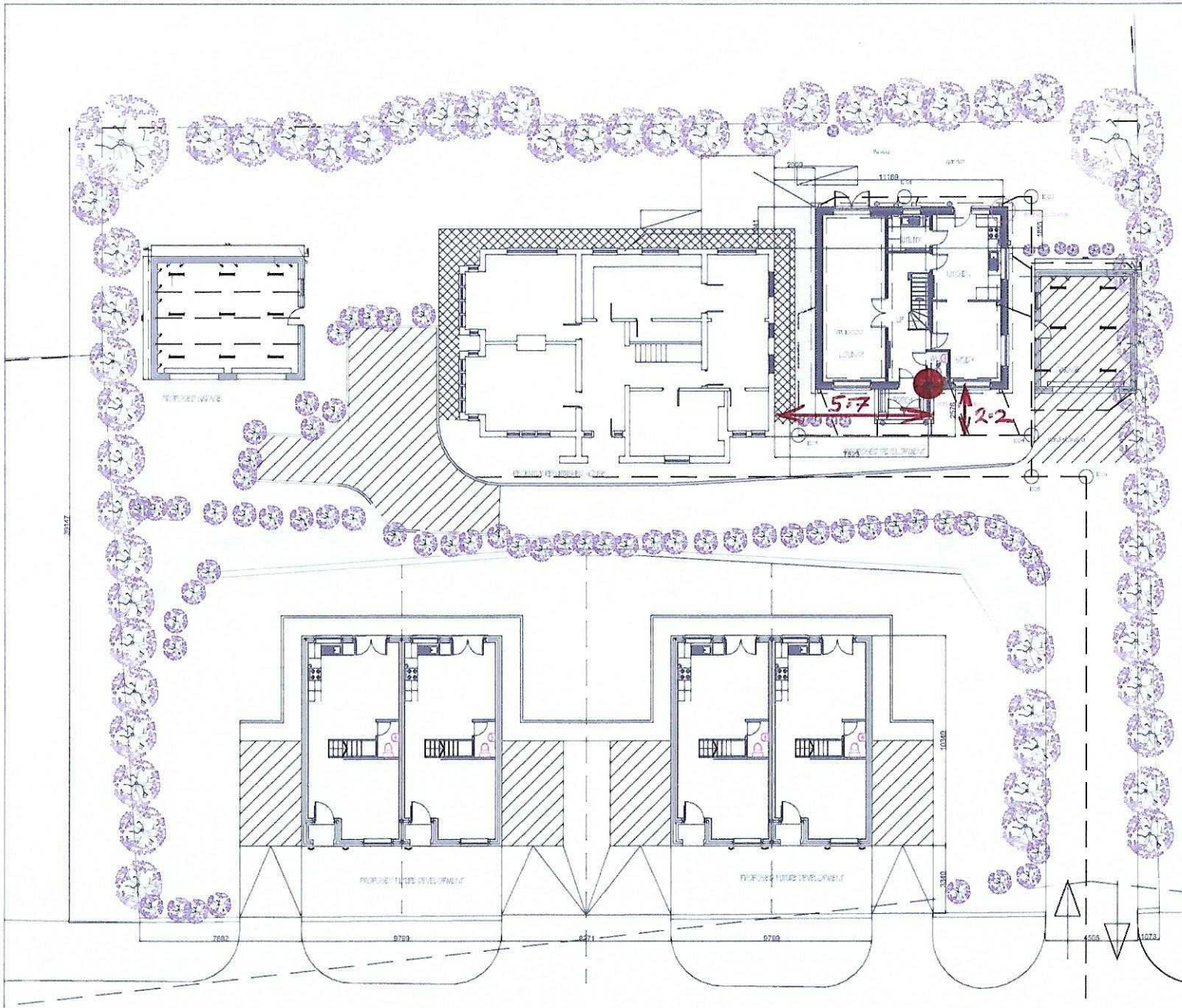
Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgment. The copyright remains with Zetica Ltd.

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

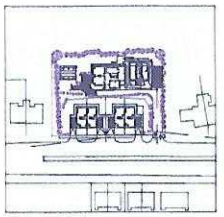
*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

Appendix E

Mini Bore Log and Borehole Location Plan



SITE PLAN



LOCATION PLAN
scale 1:250

PLAN SHOWING BOREHOLE LOCATION.

ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO ORDERING OR ERECTING MATERIALS DO NOT SCALE.

SKENDA
9 SOUTH SQUARE
THORNTON-CLEVELEYS

PROPOSED HOUSE DEVELOPMENT AT
FORESTDALE HOAR PLADELEY

Project Title
SKEANY HOMES
PADDLEY NEW ROAD
WHEELTON MAIN ROAD

REV	DRG NO
DATE	SCALE

Drilling Apparatus: Auto-Trip Standard Penetration Test Drop Hammer

Borehole Diameter: Started at 115mm, reduced to 65mm by 7.8m deep.

Scheme: 1161 Rochdale Road, Blackley, M9 7FP.

Date: 25/04/20

MINI BORE
Site Investigation
14 Pendle Drive, Whalley, Lancashire, BB7 9JT
Telephone: 01254 824959
Mobile: 07976 655490
Email: minibore@btinternet.com

Drillers Borehole Log No. 1 (Located close to centre of front wall of proposed house)

Depth (m)	Description	Shear Strength (kNm^{-2})	Symbol
0.0			
	MADE GROUND- a very thin layer of topsoil over brown sandy clay with fragments of brick & concrete rubble		
	Possible MADE GROUND- brown, sandy clay with roots (possible re-worked material)		
0.5	Stiff, brown, sandy CLAY		
	Standard Penetration Tests		
1.0	From 1.0m to 1.45m 1 / 2 - 2, 3, 2, 2 N = 9		
	Loose to medium dense, brown SAND with lenses or pockets of brown clay		
1.5	Loose, fine grained, brown, SAND		
	From 1.95m to 2.4m 2 / 2 - 1, 1, 2, 2 N = 6		
2.0	Firm, brown, very sandy CLAY		
2.5			
	Stiff, brown, sandy, gravelly CLAY with rare fragments of coal (the gravel was fine, medium & coarse in size & sub-rounded to sub-angular)		
3.0	From 3.0m to 3.45m 1 / 1 - 2, 2, 2, 2 N = 8		
	Loose, medium grained, brown SAND		
3.5	Firm, dark brown, sandy, gravelly CLAY with rare fragments of coal (the gravel was dark grey mudstone & brown sandstone & was fine & medium in size & sub-rounded to sub-angular)	48	
4.0	From 4.0m to 4.45m 1 / 2 - 2, 3, 2, 3 N = 10		
4.5		68	
5.0			

Continued Overleaf

Borehole Log No. 1

Depth (m)	Description	Shear Strength (kNm^{-2})	Symbol
5.0	As before dark brown, sandy, gravelly CLAY with rare fragments of coal (the gravel was dark grey mudstone & brown sandstone & was fine & medium in size & sub-rounded to sub-angular)		
	From 5.1m to 5.55m 2 / 2 - 2, 3, 3, 4 N = 12 Firm to stiff, dark greyish/brown, very sandy, gravelly CLAY (the gravel was dark grey mudstone & brown sandstone & was fine & medium in size & sub-rounded to sub-angular) (becoming stiff with depth)		
5.5			
6.0			
6.5	**From 6.5m to 6.95m 6 / 8 - 7, 9, 9, 10 N = 35** No sample was recovered from 6.5m to 7.8m deep due to stone cobble becoming wedged in the end of the sample tubes and preventing the soil sample core from being collected **Note: the slow penetration of the drill sample tube and high 'N' value at 6.5m deep would suggest that this ground was stiff.**		
7.0			
7.5			
	Almost Refusal **GROUND WATER: Standing water was encountered at 3.3metres deep below existing ground level.**		
8.0			
8.5			
9.0			
9.5			
10.0	**Ground water levels are subject to seasonal variations & should not be taken as constant**		

Appendix F

Risk Evaluation

Risk Evaluation

The method for risk evaluation is a qualitative method of interpreting the output from the risk estimation stage of the assessment, based on CIRIA 552[52]. It involves the classification of the:

- Magnitude of the potential consequence (severity) of the risk occurring (Table A).
- Magnitude if the probability (likelihood) of the risk occurring (Table B).

Consequence (Severity)		
Classification	**Definition**	**Example**
Severe	- Short term (acute) risk to human health likely to results in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. - Short term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. - Catastrophic damage to buildings/properties. - A short term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definition of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).	- High concentrations of cyanide on the surface of an informal recreation area. - Major spillage of contaminants from site into controlled waters. - Explosion, causing building collapse (can also equate to short term human health risk if buildings are occupied).
Medium	- Chronic damage to Human Health ('significant harm' as defined in DETR, 2000). - Pollution of sensitive water resources (note Water Resources Act contains no scope for considering significance of pollution). - A significant change in a particular ecosystem, or organism forming part of such ecosystem.	- Concentrations of a contaminant from site exceed generic, or site specific assessment criteria. - Leaching of contaminants from a site to a major or minor aquifer (Principal and Secondary). - Death of a species within a designated nature reserve.
Mild	- Pollution of non-sensitive water resources. - Significant damage to crops, buildings, structures and services ('significant harm' as defined in DETR, 2000). - Damage to sensitive buildings / structures / services or the environment.	- Pollution of non-classified groundwater. - Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	- Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. - Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.). - Easily repairable damage to buildings, structures and services.	- The presence of contaminants at such concentrations that protective equipment is required during site works. - The loss of plants in a landscaping scheme. - Discoloration of concrete.

Table A: Classification of consequence.

Probability (Likelihood)	
Classification	**Definition**
High likelihood	- There is a pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	- There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. - Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	- There is a pollutant linkage and circumstances are possible under which an event could occur. - However it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	- There is a pollutant linkage but circumstances are such that it is improbable that an event would occur in the very long term.

Table B: Classification of probability.

[52] CIRIA (2001). "Contaminated Land Risk Assessment: A Guide to Good Practice". C552.

These classifications are then compared to indicate the risk presented by each pollutant linkage (Table C). It is important that this classification is only applied where there is a possibility (which can range from high likelihood to unlikely) of a pollutant linkage existing.

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Table C: Comparison of consequence against probability.

Once the risk has been determined the corresponding action can be assessed (Table D).

Risk	Action Required
Very High Risk	- There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that sever harm to a designated receptor is currently happening. - This risk, if realised, is likely to results in a substantial liability. - Urgent investigation (if not already undertaken) and remediation are likely to be required.
High Risk	- Harm is likely to arise to a designated receptor from an identified hazard. - Realisation of the risk is likely to present a substantial liability. - Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate Risk	- It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. - Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low Risk	- It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low Risk	- There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Table D: Description of the classification and likely action required.

Where LKC identified a low to very low risk either limited intrusive investigation work, a watching brief (during construction work) or no investigation work will be recommended. This will be dependent on the nature of the site and the proposed development.

Where the risk falls into the moderate/low risk, LKC will undertake an assessment to establish what category the pollutant linkage will fall into (i.e. moderate or low risk will be chosen).

Where LKC identifies a moderate or higher risk intrusive work or precautionary remedial measures will be recommended.

Appendix G

Profile Logs

Window Sample Logs
Hand Dug Pit Logs

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** 1161 Rochdale Road, Blackley	**Number** **WS101**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Window Sampler Driven to 5.0mbgl. SPT carried out to 5.45mbgl.	101mm to 1.00m	77.00	RH Kennedy Properties Ltd	LKC 21 1140
	Location (Observed measurements) 385859 E 403208 N	**Dates** 29/03/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.10	ES1 PID=0.0ppm			76.90	(0.10) 0.10	MADE GROUND: Brown sandy gravelly SILT with frequent rootlets and rare glass fragments. Sand is fine to medium. Gravel is fine to medium, subangular to angular comprising of mixed lithologies.		
0.10-0.30	ES2 PID=0.0ppm				(0.20)			
0.30-1.40	B3			76.70	0.30	Orangish brown silty SAND. Sand is fine to medium.		
					(1.10)	Soft consistency orangish brown sandy clayey SILT. Sand is fine to medium.		
1.20-1.65	SPT N=6		1,1/1,3,1,1					
1.40-2.40	B4			75.60	1.40	Loose to medium desne brown silty SAND.		
2.00-2.45	SPT N=13		1,2/3,3,3,4		(1.10)			
2.00-2.45	X5							
2.00-2.50	B6							
2.50	PP 103kPa			74.50	2.50	Soft consistency slightly sandy CLAY with sand content increasing with depth. Sand is fine.		
					(0.50)			
3.00-3.45	SPT N=6		1,1/1,1,2,2	74.00	3.00	Loose brown gravelly slightly silty SAND with rare coal bands.Sand is fine to medium. Gravel is fine, subrounded to subangular comprising of mixed lithologies.		
					(0.80)			
4.00	PP 49.05kPa			73.20	3.80	Soft to firm consistency very sandy gravelly silty CLAY. Sand is fine to medium. Gravel is fine, subangular comprising of mixed lithologies.		▽1
4.00-4.45	X7		Water strike(1) at 4.00m.					
4.00-4.45	SPT N=10		1,1/2,2,3,3		(1.65)			
5.00-5.45	SPT N=13		2,2/3,3,3,4					
5.00-5.45	X8							
				71.55	5.45	Complete at 5.45m		

Remarks
Grid reference estimated using www.gridreferencefinder.com
Elevation estimated using www.freemaptools.com/elevation-finder.htm
Borehole was wet and collapsing from 4.0mbgl.

