



Phase 1 Desk Study Site Investigation Report

LOCATION	1 st Team Pitches, City Football Academy, Clayton Lane, Manchester, M11 4TS
ISSUE DATE	18 th July 2023
FOR	Manchester City Football Club Ltd.
CLIENT REF.	PO: MCFC1112893
OUR REF.	G23254

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Executive Summary

The major conclusions of this desk-based Phase one study are summarised in the table below:

Site Suitability	Desk Study Finding	Preliminary Assessment
Normal Foundations	A potential for deeper made/infilled ground has been identified underlain by competent natural deposits at unknown depth. However, normal foundations not proposed. Made ground recently encountered elsewhere in the site has been relatively competent though capping materials were less competent.	Unclear
Soakaways	Clay natural subsoils and overlying contaminated clay fill unlikely to offer sufficient permeability or a safe means of water disposal.	Unlikely to be suitable

Potential Risks	Desk Study Finding	Preliminary Risk Assessment
Radon Gas	< 1% of properties affected	Negligible
Chemical Contamination	Historical nearby and on-site land uses potentially giving rise to a range of inorganic and organic contaminants including asbestos, metals/metalloids, PAHs, petroleum hydrocarbons and VOCs. Contamination previously confirmed within academy site.	High
Hazardous Gas	Potential for hazardous gas to be generated in made/infilled ground deposits. However, proposed structure likely to be low risk and negligible occupancy. Confirmation by inspection of final designs may be appropriate.	Low
Ground Instability/ subsidence	Potential for significant deposits of compressible made/infilled ground.	Moderate
	Potential for vegetation influence on shrink-swell clays which may be present, including risk of soil heave.	Very Low
	Potential for unrecorded shallow coal mining.	Negligible

NB. Arbitrary potential hazard assessment: High (Red), Moderate (Amber), Low (Yellow), Very Low (Green), Negligible (uncoloured)

1. Introduction

In accordance with your instruction, Geoinvestigate Ltd. has carried out a Phase 1 Desk Study Investigation of a small section of the first team training pitches at the Manchester City Football Academy site. The location of the site is shown on the Groundsure Enviro+Geo Insight report presented in Appendix 2.

The study area comprises an area of land some 0.01 ha in size adjacent to the training pitches. The study area and training pitches lie at higher elevation to the adjacent car park to the west, at the top of an artificial embankment. Approximately half of the study area is surfaced with asphalt (west side) and half artificial turf (east side), and the adjacent pitch and embankment are both grassed.

It is understood that it is proposed to place a small portacabin on the plot and erect a large elevated LCD screen to be used as an aid during training sessions. Given the site's history as a chemical works, and remedial works that were carried out when the academy was developed, it has been necessary to assess the potential risks during groundworks and to the proposed foundations etc.

The client has also asked for consideration of waste disposal responsibilities for any excavated materials. Geoinvestigate Ltd. recently carried out a limited borehole investigation covering several other locations within the academy site to assess ground conditions and carry out WAC (waste acceptance criteria) testing. These works were carried out for other small development works proposed within the site. That report is

appended to this report and will be briefly reviewed with a view to identifying and classifying likely soil/fill types that might be encountered at the current study area.

The purpose of the Phase 1 Desk Study investigation was to review the historical land use and geological information for the site in order to provide an assessment of the potential geotechnical/foundation problems together with a qualitative contamination and ground gas risk assessment.

2. Scope of Works

The investigation comprised a review of the following information;

- An extract from the 1:50,000 BGS geological mapping.
- Historical OS maps of various scales dating back to 1848 (presented in Appendix 1).
- Observations from a walkover study carried out by Jack Harper of Geoinvestigate
- A GroundSure Enviro+Geo Insight Report. This is included in Appendix 2.
- A Coal Authority report included in Appendix 3.
- The earlier site investigation report (G23195, issued 28th June 2023) is presented in Appendix 4.

3. Findings of Phase 1 Investigation

3.1 Anticipated Geology

The extract of the 1: 50,000 BGS geological mapping indicates that the site will be underlain by superficial deposits of Devensian Till with bedrock comprising the Chester Pebble Beds (pebbly sandstone), belonging to the Pennine Lower Coal Measures.

A fault is shown close to, but not below, the west of the study area in an approximately north-south orientation.

Areas of made and infilled ground are shown to the west of the site beyond Clayton Lane, with other similar areas present at more distant locations in all directions.

A number of BGS borehole records are present within the academy site, with three located very close to the area of interest to this report. These three are dated to 1995 and show 2.1m, 2.2m and 3.3m of made ground largely comprising ash and brick fill, sometimes clayey at the base of the made ground. This is underlain by a significant thickness of sandy gravelly (boulder) clay (>10m), sometimes with sandy partings. The deepest of the boreholes shows clayey sand at 19.35m followed by sandstone rock at 25.0m.

It is known that the site has since been remediated and the recent Geoinvestigate site investigation (ref. G23195) explored the recent post-remediation ground conditions at several locations within the academy site. These generally comprised a thin capping layer of uncontaminated clay followed by very gravelly clay fill. See Section 3.6 and Appendix 4 for more details.