Scale (approx)	**Logged By**
1:40	RW

Figure No.
LKC 21 1140.WS101

Produced by the GEOtechnical DAtabase SYstem (GEODASY) © all rights reserved

LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** 1161 Rochdale Road, Blackley	**Number** **WS102**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Window Sampler Driven to 5.0mbgl. SPT carried out to 4.45mbgl.	101mm to 1.00m	76.00	RH Kennedy Properties Ltd	LKC 21 1140
	Location (Observed measurements) 385882 E 403204 N	**Dates** 29/03/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.40	ES1 PID=<0.1ppm				(0.40)	MADE GROUND: Brown sandy gravelly SILT with frequent rootlets and rare ash. Sand is fine to medium. Gravel is fine, subangular comprising of mixed lithologies.		
				75.60	0.40			
0.40-1.20 0.60	ES2 PID=<0.1ppm PP 61.31kPa				(1.10)	Soft consistency orangish brown gravelly silty sandy CLAY with rare coal fragments. Sand is fine to medium. Gravel is fine to medium, subangular comprising of mixed lithologies.		
1.20-1.65 1.20-1.65	SPT N=11 X3		2,2/2,3,3,3					
1.50-2.00	B4			74.50	1.50	Medium dense brown SAND. Sand is fine to medium.		
2.00-2.45 2.00-2.50	SPT N=13 B5		2,3/3,3,3,4		(1.50)			
3.00-3.45 3.00-3.50	SPT N=19 B6		4,4/4,5,5,5	73.00	3.00	Medium dense brown slightly silty SAND. Sand is fine to medium.		
4.00-4.45 4.00-4.45	X7 SPT N=18		Water strike(1) at 4.00m. 3,3/4,4,5,5		(2.00)			▽1
4.50-5.00	B8							
				71.00	5.00	Complete at 5.00m		

Remarks
Grid reference estimated using www.gridreferencefinder.com
Elevation estimated using www.freemaptools.com/elevation-finder.htm
Borehole was wet and collapsing from 4.0mbgl.
Dynamic probing carried out to 10.0mbgl from borehole, see separate sheet (ref.DP102).

Scale (approx)	**Logged By**
1:40	RW

Figure No.
LKC 21 1140.WS102

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LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** 1161 Rochdale Road, Blackley	**Number** **WS103**

Excavation Method	**Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Window Sampler Driven to 5.0mbgl. SPT carried out to 4.45mbgl.	101mm to 1.00m	76.00	RH Kennedy Properties Ltd	LKC 21 1140
	Location (Observed measurements) 385886 E 403208 N	**Dates** 29/03/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.20	ES1 PID=<0.1ppm			75.80	(0.20) 0.20	MADE GROUND: Brown sandy gravelly SILT with rare brick, concrete fragments and frequent rootlets. Sand is fine to medium. Gravel is fine, subangular comprising of mixed lithologies.		
0.20-1.00	ES2 PID=<0.1ppm					Soft consistency orangish brown silty sandy CLAY with rare coal fragments. Sand is fine to medium.		
					(1.30)			
1.20-1.65 1.20-1.50 1.20-1.65 1.30 1.50-2.00	SPT N=10 B4 X3 PP 24.53kPa B5		1,2/2,2,3,3	74.50	1.50	Loose to medium dense brown sand. Sand is fine to medium.		
2.00-2.45	SPT N=10		1,2/2,3,2,3		(1.50)			
3.00-3.45 3.00-3.45	SPT N=13 X6		2,3/3,3,3,4	73.00	3.00	Medium dense brown slightly silty SAND with occasional layers of silty gravel. Sand is fine to medium.		
3.50-4.00	B7							
4.00-4.45 4.00-4.45	X8 SPT N=13		Water strike(1) at 4.00m. 3,3/3,3,3,4		(2.00)			▽1
4.80-5.00	B9			71.00	5.00	Complete at 5.00m		

Remarks
Grid reference estimated using www.gridreferencefinder.com
Elevation estimated using www.freemaptools.com/elevation-finder.htm
Borehole was wet and collapsing.
Dynamic probing carried out to 10.0mbgl from borehole, see separate sheet (ref.DP103).

Scale (approx)	**Logged By**
1:40	RW

Figure No.
LKC 21 1140.WS102

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LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** 1161 Rochdale Road, Blackley	**Trial Pit Number** **HD101**
Excavation Method Hand excavated to 1.2mbgl.	**Dimensions** 0.3m x 0.3m x 1.2m	**Ground Level (mOD)** 76.00	**Client** RH Kennedy Properties Ltd	**Job Number** LKC 21 1140
	Location (Observed measurements) 385888 E 403206 N	**Dates** 29/03/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.15	ES1 PID=<0.1ppm				(0.15)	MADE GROUND: Brown sandy gravelly SILT with frequent rootlets and rare plastic, glass and concrete fragments. Sand is fine to medium. Gravel is fine, angular to subangular comprising of mixed lithologies.		
0.15-1.00	ES2 PID=<0.1ppm			75.85	0.15			
					(1.05)	Soft consistency orangish brown silty sandy CLAY with rare coal fragments. Sand is fine to medium.		
				74.80	1.20	Complete at 1.20m		



Remarks

Pit was dry and stable.
Grid reference estimated using www.gridreferencefinder.com
Elevation estimated using www.freemaptools.com.elevation-finder.htm

Scale (approx)	Logged By	Figure No.
1:20	RW	LKC 21 1140.HD101

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LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** 1161 Rochdale Road, Blackley	**Trial Pit Number** **HD102**
Excavation Method Hand excavated to 1.2mbgl.	**Dimensions** 0.3m x 0.3m x 1.2m	**Ground Level (mOD)** 76.00	**Client** RH Kennedy Properties Ltd	**Job Number** LKC 21 1140
	Location (Observed measurements) 385884 E 403204 N	**Dates** 29/03/2021	**Engineer** LKC	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.30	ES1 PID=<0.1ppm				(0.30)	MADE GROUND: Brown sandy gravelly SILT with frequent rootlets and rare ash. Sand is fine to medium. Gravel is fine, angular to subangular comprising of mixed lithologies.		
0.30-1.20	ES2 PID=0.1ppm			75.70	0.30	Soft consistency orangish brown silty sandy CLAY with rare coal fragments. Sand is fine to medium.		
					(0.90)			
				74.80	1.20	Complete at 1.20m		



Remarks

Pit was dry and stable.
Grid reference estimated using www.gridreferencefinder.com
Elevation estimated using www.freemaptools.com.elevation-finder.htm

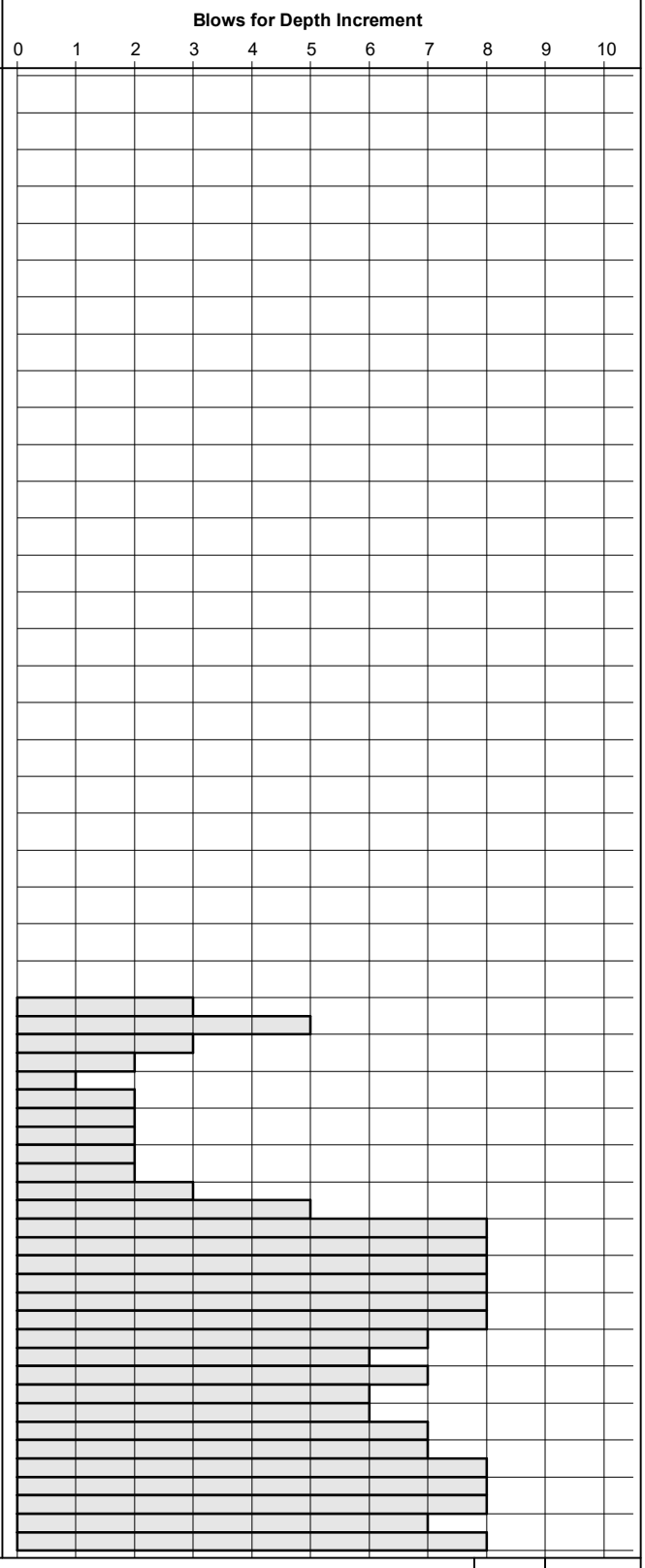
Scale (approx)	Logged By	Figure No.
1:20	RW	LKC 21 1140.HD102

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LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** 1161 Rochdale Road, Blackley	**Probe Number** **DP102**

Method	**Cone Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Dynamic probe carried on from window sampler from 5.0mbgl to 10.0mbgl.		76.00	RH Kennedy Properties Ltd	LKC 21 1140
	Location (Observed measurements) 385882 E 403204 N	**Dates** 29/03/2021	**Engineer** LKC	**Sheet** 1/2

Depth (m)	Blows for Depth Increment	Field Records
5.00-5.10	3	
5.10-5.20	5	
5.20-5.30	3	
5.30-5.40	2	
5.40-5.50	1	
5.50-5.60	2	
5.60-5.70	2	
5.70-5.80	2	
5.80-5.90	2	
5.90-6.00	2	
6.00-6.10	3	
6.10-6.20	5	
6.20-6.30	8	
6.30-6.40	8	
6.40-6.50	8	
6.50-6.60	8	
6.60-6.70	8	
6.70-6.80	8	
6.80-6.90	7	
6.90-7.00	6	
7.00-7.10	7	
7.10-7.20	6	
7.20-7.30	6	
7.30-7.40	7	
7.40-7.50	7	
7.50-7.60	8	
7.60-7.70	8	
7.70-7.80	8	
7.80-7.90	7	
7.90-8.00	8	



Remarks

Scale (approx)	**Logged By**
1:40	RW

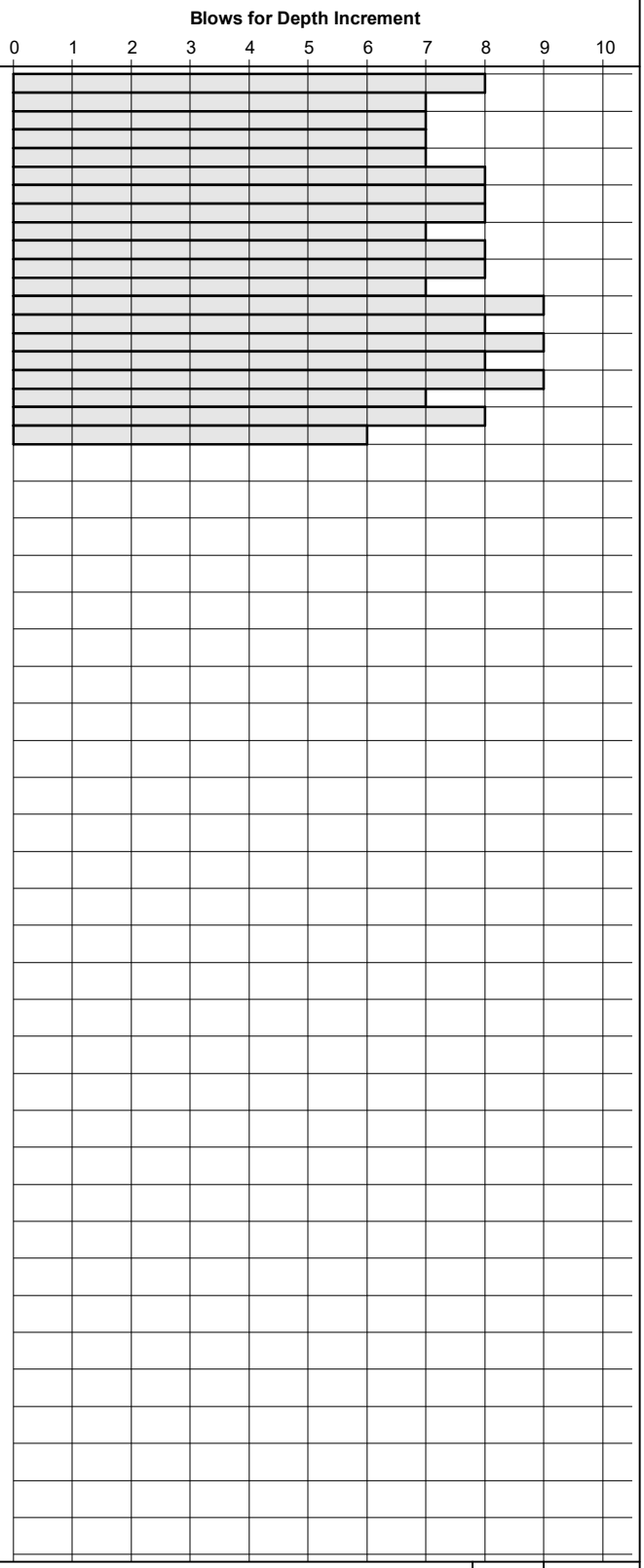
Figure No.
LKC 21 1140.DP102

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LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** 1161 Rochdale Road, Blackley	**Probe Number** **DP102**

Method	**Cone Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Dynamic probe carried on from window sampler from 5.0mbgl to 10.0mbgl.		76.00	RH Kennedy Properties Ltd	LKC 21 1140
	Location (Observed measurements) 385882 E 403204 N	**Dates** 29/03/2021	**Engineer** LKC	**Sheet** 2/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
8.00-8.10	8		68.00	8.00
8.10-8.20	7			
8.20-8.30	7			
8.30-8.40	7			
8.40-8.50	7			
8.50-8.60	8		67.50	8.50
8.60-8.70	8			
8.70-8.80	8			
8.80-8.90	7			
8.90-9.00	8			
9.00-9.10	8		67.00	9.00
9.10-9.20	7			
9.20-9.30	9			
9.30-9.40	8			
9.40-9.50	9			
9.50-9.60	8		66.50	9.50
9.60-9.70	9			
9.70-9.80	7			
9.80-9.90	8			
9.90-10.00	6			
			66.00	10.00
			65.50	10.50
			65.00	11.00
			64.50	11.50
			64.00	12.00
			63.50	12.50
			63.00	13.00
			62.50	13.50
			62.00	14.00
			61.50	14.50
			61.00	15.00
			60.50	15.50
			60.00	16.00



Remarks

Scale (approx)	**Logged By**
1:40	RW

Figure No.
LKC 21 1140.DP102

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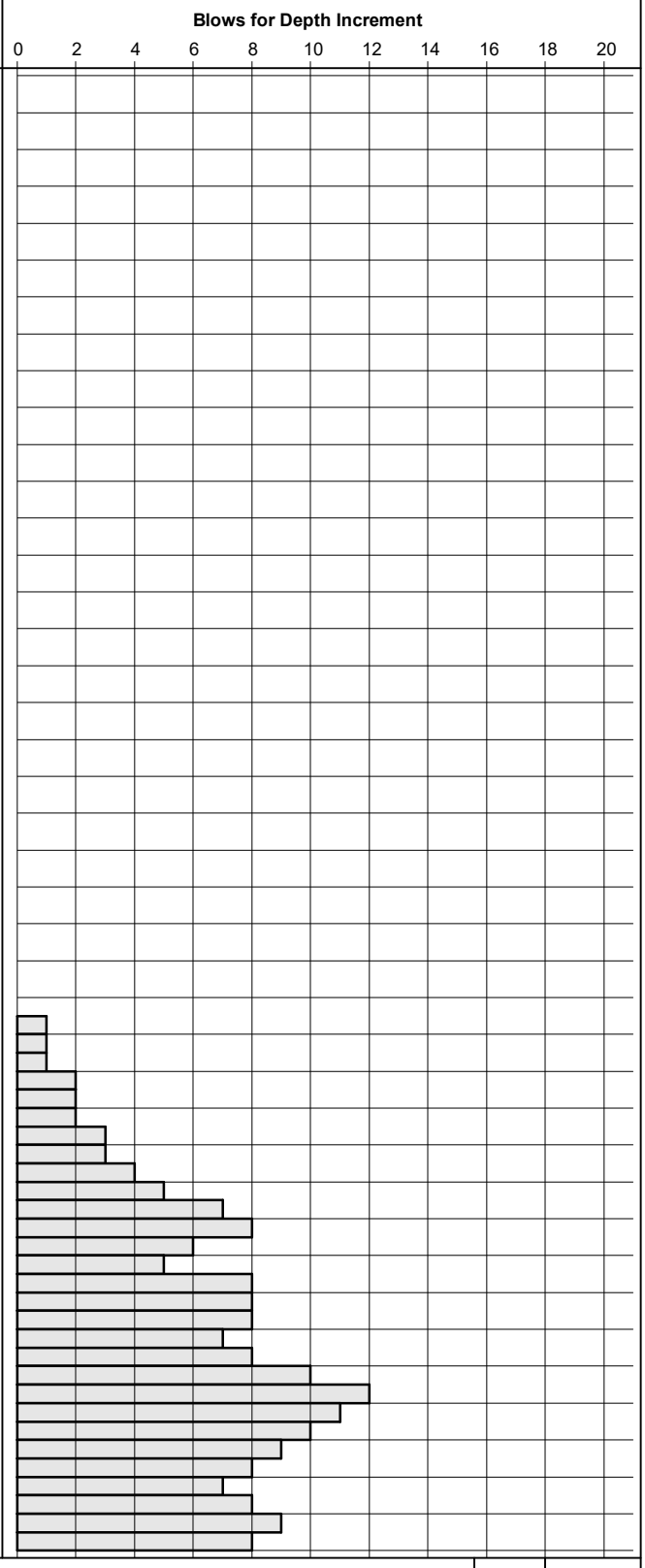
Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com

Site	Probe Number
1161 Rochdale Road, Blackley	DP103

Method	Cone Dimensions	Ground Level (mOD)	Client	Job Number
Dynamic probe continued on from window sample borehole from 5.0mbgl to 10.0mbgl.		76.00	RH Kennedy Properties Ltd	LKC 21 1140

Location (Observed measurements)	Dates	Engineer	Sheet
385886 E 403208 N	29/03/2021	LKC	1/2

Depth (m)	Blows for Depth Increment	Field Records
5.10-5.20	1	
5.20-5.30	1	
5.30-5.40	1	
5.40-5.50	2	
5.50-5.60	2	
5.60-5.70	2	
5.70-5.80	3	
5.80-5.90	3	
5.90-6.00	4	
6.00-6.10	5	
6.10-6.20	7	
6.20-6.30	8	
6.30-6.40	6	
6.40-6.50	5	
6.50-6.60	8	
6.60-6.70	8	
6.70-6.80	8	
6.80-6.90	7	
6.90-7.00	8	
7.00-7.10	10	
7.10-7.20	12	
7.20-7.30	11	
7.30-7.40	10	
7.40-7.50	9	
7.50-7.60	8	
7.60-7.70	7	
7.70-7.80	8	
7.80-7.90	9	
7.90-8.00	8	



Remarks

Scale (approx)	Logged By
1:40	RW

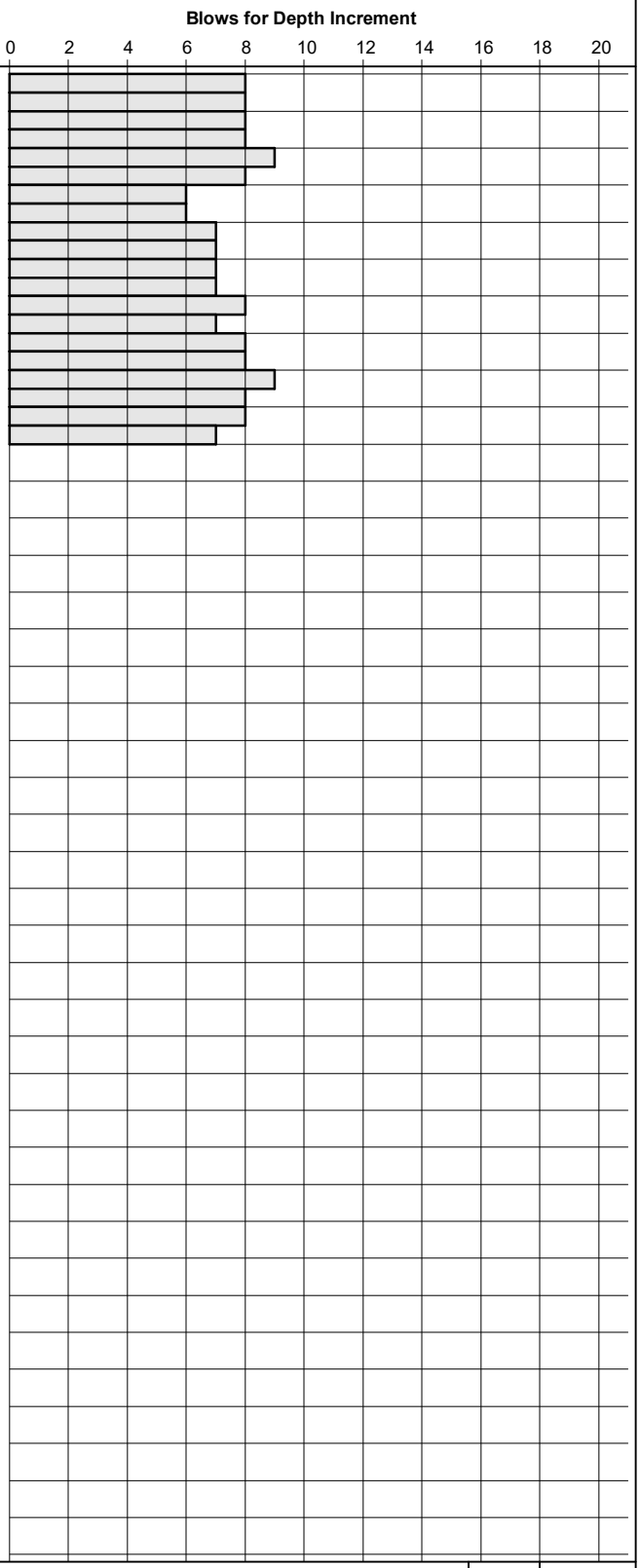
Figure No.
LKC 21 1140.DP103

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LK GROUP	**LK CONSULT LTD** Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS Tel: 0161 763 7200 web: www.thelkgroup.com	**Site** 1161 Rochdale Road, Blackley	**Probe Number** **DP103**

Method	**Cone Dimensions**	**Ground Level (mOD)**	**Client**	**Job Number**
Dynamic probe continued on from window sample borehole from 5.0mbgl to 10.0mbgl.		76.00	RH Kennedy Properties Ltd	LKC 21 1140
	Location (Observed measurements) 385886 E 403208 N	**Dates** 29/03/2021	**Engineer** LKC	**Sheet** 2/2

Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)
8.00-8.10	8		68.00	8.00
8.10-8.20	8			
8.20-8.30	8			
8.30-8.40	8			
8.40-8.50	9		67.50	8.50
8.50-8.60	8			
8.60-8.70	6			
8.70-8.80	6			
8.80-8.90	7		67.00	9.00
8.90-9.00	7			
9.00-9.10	7			
9.10-9.20	7			
9.20-9.30	8			
9.30-9.40	7		66.50	9.50
9.40-9.50	8			
9.50-9.60	8			
9.60-9.70	9			
9.70-9.80	8			
9.80-9.90	8			
9.90-10.00	7		66.00	10.00
			65.50	10.50
			65.00	11.00
			64.50	11.50
			64.00	12.00
			63.50	12.50
			63.00	13.00
			62.50	13.50
			62.00	14.00
			61.50	14.50
			61.00	15.00
			60.50	15.50
			60.00	16.00