3.2 Historical OS Maps and Historical Land Use

Copies of historical OS maps were obtained for the site covering the period 1848 to 2023. Historical land uses and major features located within the site boundary and externally but potentially within influencing distance are summarised in Table 1 below. The earliest OS map of 1848 shows the site to be undeveloped but within around 250m of a colliery, chemical works, canal, mill and reservoirs. Note that due to the number of features on the map record, only the closest and/or most relevant are discussed in Table 1.

Table 1: Summary of Historical OS Map Land Use & Potential Hazard Identification

Map Feature	Location	Appears	Absent	Notes
Collieries	350m Northwest 250m Southwest 700m Northwest	1848 1848 1848	1890-91 1890-91 1981	Evidence of coal mining. See later for assessment of coal mining risk. Collieries possibly too distant to have directly affected the site through contamination.
Mill	200m Southwest	1848	1905 (disused)	Building(s) probably incorporated into chemical works.
Chemical works and Alanine Works Wider industrial/chemical works area Including: Tanks, chimneys, gasometers, cranes, rail links, reservoirs, earthworks, refuse heap, varnish works, tar still etc.	250m West	1848	2010	Expanding over time. Alanine works appears 80m to the north by 1908 map. Expanding to surround site by 1932-33 map. Alkali works present to west/northwest Oil tanks within study area from 1908 map until 1970s. Rail lines and small reservoirs also on or adjacent to site (see below re. reservoirs). Other features noted on 1848 map include a dye works 400m to the southeast, bleach works 550m to the southwest, and a tannery 700m to the west. Probably all amalgamated and/or inter-reliant.
Motor Car Works	100m South	1908	1932-33	Low risk in context of distance and other features.
Electricity substations	90m West 140m Northeast	1948-49 1948-49	1970-74 2003	Low risk in context of distance and other features.
Reservoirs	On site / adj. West 10-15m South	1890s 1948-49	1905-06 1970-74	Closest reservoir was only present on 1890s maps. Next closest is a small feature which replaced one of the oil tanks. Others more distant.
Steel Works	250m East	1922	1977-80	Low risk in context of distance and other features.

NB. Arbitrary potential hazard assessment: High (Red), Moderate (Amber), Low (Yellow), Very Low (Green), Negligible (uncoloured)

A review of the historical OS maps has highlighted the land uses most likely to present (or have presented) a hazard or source of potentially harmful contamination to the study area. The primary features of interest are obviously the chemical/alanine/alkali works that surround and include the site, particularly the presence of tanks within the study area and adjacent ponds/reservoirs.

3.3 GroundSure Enviro + Geo Insight Report

The GroundSure Enviro+Geo Insight Report presented in Appendix 2 provides listings of potentially contaminative current and past land uses together with possible pathway and receptor information. It also covers other potential risks to the site including ground hazards associated with the area's natural geological setting and man-made hazards such as those arising from development activities. A summary of the relevant Report findings is presented in Table 2 below and on the following pages.

Table 2: GroundSure EnviroInsight Summary: Potential Contaminative Uses/Pathways/Receptors

Details	Feature	Location relative to site
Past land use		
Historical industrial land uses	Railway Sidings (6)	Onsite (closest)
	Unspecified Works (48)	Onsite (closest)
	Unspecified Commercial/Industrial (14)	Onsite (closest)
	Chemical Works (14)	Onsite (closest)
	Oil Tanks (3)	3m south (closest)
	Unspecified Tank (31)	8m southwest (closest)
	Steel Works (1)	28m southeast
	Refuse Heap (9)	121m northwest (closest)
	Unspecified Heap (6)	122m southwest (closest)
	Unspecified Disused Mill (1)	129m west
	Engineering Works (5)	140m southeast (closest)
	Motor Works (1)	143m southeast
	Refuse (1)	150m west
	Alkali Works (2)	150m west (closest)
	Unspecified Mill (1)	165m southwest
	Unspecified Pit (3)	206m southeast (closest)
	Unspecified Ground Workings (2)	209m southwest (closest)
	Dye Works (5)	210m south (closest)
	Colliery (2)	214m west (closest)
	Unspecified Tanks (2)	221m west (closest)
	Size Works (2)	225m west (closest)
	Railway Building (1)	236m north
	Finishing Works (1)	241m northeast
	Chimney (1)	263m northwest
	Disused Chemical Works (1)	268m southwest
	Unspecified Ground Working (1)	280m southeast
	Coal Pit (2)	296m southwest (closest)
	Wheel Works (1)	319m west
	Brewery (4)	358m east (closest)
	Vinegar Brewery (1)	369m east
	Oil Works (1)	375m north
	Unspecified Depot (1)	398m northwest
	Brick Works (2)	402m south (closest)
	Sand Pit (1)	406m east
	Police Station (8)	444m southwest (closest)
	Brick Kiln (1)	449m north
	Fire Station (1)	454m southwest
	Fire Engine Station (2)	458m southwest (closest)
	Brick Field (1)	483m northwest
Historical Tanks	Tanks (224)	1m south (closest)
	Unspecified Tank (189)	2m south (closest)
	Oil Tanks	9m south
Historical Energy Features	Gasometer	213m northwest
	Gas Works	471m east
	Electrical Substation (43)	58m east (closest)
Historical garages	Gasometer	213m northwest
	Gas Works	471m east
	Garage (7)	228m south (closest)
Landfill and Other Waste Sites		
Historical landfill (LA/mapping records)	No (0) records within 500m	n/a
Historical landfill (EA/NRW records)	No (0) records within 500m	n/a
Historical waste sites	Refuse	149m west
	Scrap Yard (6)	323m west (closest)
	Waste Paper Works	340m north (closest)
Licensed waste sites	25000 tonnes (5)	267m south (closest)
	>=75000 tonnes	455k west