Remarks

Scale (approx)	**Logged By**
1:40	RW

Figure No.
LKC 21 1140.DP103

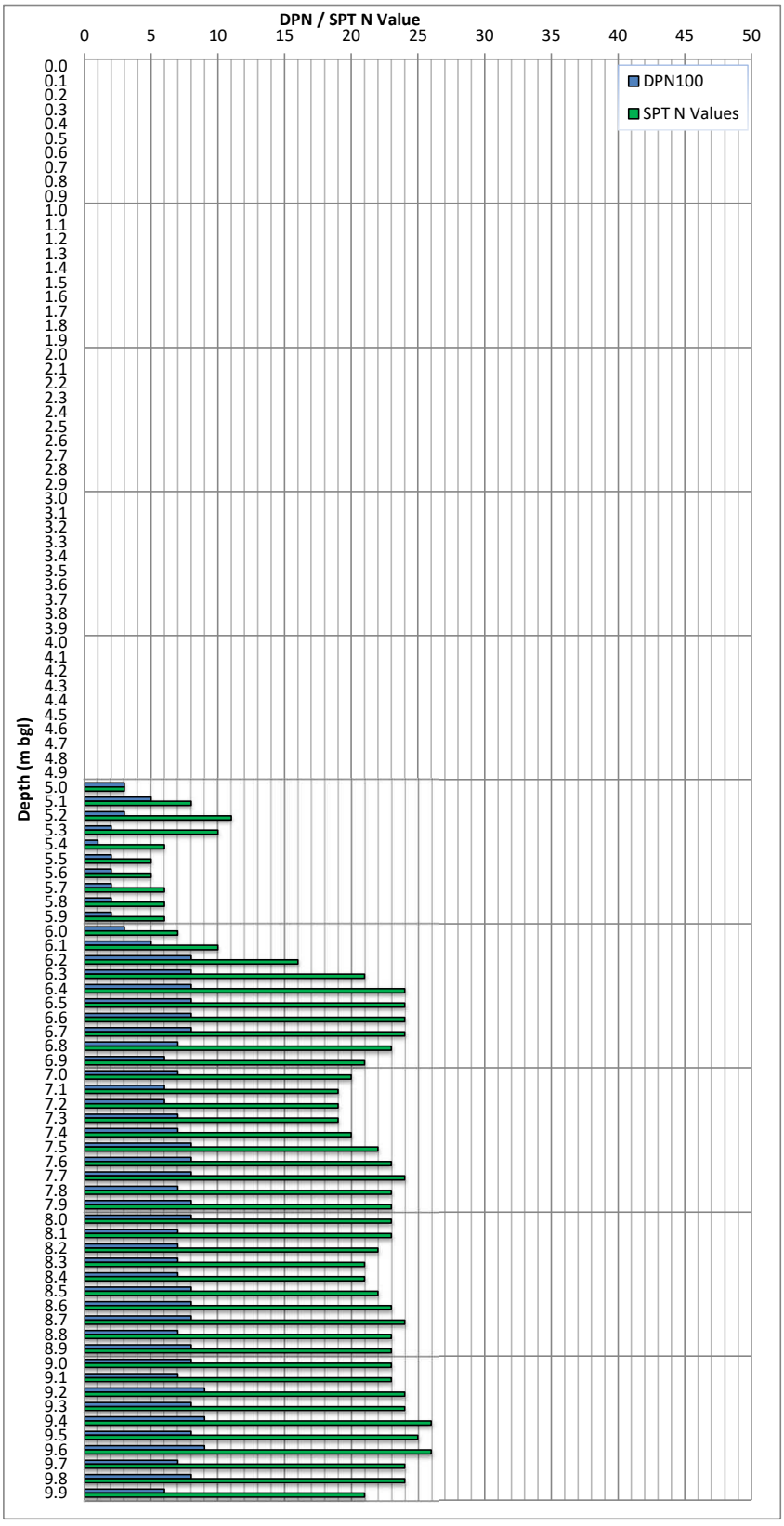
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Dynamic Probe Test Results

Site Name: 1161 Rochdale Road, Blackley
Job Number: LKC 21 1140
Client: RH Kennedy Properties Ltd
Hole Location: WS102
Start Depth: 5.0 m bgl
Final Depth: 10.0 m bgl

Date: 29-Mar-21
Test Type: Super Heavy
Rig Type Window Sample Rig

Penetration Test Results			
Depth (mbgl)	DPN100	DPN300	SPT (N Value)
0		-	-
0.1		-	-
0.2			
0.3			
0.4			
0.5			
0.6			
0.7			
0.8			
0.9			
1			
1.1			
1.2			
1.3			
1.4			
1.5			
1.6			
1.7			
1.8			
1.9			
2			
2.1			
2.2			
2.3			
2.4			
2.5			
2.6			
2.7			
2.8			
2.9			
3			
3.1			
3.2			
3.3			
3.4			
3.5			
3.6			
3.7			
3.8			
3.9			
4			
4.1			
4.2			
4.3			
4.4			
4.5			
4.6			
4.7			
4.8			
4.9			
5	3	3	3
5.1	5	8	8
5.2	3	11	11
5.3	2	10	10
5.4	1	6	6
5.5	2	5	5
5.6	2	5	5
5.7	2	6	6
5.8	2	6	6
5.9	2	6	6
6	3	7	7
6.1	5	10	10
6.2	8	16	16
6.3	8	21	21
6.4	8	24	24
6.5	8	24	24
6.6	8	24	24
6.7	8	24	24
6.8	7	23	23
6.9	6	21	21
7	7	20	20
7.1	6	19	19
7.2	6	19	19
7.3	7	19	19
7.4	7	20	20
7.5	8	22	22
7.6	8	23	23
7.7	8	24	24
7.8	7	23	23
7.9	8	23	23
8	8	23	23
8.1	7	23	23
8.2	7	22	22
8.3	7	21	21
8.4	7	21	21
8.5	8	22	22
8.6	8	23	23
8.7	8	24	24
8.8	7	23	23
8.9	8	23	23
9	8	23	23
9.1	7	23	23
9.2	9	24	24
9.3	8	24	24
9.4	9	26	26
9.5	8	25	25
9.6	9	26	26
9.7	7	24	24
9.8	8	24	24
9.9	6	21	21



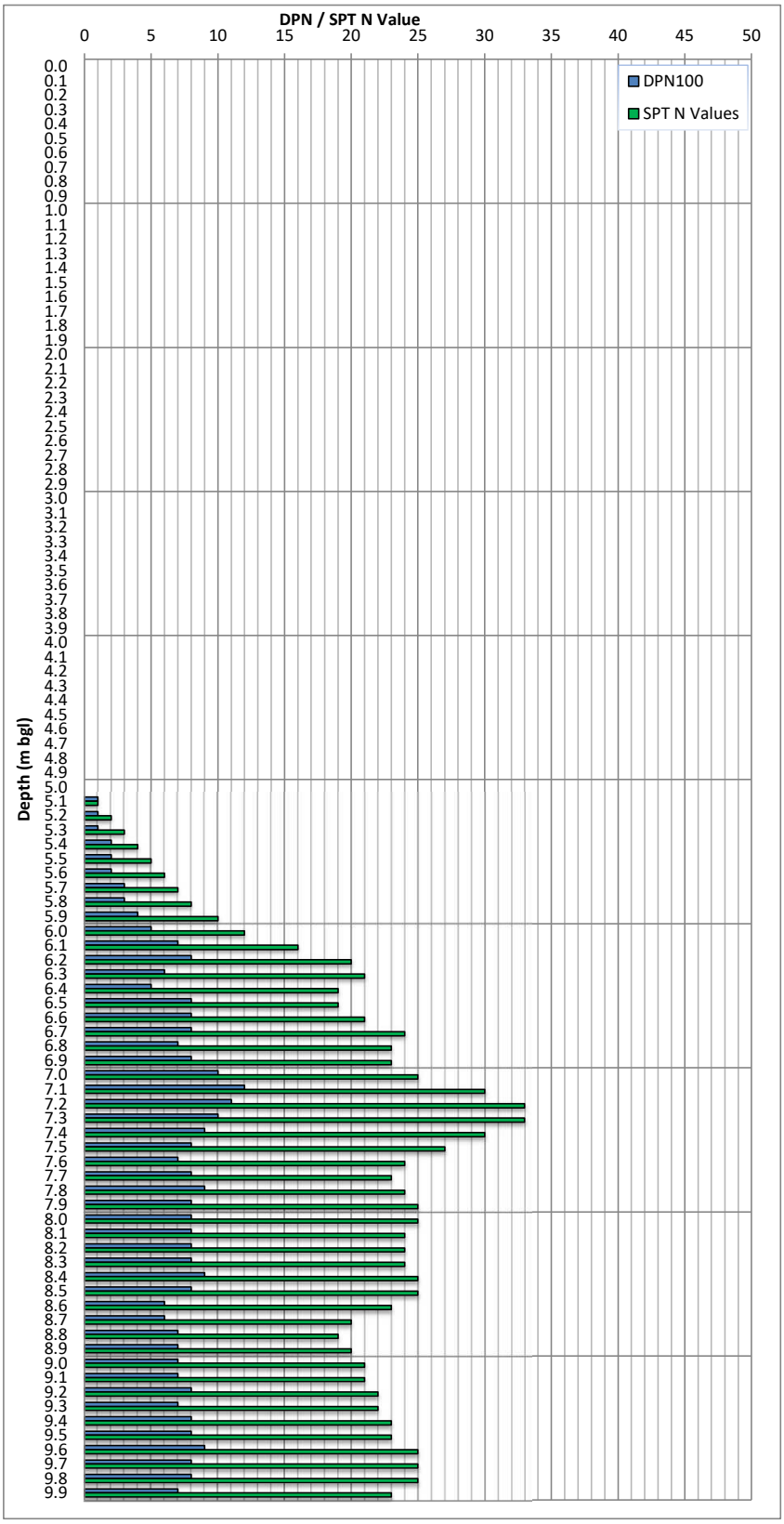
CONSULT LIMITED

Dynamic Probe Test Results

Site Name: 1161 Rochdale Road, Blackley
Job Number: LKC 21 1140
Client: RH Kennedy Properties Ltd
Hole Location: WS103
Start Depth: 5.1 m bgl
Final Depth: 10.0 m bgl

Date: 29-Mar-21
Test Type: Super Heavy
Rig Type Window Sample Rig

Penetration Test Results			
Depth (mbgl)	DPN100	DPN300	SPT (N Value)
0		-	-
0.1		-	-
0.2			
0.3			
0.4			
0.5			
0.6			
0.7			
0.8			
0.9			
1			
1.1			
1.2			
1.3			
1.4			
1.5			
1.6			
1.7			
1.8			
1.9			
2			
2.1			
2.2			
2.3			
2.4			
2.5			
2.6			
2.7			
2.8			
2.9			
3			
3.1			
3.2			
3.3			
3.4			
3.5			
3.6			
3.7			
3.8			
3.9			
4			
4.1			
4.2			
4.3			
4.4			
4.5			
4.6			
4.7			
4.8			
4.9			
5			
5.1	1	1	1
5.2	1	2	2
5.3	1	3	3
5.4	2	4	4
5.5	2	5	5
5.6	2	6	6
5.7	3	7	7
5.8	3	8	8
5.9	4	10	10
6	5	12	12
6.1	7	16	16
6.2	8	20	20
6.3	6	21	21
6.4	5	19	19
6.5	8	19	19
6.6	8	21	21
6.7	8	24	24
6.8	7	23	23
6.9	8	23	23
7	10	25	25
7.1	12	30	30
7.2	11	33	33
7.3	10	33	33
7.4	9	30	30
7.5	8	27	27
7.6	7	24	24
7.7	8	23	23
7.8	9	24	24
7.9	8	25	25
8	8	25	25
8.1	8	24	24
8.2	8	24	24
8.3	8	24	24
8.4	9	25	25
8.5	8	25	25
8.6	6	23	23
8.7	6	20	20
8.8	7	19	19
8.9	7	20	20
9	7	21	21
9.1	7	21	21
9.2	8	22	22
9.3	7	22	22
9.4	8	23	23
9.5	8	23	23
9.6	9	25	25
9.7	8	25	25
9.8	8	25	25
9.9	7	23	23



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Appendix H

Certificate of Analysis – Soil

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	21-10117-1
Initial Date of Issue:	08-Apr-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Contaminated Land Emma Khadun
Project	LKC 21 1140 1161 Rochdale Road, Blackley

Quotation No.:		**Date Received:**	30-Mar-2021
Order No.:	738513	**Date Instructed:**	31-Mar-2021
No. of Samples:	8		
Turnaround (Wkdays):	5	**Results Due:**	08-Apr-2021
Date Approved:	08-Apr-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKC 21 1140 1161 Rochdale Road, Blackley

Client: LK Consult			**Chemtest Job No.:**		21-10117	21-10117	21-10117	21-10117	21-10117	21-10117	21-10117	21-10117
Quotation No.:			**Chemtest Sample ID.:**		1169183	1169184	1169185	1169186	1169187	1169189	1169190	1169191
Order No.: 738513			Client Sample Ref.:		ES2	ES1	ES2	ES1	ES2	ES2	ES1	ES2
			Client Sample ID.:		WS101	WS102	WS102	WS103	WS103	HD101	HD102	HD102
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.10	0.00	0.40	0.00	0.20	0.15	0.00	0.30
			Bottom Depth (m):		0.30	0.40	1.20	0.20	1.00	1.00	0.30	1.20
			Date Sampled:		29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021
			Asbestos Lab:			COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A		-		-	-	-	-	
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	
ACM Detection Stage	U	2192		N/A		-		-	-	-	-	
Moisture	N	2030	%	0.020	19	27	16	21	16	19	25	22
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones and Roots	Stones	Stones	Stones and Roots	Stones	Roots and Stones	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Clay
pH	M	2010		4.0	7.0	6.8	6.7	7.5	6.7	7.0	7.5	5.8
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.12	0.029	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Arsenic	M	2450	mg/kg	1.0		23		18	8.1	11	15	
Cadmium	M	2450	mg/kg	0.10		0.19		0.22	0.13	0.38	0.18	
Chromium	M	2450	mg/kg	1.0		22		20	23	25	19	
Copper	M	2450	mg/kg	0.50		73		61	31	50	66	
Mercury	M	2450	mg/kg	0.10		0.88		0.25	< 0.10	0.10	0.26	
Nickel	M	2450	mg/kg	0.50		19		19	25	32	16	
Lead	M	2450	mg/kg	0.50		140		93	21	51	110	
Selenium	M	2450	mg/kg	0.20		0.78		0.57	0.42	0.48	0.64	
Vanadium	U	2450	mg/kg	5.0		33		29	26	30	26	
Zinc	M	2450	mg/kg	0.50		58		60	72	120	53	
Chromium (Hexavalent)	N	2490	mg/kg	0.50		< 0.50		< 0.50	< 0.50	< 0.50	< 0.50	
Organic Matter	M	2625	%	0.40		7.1		4.5	1.2	2.9	4.3	
Naphthalene	M	2800	mg/kg	0.10		0.60		3.9	0.55	0.50	0.57	
Acenaphthylene	N	2800	mg/kg	0.10		0.33		< 0.10	< 0.10	< 0.10	0.39	
Acenaphthene	M	2800	mg/kg	0.10		0.78		12	< 0.10	< 0.10	0.78	
Fluorene	M	2800	mg/kg	0.10		0.77		7.1	0.23	0.21	0.86	
Phenanthrene	M	2800	mg/kg	0.10		7.0		59	1.2	1.7	7.4	
Anthracene	M	2800	mg/kg	0.10		1.6		14	0.17	0.37	1.8	
Fluoranthene	M	2800	mg/kg	0.10		9.3		61	1.6	2.6	11	
Pyrene	M	2800	mg/kg	0.10		8.2		50	1.2	2.3	10	
Benzo[a]anthracene	M	2800	mg/kg	0.10		4.3		27	0.65	1.2	5.7	
Chrysene	M	2800	mg/kg	0.10		4.2		25	0.50	0.97	5.3	
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		4.9		28	0.78	1.5	6.7	
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		1.8		11	0.29	0.51	2.4	
Benzo[a]pyrene	M	2800	mg/kg	0.10		4.1		23	0.53	1.1	5.3	
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		2.6		14	< 0.10	< 0.10	3.6	

Results - Soil

Project: LKC 21 1140 1161 Rochdale Road, Blackley

Client: LK Consult					**Chemtest Job No.:**	21-10117	21-10117	21-10117	21-10117	21-10117	21-10117	21-10117	21-10117
Quotation No.:					**Chemtest Sample ID.:**	1169183	1169184	1169185	1169186	1169187	1169189	1169190	1169191
Order No.: 738513					Client Sample Ref.:	ES2	ES1	ES2	ES1	ES2	ES2	ES1	ES2
					Client Sample ID.:	WS101	WS102	WS102	WS103	WS103	HD101	HD102	HD102
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.10	0.00	0.40	0.00	0.20	0.15	0.00	0.30
					Bottom Depth (m):	0.30	0.40	1.20	0.20	1.00	1.00	0.30	1.20
					Date Sampled:	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021	29-Mar-2021
					Asbestos Lab:		COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.36		0.81	< 0.10	< 0.10	0.32		
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		1.4		12	< 0.10	0.69	3.1		
Total Of 16 PAH's	N	2800	mg/kg	2.0		52		350	7.7	14	65		

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Appendix I

Certificates of Analysis - Geotechnical

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	21-10685-1
Initial Date of Issue:	12-Apr-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Emma Khadun Contaminated Land
Project	LKC 21 1140 1161 Rochdale Road, Blackley

Quotation No.:		**Date Received:**	06-Apr-2021
Order No.:	738526	**Date Instructed:**	06-Apr-2021
No. of Samples:	3		
Turnaround (Wkdays):	5	**Results Due:**	12-Apr-2021
Date Approved:	12-Apr-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKC 21 1140 1161 Rochdale Road, Blackley

Client: LK Consult		**Chemtest Job No.:**			21-10685	21-10685	21-10685
Quotation No.:		**Chemtest Sample ID.:**			1171985	1171986	1171987
		Client Sample ID.:			WS103	WS101	WS103
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			3.5	1.5	1.5
		Bottom Depth (m):			4.0	2.0	2.0
		Date Sampled:			29-Mar-2021	29-Mar-2021	29-Mar-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Moisture	N	2030	%	0.020	20	21	12
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	None	None	None
Soil Texture	N	2040		N/A	Clay	Sand	Sand
pH	M	2010		4.0	7.5	7.5	7.8
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010	< 0.010	< 0.010

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
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Uncertainty of measurement for the determinands tested are available upon request
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All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

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All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

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B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
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Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client	LK Consult Ltd
Address	Unit 29 Eton Business Park Eton Hill Road Radcliffe Greater Manchester M26 2ZS
Contract	LKC 21 1140 - 1161 Rochdale Road, Blackley
Job Number	MRN 4066/67
Date of Issue	12 April 2021
Page	**1 of 4**

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

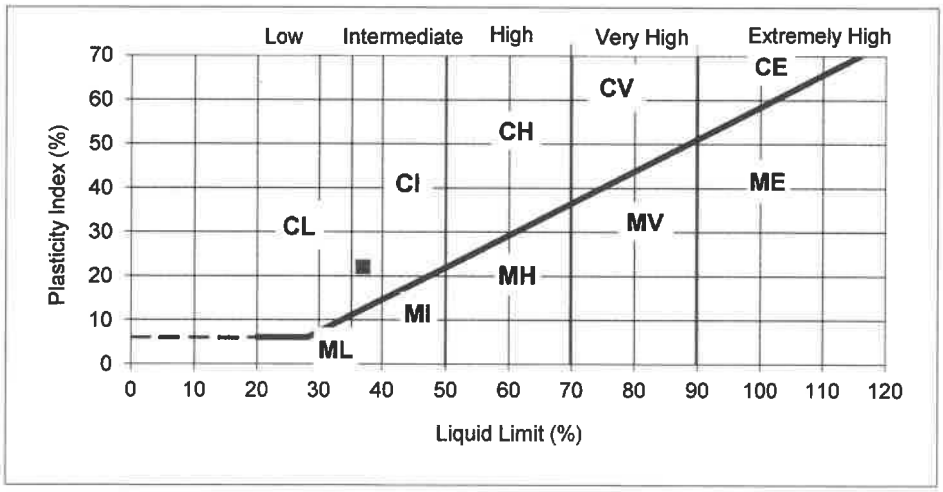
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 21 1140 - 1161 Rochdale Road, Blackley
JOB NUMBER	MRN 4066/67

SAMPLE LABEL	WS101 5.0-5.45m	DATE SAMPLED	Not advised
SAMPLE No.	97498	DATE RECEIVED	26-Mar-21
DATE TESTED	30-Mar-21	SAMPLED BY	Client

MATERIAL	Stiff grey brown silty sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14	37	15	22	97



REMARKS
Sample tested in natural condition

SIGNED

NAME O.P. Davies BA (Hons) DATE 12-Apr-21
(Laboratory Manager)

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

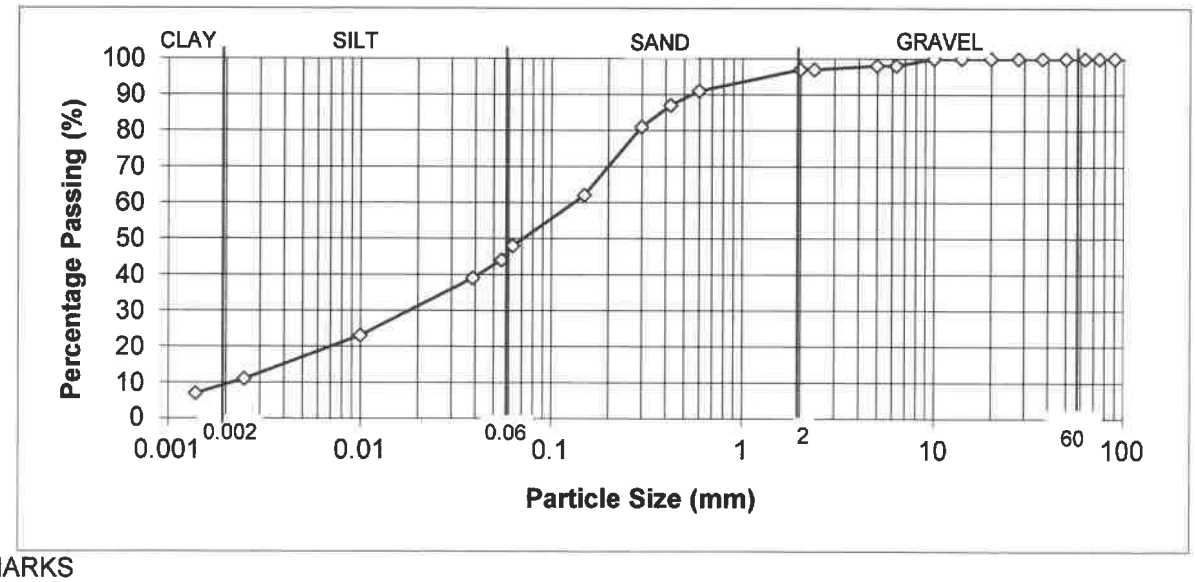
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Consult Ltd
SITE	LKC 21 1140 - 1161 Rochdale Road, Blackley
JOB NUMBER	MRN 4066/67

SAMPLE LABEL	WS101 0.3-1.4m	DATE SAMPLED	Not advised
LAB SAMPLE No	97499	DATE RECEIVED	26-Mar-21
DATE TESTED	30-Mar-21	SAMPLED BY	Client

MATERIAL	Stiff brown silty very sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	97	
90	100		2	97	
75	100		0.6	91	
63	100		0.425	87	
50	100		0.3	81	
37.5	100		0.15	62	
28	100		0.063	48	
20	100		0.055	44	
14	100		0.039	39	
10	100		0.01	23	
6.3	98		0.0025	11	
5	98		0.0014	7	



REMARKS
As received moisture content = 24%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 12-Apr-21

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

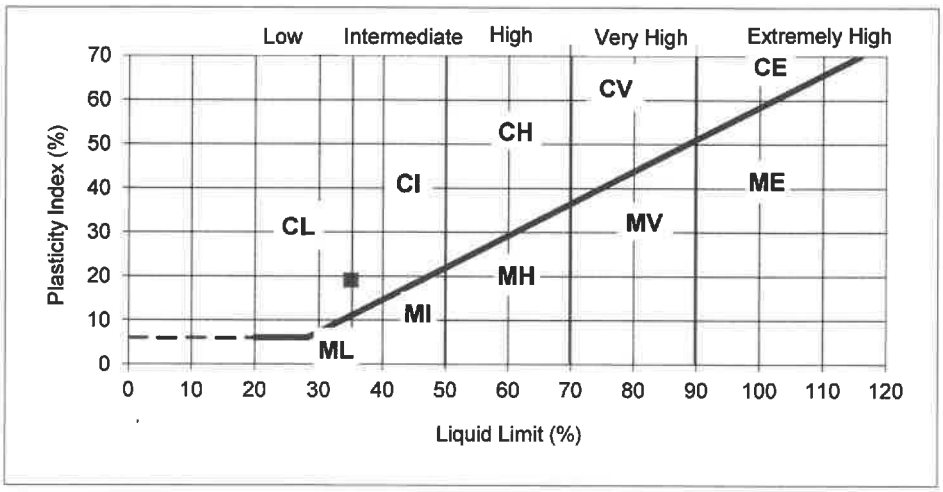
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 21 1140 - 1161 Rochdale Road, Blackley
JOB NUMBER	MRN 4066/67

SAMPLE LABEL	WS101 4.0-4.45m	DATE SAMPLED	Not advised
SAMPLE No.	97500	DATE RECEIVED	26-Mar-21
DATE TESTED	30-Mar-21	SAMPLED BY	Client

MATERIAL	Stiff brown silty sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17	35	16	19	94



REMARKS
Sample tested in natural condition

SIGNED

NAME O.P. Davies BA (Hons) DATE 12-Apr-21
(Laboratory Manager)

Appendix J

Generic Assessment Criteria Values

Summary of Category 4 Screening Levels: 2015

Substance	Residential (with home-grown produce)	Residential (without home-grown produce)	Allotments	Commercial	Public Open Space 1	Public Open Space 2
Arsenic	37 mg/kg	40 mg/kg	49 mg/kg	640 mg/kg	79 mg/kg	170 mg/kg
Benzene	0.87 mg/kg	3.3 mg/kg	0.18 mg/kg	98 mg/kg	140 mg/kg	230 mg/kg
Benzo(a)pyrene	5.0 mg/kg	5.3 mg/kg	5.7 mg/kg	77 mg/kg	10 mg/kg	21 mg/kg
Cadmium	22 mg/kg	150 mg/kg	3.9 mg/kg	410 mg/kg	220 mg/kg	880 mg/kg
Chromium VI	21 mg/kg	21 mg/kg	170 mg/kg	49 mg/kg	21 mg/kg	250 mg/kg
Lead	200 mg/kg	310 mg/kg	80 mg/kg	2300 mg/kg	630 mg/kg	1300 mg/kg

Summary Table for the Generic Assessment Criteria for Human Health Risk Assessment Land Quality Management (LQM) S4ULs.