Table 2 is continued on the following page

NB Arbitrary potential hazard assessment: potentially significant (yellow), or unlikely to be significant (uncoloured). Potential receptors for contamination are highlighted blue.

Table 2 (ctd.): GroundSure EnviroInsight Summary: Potential Contaminative Uses/Pathways/Receptors

Details	Feature	Location relative to site
Landfill and Other Waste Sites (ctd.)		
Waste exemptions	Treating waste exemption (4)	263m south (closest)
Current Land uses		
Recent industrial land uses	Electrical Features Lifting and Handling Equipment	232m south 248m south
Current or recent petrol stations	ESSO	396m west
Control of Major Accident Hazards (COMAH)	Historical COMAH Site (2)	Onsite (closest)
	Historical NIHHS Site	443m west
Hazardous Substance storage/Usage	Historical Consent (6) Approved	338m northwest (closest) 447m east
Historical licensed industrial activities (IPC)	Manufacture and Use of Organic Chemicals (36) Combustion Processes (2)	234m east (closest) 372m northwest (closest)
Licensed Industrial Activities (Part A(1))	Associated Process (7) Organic Chemicals; Plastic Materials EG Polymers (7) Organic Chemicals; Oxygen containing compounds EG alcohols (9) Organic Chemicals: Any other organic compounds (not described 4.1 A(1)(A) (4) Organic Chemicals; hydrocarbons EG aromatics (5) Organics chemicals; nitrogen containing compounds EG Amines (7) Organic Chemicals: Phosphorus containing compounds EG substituted Phosphines (4) Organic Chemicals: Organometallic compounds EG Lead Alkyls (3) Organic Chemicals; Sulphur containing compounds EG Sulphides (4) Organics Chemicals; Halogen containing compounds EG Halocarbons (3) Organic Chemicals; Synthetic Rubbers	273m west (closest) 273m west (closest) 273m west (closest) 273m west (closest) 274m northeast (closest) 274m northeast (closest) 274m northeast (closest) 274m northeast (closest) 274m northeast (closest) 274m northeast (closest) 274m northeast (closest) 274m northeast (closest) 274m northeast (closest) 274m northeast (closest) 344m Northeast
Licensed pollutant release (Part A(2)/B)	Rubber (3) Coating Processes (2) Use of Organic Chemicals Waste Oil Burner 0.4 MW	120m southeast (closest) 321m northwest (closest) 334m northeast 381m Northeast
Radioactive Substance Authorisations	Disposal of Radioactive Waste (was Rsa60 Section 6)	372m northwest
Licensed Discharges to controlled waters	SEWAGE DISCHARGES (4)	261m southeast (closest)
Pollutant release to public sewer	Manchester city council (2)	467m West (closest)
List 1 Dangerous substances	Mercury (other) (2) Mercury (other), Cadmium (5) Cadmium (4)	235m east (closest) 273m west (closest) 273m west
List 2 Dangerous substances	Chromium, Copper, Zinc, Toluene	373m northwest (closest)
Pollution Incidents (EA/NRW)	Organic Chemicals/products (10) Atmospheric Pollutants and Effects (2)	49m west (closest) 314m northeast (closest)
Pollution inventory substances	Organic Chemicals; Hydrocarbons EG aromatics Organics Chemicals; Nitrogen containing compounds EG Amines (2)	274m northeast 366m northeast (closest)
Pollution inventory waste transfers	Organic Chemicals; Hydrocarbons EG Aromatics Organics Chemicals; Nitrogen containing compounds EG Amines	274m northeast 366m northeast

Table 2 is continued on the following page

NB Arbitrary potential hazard assessment: potentially significant (yellow), or unlikely to be significant (uncoloured). Potential receptors for contamination are highlighted blue.