All GAC are based on sandy loam soils with a pH 7.

	Contaminant	SOM	LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
			Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Metals	Inorganic Arsenic	6%	37	40	43	640	79	170
	Beryllium	6%	1.7	1.7	35	12	2.2	63
	Boron	6%	290	11,000	45	240,000	21,000	46,000
	Cadmium	6%	11	85	1.9	190	120	532
	Chromium (III)	6%	910	910	18,000	8,600	1,500	33,000
	Chromium (VI)	6%	6.0	6.0	1.8	33	7.7	220
	Copper	6%	2,400	7,100	520	68,000	12,000	44,000
	Elemental Mercury	6%	1.2	1.2	21	58 (25.8) ^{vap}	16	30 (25.8) ^{vap}
	Inorganic Mercury	6%	40	56	19	1,100	120	240
	Methylmercury	6%	11	15	6.0	320	40	68
	Nickel	6%	180	180	230	980	230	3,400
	Selenium	6%	250	430	88	12,000	1,100	1,800
	Vanadium	6%	410	1,200	91	9,000	2,000	5,000
	Zinc	6%	3,700	40,000	620	730,000	81,000	170,000
BTEX Compounds	Benzene	1%	0.087	0.38	0.017	27	72	90
		2.5%	0.17	0.70	0.034	47	72	100
		6%	0.37	1.4	0.075	90	73	110
	Toluene	1%	130	880 (869) ^{vap}	22	56,000 (869) ^{vap}	56,000	87,000 (869) ^{vap}
		2.5%	290	1,900	51	110,000 (1,920) ^{vap}	56,000	95,000 (1,920) ^{vap}
		6%	660	3,900	120	180,000 (4,360) ^{vap}	56,000	100,000 (4,360) ^{vap}
	Ethylbenzene	1%	47	83	16	5,700 (518) ^{vap}	24,000	17,000 (518) ^{vap}
		2.5%	110	190	39	13,000 (1,220) ^{vap}	24,000	22,000 (1,220) ^{vap}
		6%	260	440	91	27,000 (2,840) ^{vap}	25,000	27,000 (2,840) ^{vap}
	o-xylene	1%	60	88	28	6,600 (478) ^{sol}	41,000	17,000 (478) ^{sol}
		2.5%	140	210	67	15,000 (1,120) ^{sol}	42,000	24,000 (1,120) ^{sol}
		6%	330	480	160	33,000 (2,620) ^{sol}	43,000	33,000 (2,620) ^{sol}
	m-xylene	1%	59	82	31	6,200 (625) ^{vap}	41,000	17,000 (625) ^{vap}
		2.5%	140	190	74	14,000 (1,470) ^{vap}	42,000	24,000 (1,470) ^{vap}
		6%	320	450	170	31,000 (3,460) ^{vap}	43,000	32,000 (3,460) ^{vap}
	p-xylene	1%	56	79	29	5,900 (576) ^{sol}	41,000	17,000 (576) ^{sol}
		2.5%	130	180	69	14,000 (1,350) ^{sol}	42,000	23,000 (1,350) ^{sol}
		6%	310	430	160	30,000 (3,170) ^{sol}	43,000	31,000 (3,170) ^{sol}

NOTES

$^{Sol / vap}$ = solubility / vapour limit (potentially use if free product identified, although highly conservative).

f = oral, dermal and inhalation exposures compared to oral HCV.

All GAC are based on sandy loam soils with a pH 7.

	Contaminant	SOM	LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
			Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Polycyclic Aromatic Hydrocarbons (PAHs)	Acenaphthene	1%	210	3,000 (57.1) ^{sol}	34	84,000 (57.0) ^{sol}	15,000	29,000
		2.5%	510	4,700 (141) ^{sol}	85	97,000 (141) ^{sol}	15,000	30,000
		6%	1,100	6,000 (336) ^{sol}	200	100,000	15,000	30,000
	Acenaphthylene	1%	170	2,900 (86.1) ^{sol}	28	83,000 (86.1) ^{sol}	15,000	29,000
		2.5%	420	4,600 (212) ^{sol}	69	97,000 (212) ^{sol}	15,000	30,000
		6%	920	6,000 (506) ^{sol}	160	100,000	15,000	30,000
	Anthracene	1%	2,400	31,000 (1.17) ^{vap}	380	520,000	74,000	150,000
		2.5%	5,400	35,000	950	540,000	74,000	150,000
		6%	11,000	37,000	2,200	540,000	74,000	150,000
	Benz(a)anthracene	1%	7.2	11	2.9	170	29	49
		2.5%	11	14	6.5	170	29	56
		6%	13	15	13	180	29	62
	Benzo(a)pyrene (only)	1%	2.2	3.2	0.97	35	5.7	11
		2.5%	2.7	3.2	2.0	35	5.7	12
		6%	3.0	3.2	3.5	36	5.7	13
	Benzo(b)fluoranthene	1%	2.6	3.9	0.99	44	7.1	13
		2.5%	3.3	4.0	2.1	44	7.2	15
		6%	3.7	4.0	3.9	45	7.2	16
	Benzo(ghi)perylene	1%	320	360	290	3,900	640	1,400
		2.5%	340	360	470	4,000	640	1,500
		6%	350	360	640	4,000	640	1,600
	Benzo(k)fluoranthene	1%	77	110	37	1,200	190	370
		2.5%	93	110	75	1,200	190	410
		6%	100	110	130	1,200	190	440
	Chrysene	1%	15	30	4.1	350	57	93
		2.5%	22	31	9.4	350	57	110
		6%	27	32	19	350	57	120
	Dibenzo(ah)anthracene	1%	0.24	0.31	0.14	3.5	0.57	1.1
		2.5%	0.28	0.32	0.27	3.6	0.58	1.3
		6%	0.3	0.32	0.43	3.6	0.58	1.4
	Fluoranthene	1%	280	1,500	52	23,000	3,100	6,300
		2.5%	560	1,600	130	23,000	3,100	6,300
		6%	890	1,600	290	23,000	3,100	6,400
	Fluorene	1%	170	2,800 (36.0) ^{sol}	27	63,000 (30.9) ^{sol}	9,900	20,000
		2.5%	400	3,800 (76.5) ^{sol}	67	68,000	9,900	20,000
		6%	860	4,500 (183) ^{sol}	160	71,000	9,900	20,000
	Indeno(123-cd)pyrene	1%	27	45	9.5	500	82	150
		2.5%	36	46	21	510	82	170
		6%	41	46	39	510	82	180
	Naphthalene	1%	2.3 ^{f}	2.3 ^{f}	4.1 ^{f}	190 ^{f} (76.4) ^{sol}	4,900 ^{f}	1,200 ^{f} (76.4) ^{sol}
		2.5%	5.6 ^{f}	5.6 ^{f}	10 ^{f}	460 ^{f} (183) ^{sol}	4,900 ^{f}	1,900 ^{f} (183) ^{sol}
		6%	13 ^{f}	13 ^{f}	24 ^{f}	1,100 ^{f} (432) ^{sol}	4,900 ^{f}	3,000
	Phenanthrene	1%	95	1,300 (36.0) ^{sol}	15	22,000	3,100	6,200
		2.5%	220	1,500	38	22,000	3,100	6,200
		6%	440	1,500	90	22,000	3,100	6,300
	Pyrene	1%	620	3,700	110	54,000	7,400	15,000
		2.5%	1,200	3,800	270	54,000	7,400	15,000
		6%	2,000	3,800	620	54,000	7,400	15,000
	Coal Tar (B(a)P as surrogate marker)	1%	0.79	1.2	0.32	15	2.2	4.4
		2.5%	0.98	1.2	0.67	15	2.2	4.7
		6%	1.1	1.2	1.2	15	2.2	4.8

NOTES

$^{sol / vap}$ = solubility / vapour limit (potentially use if free product identified, although highly conservative).

f = naphthalene is based on comparison of inhalation exposure with TDI_{inhal} for localised effect.

All GAC are based on sandy loam soils with a pH 7.

LQM Generic Assessment Criteria (mg/kg) Dry weight soil

	Contaminant	SOM	Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Petroleum Hydrocarbons	**Aliphatic**							
	EC 5-6	1%	42	42	730	3,200 (304) sol	570,000(304) sol	95,000 (304) sol
	EC>6-8	1%	100	100	2,300	7,800 (144) sol	600,000	150,000 (144) sol
	EC>8-10	1%	27	27	320	2,000 (78) sol	13,000	14,000 (78) vap
	EC>10-12	1%	130 (48) vap	130 (48) vap	2,200	9,700 (48) sol	13,000	21,000 (48) vap
	EC>12-16	1%	1,100 (24) sol	1,100 (24) sol	11,000	59,000 (24) sol	13,000	25,000 (24) sol
	EC>16-35	1%	65,000 (8.48) f,sol	65,000 (8.48) f,sol	260,000 f	160,000 f	250,000 f	450,000 f
	EC>35-44	1%	65,000 (8.48) f,sol	65,000 (8.48) f,sol	260,000 f	160,000 f	250,000 f	450,000 f
	Aliphatic							
	EC 5-6	2.5%	78	78	1,700	5,900 (558) sol	590,000	130,000 (558) sol
	EC>6-8	2.5%	230	230	5,600	17,000 (322) sol	610,000	220,000 (322) sol
	EC>8-10	2.5%	65	65	770	4,800 (190) vap	13,000	18,000 (190) vap
	EC>10-12	2.5%	330 (118) vap	330 (118) vap	4,400	23,000 (118) vap	13,000	23,000 (118) vap
	EC>12-16	2.5%	2,400 (59) sol	2,400 (59) sol	13,000	82,000 (59) sol	13,000	25,000 (59) sol
	EC>16-35	2.5%	92,000 (21) f,sol	92,000 (21) f,sol	270,000 f	1,700,000 f	250,000 f	480,000 f
	EC>35-44	2.5%	92,000 (21) f,sol	92,000 (21) f,sol	270,000 f	1,700,000 f	250,000 f	480,000 f
	Aliphatic							
	EC 5-6	6%	160	160	3,900	12,000 (1,150) sol	600,000	180,000 (1,150) sol
	EC>6-8	6%	530	530	13,000	40,000 (736) sol	620,000	320,000 (736) sol
	EC>8-10	6%	150	150	1,700	11,000 (451) vap	13,000	21,000 (451) vap
	EC>10-12	6%	760 (283) vap	760 (283) vap	7,300	47,000 (283) vap	13,000	24,000 (283) vap
	EC>12-16	6%	4,300 (142) sol	4,400 (142) sol	13,000	90,000 (142) sol	13,000	26,000 (142) sol
	EC>16-35	6%	110,000 f	110,000 f	270,000 f	1,800,000 f	250,000 f	490,000 f
	EC>35-44	6%	110,000 f	110,000 f	270,000 f	1,800,000 f	250,000 f	490,000 f
	Aromatic							
	EC5-7(benzene as non-threshold)	1%	70	370	13	26,000 (1,220) sol	56,000	76,000 (1,220) sol
	EC>7-8(toluene)	1%	130	860	22	56,000 (869) vap	56,000	87,000 (869) vap
	EC>8-10	1%	34	47	8.6	3,500 (613) vap	5,000	7,200 (613) vap
	EC>10-12	1%	74	250	13	16,000 (364) sol	5,000	9,200 (364) sol
	EC>12-16	1%	140	1,800	23	36,000 (169) sol	5,100	10,000
	EC>16-21	1%	260 f	1,900 f	46 f	28,000 f	3,800 f	7,600 f
	EC>21-35	1%	1,100 f	1,900 f	370 f	28,000 f	3,800 f	7,800 f
	EC>35-44	1%	1,100 f	1,900 f	370 f	28,000 f	3,800 f	7,800 f
	Aromatic							
	EC5-7(benzene as non-threshold)	2.5%	140	690	27	46,000 (2,260) sol	56,000	84,000 (2,260) sol
	EC>7-8(toluene)	2.5%	290	1,800	51	110,000 (1,920) sol	56,000	95,000 (1,920) sol
	EC>8-10	2.5%	83	110	21	8,100 (1,500) vap	5,000	8,500 (1,500) vap
	EC>10-12	2.5%	180	590	31	28,000 (899) sol	5,000	9,700 (899) sol
	EC>12-16	2.5%	330	2,300 (419) sol	57	37,000	5,100	10,000
	EC>16-21	2.5%	540 f	1,900 f	110 f	28,000 f	3,800 f	7,700 f
	EC>21-35	2.5%	1,500 f	1,900 f	820 f	28,000 f	3,800 f	7,800 f
	EC>35-44	2.5%	1,500 f	1,900 f	820 f	28,000 f	3,800 f	7,800 f
	Aromatic							
	EC5-7(benzene as non-threshold)	6%	300	1,400	57	86,000 (4,710) sol	56,000	92,000 (4,710) sol
	EC>7-8(toluene)	6%	660	3,900	120	180,000 (4,360) vap	56,000	100,000 (4,360) vap
	EC>8-10	6%	190	270	51	17,000 (3,580) vap	5,000	9,300 (3,580) vap
	EC>10-12	6%	380	1,200	4	34,000 (2,150) sol	5,000	10,000
	EC>12-16	6%	660	2,500	130	38,000	5,100	10,000
	EC>16-21	6%	930 f	1,900 f	260 f	28,000 f	3,800 f	7,800 f
	EC>21-35	6%	1,700 f	1,900 f	1,600 f	28,000 f	3,800 f	7,900 f
	EC>35-44	6%	1,700 f	1,900 f	1,600 f	28,000 f	3,800 f	7,900 f
	Aliphatic +Aromatic >EC44	1%	1,600 f	1,900 f	1,200 f	28,000 f	3,800 f	7,800 f
		2.5%	1,800 f	1,900 f	2,100 f	28,000 f	3,800 f	7,800 f
		6%	1,900 f	1,900 f	3,000 f	28,000 f	3,800 f	7,900 f