Table 2 (ctd.): GroundSure EnviroInsight Summary: Potential Contaminative Uses/Pathways/Receptors

Details	Feature	Location relative to site
Hydrogeology - Superficial aquifer		
Superficial aquifer	Secondary undifferentiated Secondary A	Onsite 180m northeast
Bedrock aquifer	Principal Secondary A Secondary B	Onsite 40m west 225m north
Groundwater vulnerability	Low (2)	Onsite (closest)
Groundwater Abstractions	Historical (19) Active (7)	35m southeast (closest) 92m south (closest)
Surface Water Abstractions	Historical (6)	269m north (closest)
Hydrology		
Water Network (OS MasterMap)	Water year round	238m northeast
WFD Surface water body catchments	River WB catchment	Onsite
WFD Surface water bodies	Canal (1) River (1)	238m northeast 3901 west
WFD Groundwater bodies	Manchester and East Cheshire Permo-Triassic Sand Aquifers	Onsite
River and coastal flooding		
Risk of Flooding from Rivers and Sea (RoFRaS)	No (0) records within 50m	n/a
Historical Flood Events	No (0) records within 250m	n/a
Flood Zone 2	No (0) records within 50m	n/a
Flood Zone 3	No (0) records within 50m	n/a
Surface water flooding		
Surface water flooding	Highest risk Onsite Highest risk within 50m	Negligible 1 in 30 year, 0.1m – 0.3m
Groundwater flooding		
Groundwater flooding	Highest risk Onsite Highest risk within 50m	Moderate High
Environmental designations		
Local Nature Reserves (LNR)	Clayton Vale	877m north
Green Belt	Merseyside and Greater Manchester	1040m north (closest)
SSSI impact Zones and Units		
SSSI Impact Risk Zones	Proposed development does not fall into any of the potential problem categories.	Onsite
Visual and cultural designations		
Listed Buildings	No (0) records within 250m	n/a
Agricultural designations		
Agricultural Land Classification	Urban	Onsite
Habitat designations		
Open Mosaic Habitat	Identification confidence: Low	Onsite
Geology 1:10,000 scale		
Artificial and made ground (10k)	Made Ground (Undivided) (2) Infilled Ground (2)	137m southeast (closest) 249m southeast (closest)
Superficial geology (10k)	Till, Devensian – Diamicton	Onsite
Bedrock geology (10k)	Chester Pebble Beds Formation – Sandstone (2) Pennine Upper Coal Measures Formation – Mudstone, Siltstone and Sandstone Manchester Marls Formation – Mudstone	Onsite (closest) 62m west 257m north
Bedrock faults and other linear features (10k)	Normal fault, inferred (3) Coal seam, inferred (5)	45m west 73m southwest
Table 2 is continued on the following page		

NB Arbitrary potential hazard assessment: potentially significant (yellow), or unlikely to be significant (uncoloured). Potential receptors for contamination are highlighted blue.

Table 2 (ctd.): GroundSure EnviroInsight Summary: Potential Contaminative Uses/Pathways/Receptors

Details	Feature	Location relative to site
Geology 1:50,000 scale		
Artificial and made ground (50k)	Made Ground (Undivided)	136m southeast
Superficial geology (50k)	Till, Devensian	Onsite
Superficial permeability (50k)	Mixed (High to Low)	Onsite
Bedrock geology (50k)	Chester Formation – Sandstone (2) Pennine Upper Coal Measures Formation – Mudstone, Siltstone and Sandstone Manchester Marls Formation – Mudstone	Onsite (closest) 62m west 257m north
Bedrock permeability (50k)	Mixed (High to Moderate)	Onsite
Bedrock faults and other linear features (50k)	Fault, inferred (3) Coal seam, inferred (4)	46m west (closest) 73m southwest (closest)
Natural ground subsidence		
Shrink swell clays	Very low	Onsite
Running sands	Very low	Onsite
Compressible deposits	Negligible	Onsite
Collapsible deposits	Very low	Onsite
Landslides	Very Low	Onsite
Ground dissolution of soluble rocks	Negligible	Onsite
Mining, ground workings and natural cavities		
BritPits	Coal, Deep Sand Clay & Shale (2)	216m west 455m east 483m south (closest)
Surface ground workings	Pond (5) Refuse Heap (10) Unspecified Heap (8) Refuse Unspecified pit Unspecified Ground Workings Colliery Canal (11) Reservoirs (3)	6m west (closest) 121m northwest (closest) 122m southwest (closest) 150m west 206m southeast 209m southwest 214m West 222m Northeast (closest) 248m southeast (closest)
Underground workings	Colliery (3) Unspecified Disused Shafts (2) Unspecified Shafts (2)	624m northwest (closest) 655m northwest (closest) 665m northwest (closest)
Underground mining extents	Fireclay	306m west
Non-coal mining	Vein Mineral	653m southwest
JPB mining areas	Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.	Onsite
Coal mining	The site is located within a coal mining area as defined by the Coal Authority.	Onsite
Mining Cavities		
Mining Cavities	Fireclay Bath Stone, Cornstone, Limestone	590m northwest 681m west
Radon Risk		
Radon Risk	Less than 1%, No protection required	Onsite
Soil chemistry		
Mostly near normal levels recorded though slightly elevated arsenic and Lead might be expected.		
Railway infrastructure and projects		
Historical railway and tunnel features	Mineral Railway Sidings (6)	Onsite (closest)
	Railway Sidings (38)	Onsite (closest)
	Railway Tramway Sidings	135m west 163m east
Historical railways	Dismantled (3)	45m southeast (closest)

NB Arbitrary potential hazard assessment: potentially significant (yellow), or unlikely to be significant (uncoloured). Potential receptors for contamination are highlighted blue.

The GeoInsight report has highlighted no additional potential risks to the site or the intended development arising due to the geological setting beyond those already discussed save for perhaps the record of Control of Major Accident Hazards (COMAH) record. This COMAH record, however, is perhaps unlikely to refer to the exact study area. This is listed as occurring on Ashton New Road which is some 400m to the north of the study area and therefore could refer to any location within the large historical chemical works complex. The map entry shows this incident to include most of the Academy site so the exact incident location and affected area is unclear.

3.4 Coal Authority Report Summary

The Coal Authority (CA) report (see Appendix 3) states that:

- The site is in an area where underground coal mining has occurred in the Parker, Crombouke, and Roger coal seams at a shallowest depth of 427m, with the last worked dates ranging from 1913-1957.
- The CA does not believe that there are probable unrecorded shallow workings.
- There are no known coal mine entries within 100m of the study area.
- There are no outcrops, faults, fissures or breaklines recorded below the study area.
- There are no opencast mines or CA tips within 500m of the study area.
- There has been no damage notice or claim for any property within 50m of the site.
- There are no records of mine gas or minewater treatment schemes within 500m.
- There is a record of site investigation work for the whole academy site.

The earlier site investigation reports have been briefly reviewed and, broadly speaking, found evidence of mining and mine entries in the west of the academy site where it is underlain by coal measures geology, but no such evidence in the east where the current study area is located. Remedial works are understood to have been undertaken in the west of the academy site where mining and mine entries were discovered.

Based on the CA report, GBS records and earlier site investigation/remediation works, a negligible risk of coal mining related subsidence to the proposed development is inferred.

3.5 Recent Ground Investigation Report G23195

Report G23195 is presented in Appendix 4 for reference. Four (4) shallow boreholes were sunk by Geoinvestigate in various locations across the academy to establish foundation requirements and waste classification information for several other small proposed developments within the academy.

As noted earlier, the site was remediated during the development of the academy facility, and so the upper soils encountered by these boreholes appeared to comprise a capping layer made up of topsoil with a sand base/drainage later underlain by clay fill to depths of between 0.75m and 1.20m.

The majority of the underlying made ground comprised grey-brown very gravelly clay fill material with occasional slight hydrocarbon odours. A blue-grey clay fill was also encountered in places (at greater depth), and suspected evidence of “galligu”^{*} was also sporadically noted.

^{*}A (mostly) calcium sulphide solid waste product of the Leblanc Process used historically in alkali works.

WAC (waste acceptance criteria) testing suggested that the capping materials would probably comprise inert waste, with the underlying clay fill probably falling into the hazardous waste category.

It is assumed that the current study area has been similarly capped during the earlier remedial works but no excavations have been undertaken to confirm this.

Geoinvestigate Ltd. is advised that the development proposed for this location is not expected to require significant foundation excavations; the proposed cabin is to be placed on a concrete slab / shallow raft and so will not require excavation beyond the (assumed) capping layer.

The posts supporting the large LCD screen may require small pad foundations and so care should be taken to inspect the soils removed for their installation. It would be advisable to have a geoenvironmental engineer present to assess the arisings with regard to hazard identification and potentially waste classification. A proposal / method statement has been prepared for such works and is issued alongside this report.

3.6 Walkover Survey Observations

A site reconnaissance visit was undertaken on the 19th June 2023 by Jack Harper of Geoinvestigate Ltd.

The site was as described in Section 1 of this report comprising a small section of the runoff area around the first team training pitches. The study area and training pitches lie at higher elevation to the adjacent car park to the west, at the top of an artificial embankment. Approximately half of the study area is surfaced with asphalt (west side) and half artificial turf (east side), and the adjacent pitch and embankment are both grassed.

Very little vegetation is present close to the study area but some small coniferous trees were present on the adjacent embankment at regular ca. 15m spacings. Evidence of various buried services was noted in the form of inspection covers and control boxes, and large floodlights surround the training pitches.

A small dugout was present on a concrete slab base within the study area.

Soils could not be meaningfully inspected give the artificial turf and asphalt/concrete surfaces. The adjacent training pitches were dressed with sand and work was being undertaken to restore the grass surface in the off-season.

The inspection of the surface of the site found no obvious evidence of physical hazards or odours, staining, or residues that might be indicative of the presence of chemical (including hydrocarbon) contamination.

On the basis of the walkover inspection only, the risk of a serious contamination hazard occurring at this site would therefore be assessed to be very low given the current condition of the site and use, with no *visual* evidence of contamination or the historical use of the site apparent.

The hazardous gas risk at the site, based solely on the findings of the walkover survey, might be assessed to be higher given the apparent groundworks that have been undertaken (adjacent artificial embankment). It is known that significant made ground is present across most of the site, but the temporary nature of the proposed structures might result in a low risk.

It is noted however that despite the apparent lack of evidence of any contamination encountered during the visual inspection described above, a planning application may require confirmation that no contamination is likely to have occurred. Photographs taken during the walkover survey are presented below:

Photograph 1: Embankment below study area (right) and trees/floodlights.



Photograph 2: Looking north towards study area.



Photograph 3: Dugout, inspection covers, and mixed asphalt, artificial turf and concrete surface.



Photograph 4: Looking north from study area.