NOTES

Sol / vap = solubility / vapour limit (potentially use if free product identified, although highly conservative).

f = oral, dermal and inhalation exposures compared to oral HCV.

All GAC are based on sandy loam soils with a pH 7.

	Contaminant	SOM	LQM Generic Assessment Criteria (mg/kg) Dry weight soil: Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Chloalkanes and Alkenes & Explosives	1,2 Dichloroethane (DCA)	1%	7.1E-03	9.2E-03	4.6E-03	0.67	29	21
		2.5%	1.1E-02	1.3E-02	8.3E-03	0.97	29	24
		6%	1.9E-02	2.3E-02	1.6E-02	1.7	29	28
	1,1,1 Trichloroethane (TCA)	1%	8.8	9.0	48	660	140,000	57,000 (1,425) vap
		2.5%	18	18	110	1,300	140,000	76,000 (2,915) vap
		6%	39	40	240	3,000	140,000	100,000 (6,392) vap
	1,1,2,2-Tetrachloroethanes (PCA)	1%	1.6	3.9	0.41	270	1,400	1,800
		2.5%	3.4	8.0	0.89	550	1,400	2,100
		6%	7.5	17	2.0	1,100	1,400	2,300
	1,1,1,2-Tetrachloroethanes (PCA)	1%	1.2	1.5	0.79	110	1,400	1,500
		2.5%	2.8	3.5	1.9	250	1,400	1,800
		6%	6.4	8.2	4.4	560	1,400	2,100
	Tetrachloroethene (PCE)	1%	0.18	0.18	0.65	19	1,400	810 (424) sol
		2.5%	0.39	0.40	1.5	42	1,400	1,100 (951) sol
		6%	0.90	0.92	3.6	95	1,400	1,500
	Tetrachloromethane (carbon tetrachloride)	1%	2.6E-02	2.6E-02	0.45	2.9	890	190
		2.5%	5.6E-02	5.6E-02	1.0	6.3	920	270
		6%	0.13	0.13	2.4	14	950	400
	Trichloroethene (TCE)	1%	1.6E-02	1.7E-02	4.1E-02	1.2	120	70
		2.5%	3.4E-02	3.6E-02	9.1E-02	2.6	120	91
		6%	7.5E-02	8.0E-02	0.21	5.7	120	120
	Trichloromethane (chloroform)	1%	0.91	1.2	0.42	99	2,500	2,600
		2.5%	1.7	2.1	0.83	170	2,500	2,800
		6%	3.4	4.2	1.7	350	2,500	3,100
	Chloroethene (vinyl chloride)	1%	6.4E-04	7.7E-04	5.5E-04	5.9E-02	3.5	4.8
		2.5%	8.7E-04	1.0E-03	1.0E-03	7.7E-02	3.5	5.0
		6%	1.4E-03	1.5E-03	1.8E-03	0.12	3.5	5.4
	2,4,6-Trinitritoluene (TNT)	1%	1.6	65	0.24	1,000	130	260
		2.5%	3.7	66	0.58	1,000	130	270
		6%	8.1	66	1.4	1,000	130	270
	RDX	1%	120	13,000	17	210,000	26,000	49,000 (18.7) sol
		2.5%	250	13,000	38	210,000	26,000	51,000
		6%	540	13,000	85	210,000	27,000	53,000
	HMX	1%	5.7	6,700	0.86	110,000	13,000	23,000 (0.35) vap
		2.5%	13	6,700	1.9	110,000	13,000	23,000 (0.39) vap
		6%	26	6,700	3.9	110,000	13,000	24,000 (0.48) vap
Pesticides	Aldrin	1%	5.7	7.3	3.2	170	18	30
		2.5%	6.6	7.4	6.1	170	18	31
		6%	7.1	7.5	9.8	170	18	31
	Dieldrin	1%	0.97	7.0	0.17	170	18	30
		2.5%	2.0	7.3	0.41	170	18	30
		6%	3.5	7.4	0.96	170	18	31
	Atrazine	1%	3.3	610	0.5	9,300	1,200	2,300
		2.5%	7.8	620	1.2	9,400	1,200	2,400
		6%	17.4	620	2.7	9,400	1,200	2,400
	Dichlorvos	1%	3.2E-02	6.4	4.9E-03	140	16	26
		2.5%	6.6E-02	6.5	1.0E-02	140	16	26
		6%	0.14	6.6	2.2E-02	140	16	27
	Endosulfanns (2 isomers)	1%	7.4	160 (3.0E-03) vap	1.2	5,600 (3.0E-03) vap	1,200	2,300
		2.5%	18	280 (7.0E-03) vap	2.9	7,400 (7.0E-03) vap	1,200	2,400
		6%	41	410 (1.6E-02) vap	6.8	8,400 (1.6E-02) vap	1,200	2,500
	Hexachlorocyclohexane (3 isomers), inc Lindane	1%	8.5E-02	3.7	1.3E-02	65	8.1	15
		2.5%	0.2	3.8	3.2E-02	65	8.1	15
		6%	0.46	3.8	7.7E-02	65	8.1	16

NOTES

Sol / vap = solubility / vapour limit (potentially use if free product identified, although highly conservative).

All GAC are based on sandy loam soils with a pH 7.

Contaminant		SOM	LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
			Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Chlorobenzenes	Chlorobenzene	1%	0.46	0.46	5.9	56	11,000	1,300 (675) [sol]
		2.5%	1.0	1.0	14	130	13,000	2,000 (1,520) [sol]
		6%	2.4	2.4	32	290	14,000	2,900
	Dichlorobenzenes (3 isomers)	1%	23	24	94	2,000 (571) [sol]	90,000	24,000 (571) [sol]
		2.5%	55	57	230	4,800 (1,370) [sol]	95,000	36,000 (1,370) [sol]
		6%	130	130	540	11,000 (3,240) [sol]	98,000	51,000 (3,270) [sol]
	Trichlorobenzenes (3 isomers)	1%	2.6	2.6	55	220	15,000	1,700 (318) [vap]
		2.5%	6.4	6.4	140	530	17,000	2,600 (786) [vap]
		6%	15	15	320	1,300	19,000	4,000 (1,880) [vap]
	Tetrachlorobenzenes (3 isomers)	1%	0.66	0.75	0.38	49 (39.4) [vap]	78	110 (39) [vap]
		2.5%	1.6	1.9	0.90	120 (98.1) [vap]	79	120
		6%	3.7	4.3	2.2	240 (235) [vap]	79	130
	Pentachlorobenzene	1%	5.8	19	1.2	640 (43.0) [sol]	100	190
		2.5%	12	30	3.1	770 (107) [sol]	100	190
		6%	22	38	7.0	830	100	190
	Hexachlorobenzene	1%	1.8 (0.20) [vap]	4.1 (0.20) [vap]	0.47	110 (0.20) [vap]	16	30
		2.5%	3.3 (0.50) [vap]	5.7 (0.50) [vap]	1.1	120	16	30
		6%	4.9	6.7 (1.2) [vap]	2.5	120	16	30
Chlorophenol	Chlorophenols (4 congeners)	1%	0.87 [g]	94	0.13 [g]	3,500	620	1,100
		2.5%	2.0	150	0.30	4,000	620	1,100
		6%	4.5	210	0.70	4,300	620	1,100
	Pentachlorophenol	1%	0.22	27 (16.4) [vap]	3.0E-02	400	60	110
		2.5%	0.52	29	8.0E-02	400	60	120
		6%	1.2	31	0.19	400	60	120
Others	Carbon Disulphide	1%	0.14	0.14	4.8	11	11,000	1,300
		2.5%	0.29	0.29	10	22	11,000	1,900
		6%	0.62	0.62	23	47	11,000	2,700
	Hexachlorobutadiene	1%	0.29	0.32	0.25	31	25	48
		2.5%	0.7	0.78	0.61	66	25	50
		6%	1.6	1.8	1.4	120	25	51
	Phenol	1%	280	750	66	760 [dir] (31,000)	760 [dir] (11,000)	760 [dir] (8,600)
		2.5%	550	1,300	140	1,500 [dir] (35,000)	1,500 [dir] (11,000)	1,500 [dir] (9,700)
		6%	1,100	2,300	280	3,200 [dir] (37,000)	3,200 [dir] (11,000)	3,200 [dir] (11,000)

NOTES

[sol / vap] = solubility / vapour limit (potentially use if free product identified, although highly conservative).

[dir] = S4uls based on threshold protective of direct skin contact with phenol (brackets long term exposure for illustration purposes).

[g] = derived based on 2,3,4,6-tetrachlorophenol.

Appendix K

HazWaste Online Output Sheets

Waste Classification Report

GLSXA-BUDW4-74B23

Job name

LKC 21 1140

Description/Comments

Project

LKC 21 1140

Site

1161 Rochdale Road, Blackley

Related Documents

#	Name	Description
1	HWOL_21-10117-20210408 122559.hwol	.hwol file used to create the Job

Waste Stream Template

Example waste stream template for contaminated soils

Classified by

Name:
Colin Crompton
Date:
09 Apr 2021 19:34 GMT
Telephone:
0161 763 7200

Company:
LK Group
Unit 29, Eton Business Park
Eton Hill Rd, Radcliffe
Greater Manchester
M26 2ZS

HazWasteOnline™ Training Record:

Course	Date
Hazardous Waste Classification	07 Oct 2020
Advanced Hazardous Waste Classification	08 Oct 2020

Report

Created by: Colin Crompton
Created date: 09 Apr 2021 19:34 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	WS101-29/03/2021-0.10	0.10-0.30	Non Hazardous		3
2	WS102-29/03/2021-0.00	0.00-0.40	Non Hazardous		4
3	WS102-29/03/2021-0.40	0.40-1.20	Non Hazardous		6
4	WS103-29/03/2021-0.00	0.00-0.20	Non Hazardous		7
5	WS103-29/03/2021-0.20	0.20-1.00	Non Hazardous		9
6	HD101-29/03/2021-0.15	0.15-1.00	Non Hazardous		11
7	HD102-29/03/2021-0.00	0.00-0.30	Non Hazardous		13
8	HD102-29/03/2021-0.30	0.30-1.20	Non Hazardous		15

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Appendix A: Classifier defined and non CLP determinands	16
Appendix B: Rationale for selection of metal species	17

Appendices	Page
Appendix C: Version	17

Classification of sample: WS101-29/03/2021-0.10

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
WS101-29/03/2021-0.10
Sample Depth:
0.10-0.30 m
Moisture content:
19%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
1	●	pH				7 pH		7 pH	7pH		
				PH							
								Total:	0%		