Photograph 5: Looking south towards study area. Note control box (one of many around pitches).



Photograph 6: More distant view of embankment from southwest below study area showing vegetation/planting/floodlights.



4. Qualitative Risk Assessment

4.1 Method

In order to assess the potential risks to the site, information obtained on the potential sources of hazard identified in Section 3 have been reviewed and applied to a model of the site. This allows an assessment of the potential sources of contamination to be made by examining the potential pollutant linkages between these and the receptors at the site.

The risk assessment presented comprises a source-pathway-receptor model developed in the context of the intended end use of the site (commercial use / playing fields).

It is noted that an alternative land use would present different pollutant linkages with more or less vulnerable receptors and differing pathways for exposure. Were the intended land use to be changed at the site, a revised risk assessment would be required.

Identified potential sources of hazard or contamination, vulnerable receptors, and possible pathways by which they may be exposed are presented in the Conceptual Ground Hazard Model (CGHM) presented in Figure 1, see Section 4.2.

In addition to risks to human health and controlled waters and aquifers posed by contamination and ground gas, the CGHM examines the potential risks to the construction of the development including its buildings from geological or geotechnical hazards.

It allows an overall assessment to be made of the potential hazards and risks to the site and the proposed development with respect to “fitness for purpose”. Bedrock geology which is anticipated to underlie the site is assumed to exhibit potentially high permeability with low permeability anticipated for the made ground and superficial geology that is expected (or has been encountered in recent boreholes post-remediation).

4.2 Risk Assessment

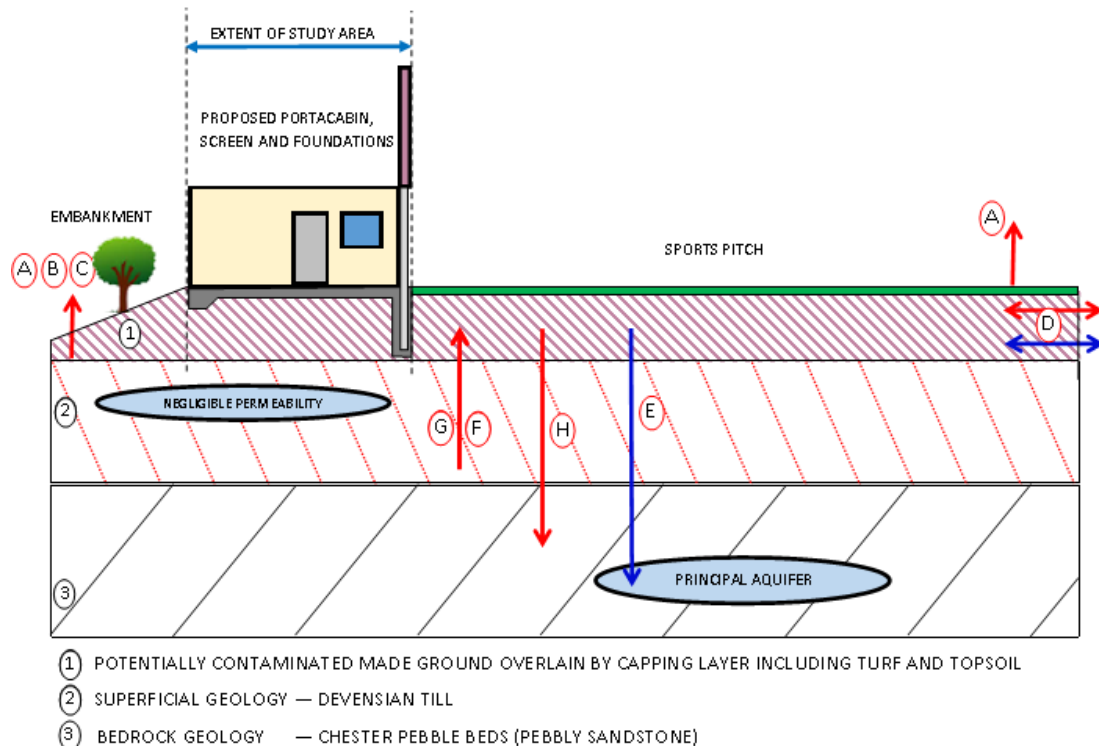
The desk study has highlighted the presence of possible sources of contamination which could potentially affect (or have affected) the site, primarily comprising the industrial (chemical works) use of the site and surrounding area, and the presence of tanks within the study area historically.

BGS mapping and borehole records both suggest that the superficial deposits will primarily comprise clay soils which would have intrinsically low permeability. As such, it is quite unlikely that a plausible pathway for contamination migration into or out of the site could exist and thus the risk of contamination migration is probably very low currently, but past contamination cannot be ruled out at this stage, particularly in deeper soils.

The site is expected to have been remediated, but that this might only comprise a capping layer meaning deeper soils could still contain contamination.

Potential receptors at the site would include the end users of the site (staff/players/visitors), workers employed in the construction of the new development, the buildings themselves and their services, plants and vegetation, neighbouring sites (and their users/occupants), nearby surface water and ground water at depth. A representation of the potential hazards and pollutant linkages is shown in Figure 1 below.