Key

	User supplied data
●	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: WS102-29/03/2021-0.00

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
WS102-29/03/2021-0.00
Sample Depth:
0.00-0.40 m
Moisture content:
27%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 27% Wet Weight Moisture Correction applied (MC)

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		23	mg/kg	1.32	22.168	mg/kg	0.00222 %	✓	
2		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.19	mg/kg	1.142	0.158	mg/kg	0.0000158 %	✓	
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		22	mg/kg	1.462	23.473	mg/kg	0.00235 %	✓	
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
5		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		73	mg/kg	1.126	59.999	mg/kg	0.006 %	✓	
6		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	140	mg/kg	1.56	159.413	mg/kg	0.0102 %	✓	
7		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.88	mg/kg	1.353	0.869	mg/kg	0.0000869 %	✓	
8		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		19	mg/kg	2.976	41.281	mg/kg	0.00413 %	✓	
9		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.78	mg/kg	2.554	1.454	mg/kg	0.000145 %	✓	
10		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		58	mg/kg	2.774	117.457	mg/kg	0.0117 %	✓	
11		pH			PH		6.8	pH		6.8	pH	6.8 pH		
12		naphthalene	601-052-00-2	202-049-5	91-20-3		0.6	mg/kg		0.438	mg/kg	0.0000438 %	✓	
13		acenaphthylene		205-917-1	208-96-8		0.33	mg/kg		0.241	mg/kg	0.0000241 %	✓	
14		acenaphthene		201-469-6	83-32-9		0.78	mg/kg		0.569	mg/kg	0.0000569 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				0.77	mg/kg		0.562	mg/kg	0.0000562 %	✓	
			201-695-5	86-73-7									
16		phenanthrene				7	mg/kg		5.11	mg/kg	0.000511 %	✓	
			201-581-5	85-01-8									
17		anthracene				1.6	mg/kg		1.168	mg/kg	0.000117 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				9.3	mg/kg		6.789	mg/kg	0.000679 %	✓	
			205-912-4	206-44-0									
19		pyrene				8.2	mg/kg		5.986	mg/kg	0.000599 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				4.3	mg/kg		3.139	mg/kg	0.000314 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				4.2	mg/kg		3.066	mg/kg	0.000307 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				4.9	mg/kg		3.577	mg/kg	0.000358 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				1.8	mg/kg		1.314	mg/kg	0.000131 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				4.1	mg/kg		2.993	mg/kg	0.000299 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				2.6	mg/kg		1.898	mg/kg	0.00019 %	✓	
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				0.36	mg/kg		0.263	mg/kg	0.0000263 %	✓	
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				1.4	mg/kg		1.022	mg/kg	0.000102 %	✓	
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				33	mg/kg	1.785	43.005	mg/kg	0.0043 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0451 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS102-29/03/2021-0.40

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
WS102-29/03/2021-0.40
Sample Depth:
0.40-1.20 m
Moisture content:
16%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 16% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
1	●	pH		PH		6.7 pH		6.7 pH	6.7 pH		
								Total:	0%		

Key

	User supplied data
●	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: WS103-29/03/2021-0.00

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
WS103-29/03/2021-0.00
Sample Depth:
0.00-0.20 m
Moisture content:
21%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 21% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		18	mg/kg	1.32	18.775	mg/kg	0.00188 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.22	mg/kg	1.142	0.199	mg/kg	0.0000199 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		20	mg/kg	1.462	23.093	mg/kg	0.00231 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		61	mg/kg	1.126	54.257	mg/kg	0.00543 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	93	mg/kg	1.56	114.6	mg/kg	0.00735 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.25	mg/kg	1.353	0.267	mg/kg	0.0000267 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		19	mg/kg	2.976	44.674	mg/kg	0.00447 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.57	mg/kg	2.554	1.15	mg/kg	0.000115 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		60	mg/kg	2.774	131.495	mg/kg	0.0131 %	✓	
11	pH			PH		7.5	pH		7.5	pH	7.5 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		3.9	mg/kg		3.081	mg/kg	0.000308 %	✓	
13	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		12	mg/kg		9.48	mg/kg	0.000948 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				7.1	mg/kg		5.609	mg/kg	0.000561 %	✓	
			201-695-5	86-73-7									
16		phenanthrene				59	mg/kg		46.61	mg/kg	0.00466 %	✓	
			201-581-5	85-01-8									
17		anthracene				14	mg/kg		11.06	mg/kg	0.00111 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				61	mg/kg		48.19	mg/kg	0.00482 %	✓	
			205-912-4	206-44-0									
19		pyrene				50	mg/kg		39.5	mg/kg	0.00395 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				27	mg/kg		21.33	mg/kg	0.00213 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				25	mg/kg		19.75	mg/kg	0.00198 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				28	mg/kg		22.12	mg/kg	0.00221 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				11	mg/kg		8.69	mg/kg	0.000869 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				23	mg/kg		18.17	mg/kg	0.00182 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				14	mg/kg		11.06	mg/kg	0.00111 %	✓	
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				0.81	mg/kg		0.64	mg/kg	0.000064 %	✓	
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				12	mg/kg		9.48	mg/kg	0.000948 %	✓	
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				29	mg/kg	1.785	40.899	mg/kg	0.00409 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0664 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS103-29/03/2021-0.20

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
WS103-29/03/2021-0.20
Sample Depth:
0.20-1.00 m
Moisture content:
16%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 16% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.1 mg/kg	1.32	8.983 mg/kg	0.000898 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.13 mg/kg	1.142	0.125 mg/kg	0.0000125 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		23 mg/kg	1.462	28.237 mg/kg	0.00282 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		31 mg/kg	1.126	29.318 mg/kg	0.00293 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	21 mg/kg	1.56	27.515 mg/kg	0.00176 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		25 mg/kg	2.976	62.502 mg/kg	0.00625 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.42 mg/kg	2.554	0.901 mg/kg	0.0000901 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		72 mg/kg	2.774	167.78 mg/kg	0.0168 %	✓	
11	pH			PH		6.7 pH		6.7 pH	6.7 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		0.55 mg/kg		0.462 mg/kg	0.0000462 %	✓	
13	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				0.23	mg/kg		0.193	mg/kg	0.0000193 %	✓	
			201-695-5	86-73-7									
16		phenanthrene				1.2	mg/kg		1.008	mg/kg	0.000101 %	✓	
			201-581-5	85-01-8									
17		anthracene				0.17	mg/kg		0.143	mg/kg	0.0000143 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				1.6	mg/kg		1.344	mg/kg	0.000134 %	✓	
			205-912-4	206-44-0									
19		pyrene				1.2	mg/kg		1.008	mg/kg	0.000101 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				0.65	mg/kg		0.546	mg/kg	0.0000546 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				0.5	mg/kg		0.42	mg/kg	0.000042 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				0.78	mg/kg		0.655	mg/kg	0.0000655 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				0.29	mg/kg		0.244	mg/kg	0.0000244 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				0.53	mg/kg		0.445	mg/kg	0.0000445 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				26	mg/kg	1.785	38.988	mg/kg	0.0039 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0363 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: HD101-29/03/2021-0.15

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
HD101-29/03/2021-0.15
Sample Depth:
0.15-1.00 m
Moisture content:
19%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11 mg/kg	1.32	11.764 mg/kg	0.00118 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.38 mg/kg	1.142	0.352 mg/kg	0.0000352 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25 mg/kg	1.462	29.597 mg/kg	0.00296 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		50 mg/kg	1.126	45.598 mg/kg	0.00456 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	51 mg/kg	1.56	64.436 mg/kg	0.00413 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1 mg/kg	1.353	0.11 mg/kg	0.000011 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		32 mg/kg	2.976	77.145 mg/kg	0.00771 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.48 mg/kg	2.554	0.993 mg/kg	0.0000993 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		120 mg/kg	2.774	269.647 mg/kg	0.027 %	✓	
11	pH			PH		7 pH		7 pH	7pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		0.5 mg/kg		0.405 mg/kg	0.0000405 %	✓	
13	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**
14	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				0.21	mg/kg		0.17	mg/kg	0.000017 %	✓	
			201-695-5	86-73-7									
16		phenanthrene				1.7	mg/kg		1.377	mg/kg	0.000138 %	✓	
			201-581-5	85-01-8									
17		anthracene				0.37	mg/kg		0.3	mg/kg	0.00003 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				2.6	mg/kg		2.106	mg/kg	0.000211 %	✓	
			205-912-4	206-44-0									
19		pyrene				2.3	mg/kg		1.863	mg/kg	0.000186 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				1.2	mg/kg		0.972	mg/kg	0.0000972 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				0.97	mg/kg		0.786	mg/kg	0.0000786 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				1.5	mg/kg		1.215	mg/kg	0.000122 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				0.51	mg/kg		0.413	mg/kg	0.0000413 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				1.1	mg/kg		0.891	mg/kg	0.0000891 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				0.69	mg/kg		0.559	mg/kg	0.0000559 %	✓	
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				30	mg/kg	1.785	43.38	mg/kg	0.00434 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0532 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: HD102-29/03/2021-0.00

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
HD102-29/03/2021-0.00
Sample Depth:
0.00-0.30 m
Moisture content:
25%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 25% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15	mg/kg	1.32	14.854	mg/kg	0.00149 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.18	mg/kg	1.142	0.154	mg/kg	0.0000154 %	✓	
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		19	mg/kg	1.462	20.827	mg/kg	0.00208 %	✓	
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
5	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		66	mg/kg	1.126	55.731	mg/kg	0.00557 %	✓	
6	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	110	mg/kg	1.56	128.685	mg/kg	0.00825 %	✓	
7	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.26	mg/kg	1.353	0.264	mg/kg	0.0000264 %	✓	
8	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		16	mg/kg	2.976	35.715	mg/kg	0.00357 %	✓	
9	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.64	mg/kg	2.554	1.226	mg/kg	0.000123 %	✓	
10	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		53	mg/kg	2.774	110.272	mg/kg	0.011 %	✓	
11	pH			PH		7.5	pH		7.5	pH	7.5 pH		
12	naphthalene	601-052-00-2	202-049-5	91-20-3		0.57	mg/kg		0.427	mg/kg	0.0000427 %	✓	
13	acenaphthylene		205-917-1	208-96-8		0.39	mg/kg		0.293	mg/kg	0.0000293 %	✓	
14	acenaphthene		201-469-6	83-32-9		0.78	mg/kg		0.585	mg/kg	0.0000585 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		fluorene				0.86	mg/kg		0.645	mg/kg	0.0000645 %	✓	
			201-695-5	86-73-7									
16		phenanthrene				7.4	mg/kg		5.55	mg/kg	0.000555 %	✓	
			201-581-5	85-01-8									
17		anthracene				1.8	mg/kg		1.35	mg/kg	0.000135 %	✓	
			204-371-1	120-12-7									
18		fluoranthene				11	mg/kg		8.25	mg/kg	0.000825 %	✓	
			205-912-4	206-44-0									
19		pyrene				10	mg/kg		7.5	mg/kg	0.00075 %	✓	
			204-927-3	129-00-0									
20		benzo[a]anthracene				5.7	mg/kg		4.275	mg/kg	0.000428 %	✓	
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				5.3	mg/kg		3.975	mg/kg	0.000398 %	✓	
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				6.7	mg/kg		5.025	mg/kg	0.000503 %	✓	
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				2.4	mg/kg		1.8	mg/kg	0.00018 %	✓	
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				5.3	mg/kg		3.975	mg/kg	0.000398 %	✓	
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				3.6	mg/kg		2.7	mg/kg	0.00027 %	✓	
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				0.32	mg/kg		0.24	mg/kg	0.000024 %	✓	
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				3.1	mg/kg		2.325	mg/kg	0.000233 %	✓	
			205-883-8	191-24-2									
28		vanadium { divanadium pentaoxide; vanadium pentoxide }				26	mg/kg	1.785	34.811	mg/kg	0.00348 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
										Total:	0.0406 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: HD102-29/03/2021-0.30

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
HD102-29/03/2021-0.30
Sample Depth:
0.30-1.20 m
Moisture content:
22%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 22% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
1		pH		PH		5.8 pH		5.8 pH	5.8 pH		
								Total:	0%		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)

Appendix A: Classifier defined and non CLP determinands

- **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

- **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H332 , Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 1B H360FD , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H302 , Acute Tox. 1 H330 , Acute Tox. 1 H310 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Aquatic Chronic 2 H411

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Carc. 2 H351 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Skin Irrit. 2 H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4 H302 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2 H315 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2 H351

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

vanadium {divanadium pentaoxide; vanadium pentoxide}

worst case/most likely scenario

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2021.77.4714.9046 (18 Mar 2021)
HazWasteOnline Database: 2021.77.4714.9046 (18 Mar 2021)

This classification utilises the following guidance and legislation:
WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2019 - UK: 2019 No. 720 of 27th March 2019
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
POPs Regulation 2019 - Regulation (EU) 2019/1021 of 20 June 2019

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