Figure 1 – Conceptual Ground Hazard Model of site including a Source, Pathway and Receptor Model



IDENTIFIED HAZARDS Including Potential CONTAMINATION SOURCES

- Historical land uses: Chemical works, tanks, reservoirs on site.
- Associated made ground and contamination thereof.
- Potential hazardous gases sourced from infilled/made ground on site.
- Potential stability issues arising due to poorly consolidated made/infilled ground.

IDENTIFIED RECEPTORS and ASSOCIATED PATHWAY

- A—** End Users through Direct Contact / Inhalation / Ingestion.
Buildings and hard standing will encompass whole of study area, removing any pathway to end users through direct contact.
Primary remaining concern regards waste classification and possible risk to groundworkers.
Potential for vapour risk not ruled out at this stage but considered fairly unlikely.
- B—** Plants and Trees through uptake, possible given the intended use of the site.
None within study area.
- C—** End Users through cultivation and consumption of vegetables / fruit. Possible given the intended end use of the site.
Not possible within study area.
- D—** Neighbouring Sites through lateral migration (in soil and water, including surface water run off).
Low likelihood due to low permeability fill materials and natural subsoils previously encountered.
- E—** Ground water through leaching of sub-soil.
Low likelihood due to low permeability fill materials and natural subsoils previously encountered.
- F—** Buildings and services through direct contact.
Low risk anticipated but potential for aggressive ground (re. concrete design) not currently ruled out.
- G—** End users and buildings through ground gas migration.
Potential for gas risk not ruled out at this stage but considered fairly unlikely, depending on design of proposed structure.
- H—** Ground surface instability due to potential geotechnical hazards.
Deeper made ground anticipated, though this has been shown to be relatively competent in other parts of the wider academy site.
Upper capping layer may be weaker.

To be re-assessed following site inspection during groundworks.

The CGHM and the summary table below (Table 4) present the most likely potential sources of contamination, gas or geotechnical risk that are considered to be possible either within or near to the study site.

The identified potential contamination sources could feasibly have given rise to harmful and potentially mobile contamination of made ground and/or natural deposits which might underlie the site.

Superficial deposits are anticipated to primarily comprise low permeability clay soils and so significant contamination migration into or out of the site is currently thought unlikely to be possible / have occurred but some instances may have been possible historically.

Note that, due to the potentially contaminative historical land uses / features that have been identified within the study site boundary (oil tanks, reservoirs/ponds), the risk to external sites or ground/surface waters through contamination migration *from* the study site might be expected to be more significant/likely than any risks posed to the study site from external sources.

Therefore, assuming the worst-case scenario, the potential for harmful contamination to exist at the site from historical sources is assessed to be **High** owing to the potentially contaminative activities located near to and within the study area. This is further supported by the fact that contamination issues have been identified and remediated previously within the wider academy site, presumably including this study area.

The hazardous gas risk is assessed to be **Moderate** due to the potential for significant (>1.0m deep) made/infilled ground to be present. However, given that the only structures proposed are a portacabin and an elevated LCD screen, the risk in this regard might be low.

The placing of a cabin on a new concrete raft/slab foundation will provide some intrinsic gas protection and the unit may also have its own built-in sealed floor structure. The unit may also be supported on feet (the exact design is unclear at the time of writing) and may therefore have good sub-floor ventilation which would also significantly reduce any possible gas risk. Given the above, and that the cabin will most likely not be intended to be occupied for any extended period, the gas risk is likely to in fact be **Low**.

The actual current level of risk to the development and its users can only be ascertained for certain through confirmation of the ground conditions by a Phase 2 intrusive investigation, including a contamination survey, and potentially a gas monitoring survey. However, given the nature of the development and the recent information on ground conditions within the site (ref. report G23195), this might not be necessary. It might be feasible to assess risks in this regard through on-site inspection/watching brief of the ground works and further consideration of the finalised designs.

Table 4: Summary of Conceptual Ground Hazard Model

Potential Source	Nature of Hazard	Associated Contaminants	Pathway	Receptor	Preliminary Risk Rating
Historical land use and development: -Chemical works -Tanks -Reservoirs -Made ground.	Inorganic and organic chemical contaminants within soil.	-Trace metals -PAHs -Petroleum hydrocarbons -Asbestos -VOCs	-Direct human contact -Ingestion of soil -Ingestion of dust -Inhalation of vapour -Leaching into ground or surface waters -Overground migration to external sites (soil and water)	-Site Operatives -End Users -Vegetation -Controlled waters -Structures and services -Neighbouring sites/users	High
Made/Infilled ground	Hazardous ground gas migration.	Landfill-type gases (CO ₂ , CH ₄ etc.)	-Inhalation -Explosion risk	-Site Operatives -End Users -Structures	Low
	Ground instability via risk of settlement	N/A	Direct	-End Users -Structures	Low

NB. Arbitrary potential hazard assessment: High (Red), Moderate (Amber), Low (Yellow), Very Low (Green), Negligible (uncoloured)

5. Conclusions

A summary of the anticipated ground conditions, risks and implications based on the findings of Sections 3 and 4 of this report is presented in Table 5 below:

Table 5: Summary of Phase 1 Desk Study Findings

Concern	Desk Study Finding	Initial Risk Assessment	Potentially Useful Action in a Phase 2 Site Investigation
Normal Foundations	A potential for deeper made/infilled ground has been identified underlain by competent natural deposits at unknown depth. However, normal foundations not proposed. Made ground recently encountered elsewhere in the site has been relatively competent though capping materials were less competent.	Unclear	Phase 2 investigation may not be necessary. Inspection of ground conditions during groundworks may be sufficient, with consideration of proposed foundation solution with respect to anticipated ground conditions (ground conditions may be akin to those encountered in the G23195 investigation). Borehole investigation to confirm strength of ground with regard to supporting building loads if uncertain at point of groundworks.
Soakaways	Clay natural subsoils and overlying contaminated clay fill unlikely to offer sufficient permeability or a safe means of water disposal.	Unlikely to be suitable	None.
Radon Gas	< 1% of properties affected	Negligible	None. No radon protection required.
Chemical Contamination	Historical nearby and on-site land uses potentially giving rise to a range of inorganic and organic contaminants including asbestos, metals/metalloids, PAHs, petroleum hydrocarbons and VOCs. Contamination previously confirmed within academy site.	High	Potentially none required following findings of G23195 investigation. Comparison to ground conditions and soils analyses of G23195 should be made as previous findings may be representative of this location. Chemical analysis for potential contaminants in soil samples (and potentially leachate) if previously unencountered, unexpected or unusual ground conditions encountered. Capping layer should be maintained/restored as appropriate following development.
Hazardous Gas	Potential for hazardous gas to be generated in made/infilled ground deposits. However, proposed structure likely to be low risk and negligible occupancy. Confirmation by inspection of final designs may be appropriate.	Low	Potentially none required. Sufficient recommendations likely to be possible on inspection of final designs without a need for ground gas monitoring.
Ground Instability/ subsidence	Potential for significant deposits of compressible made/infilled ground.	Moderate	Potentially none required. Sufficient recommendations may be possible on inspection of groundworks. Borehole investigation may be necessary if unexpected ground conditions are discovered.
	Potential for vegetation influence on shrink-swell clays which may be present, including risk of soil heave.	Very Low	
	Potential for unrecorded shallow coal mining.	Negligible	

NB. Arbitrary potential hazard assessment: High (Red), Moderate (Amber), Low (Yellow), Very Low (Green), Negligible (uncoloured)

The initial risk assessment provided above is tentative as it is based only on the Phase 1 desk study. The risks will need to be reassessed and may perhaps change significantly becoming higher or lower depending on the findings of the proposed groundworks inspections and/or the results of any Phase 2 intrusive investigation and contamination/gas survey, should these be undertaken.

6. Recommendations

In light of the Phase 1 desk study findings it is not currently anticipated that a Phase 2 investigation will be necessary to enable the limited proposed development works to be safely undertaken. This is not certain however, and inspection of ground conditions will be required to confirm the situation, but a full phase 2 investigation is not necessarily a prerequisite given the information already available for the site.

It is currently assumed that ground conditions in this study area may be very comparable to those encountered during investigation G23195, and that it may be possible to refer to and rely upon the findings and WAC analyses of that exercise as being suitably representative.

The limited groundworks are (mostly, if not entirely) not expected to penetrate beyond the new capping layer installed during relatively recent remedial works across the academy site. Therefore, assuming the capping layer is present and has a comparable composition and thickness to that described in G23195, there may be low risks associated with this proposed development with respect to contamination.

Further consideration of the exact portacabin and foundation design will be required, but it is considered fairly likely that the proposed development will be low risk with respect to ground gas

A proposal for inspection of ground conditions during groundworks has been prepared for issue alongside this document, which will include a re-assessment of the findings of this report accordingly.

It should be noted however that Phase 2 investigation work may be required if extensive evidence of ground contamination, weak ground, or previously unencountered/unexpected ground conditions are discovered, and/or the Local Authority or the Environment Agency require additional information.

END OF REPORT

The findings and contents of this (desk study) Site Investigation Report pertain solely to the study area(s) outlined herein and are based solely on the information presented within this document which has been acquired or provided for the current exercise, unless otherwise stated. The findings and/or recommendations of this report do not take into account any information that is not presented herein and, being a desk-based exercise only, cannot make comment on the actual ground conditions at the site as these have not been directly inspected through excavation. As such, further investigation and/or a reconsideration of the findings of this report should be undertaken if conditions are subsequently discovered to vary from those predicted by this report, or an alternative development plan or land use is subsequently proposed.

This report considers various hypothetical environmental and/or geological risks posed to the site and/or proposed development and offers advice accordingly as guidance only. The findings of this report will remain valid provided ground conditions are as predicted, and no changes to ground or groundwater conditions, either natural or anthropogenic, subsequently take place. No warrantee is offered or implied.

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APPENDIX 1

HISTORICAL MAP RECORD

Site Details:

MANCHESTER CITY F C, 161 M
C F C FACILITIES MANAGEMENT
BUILDING, CLAYTON LANE,
MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2,500



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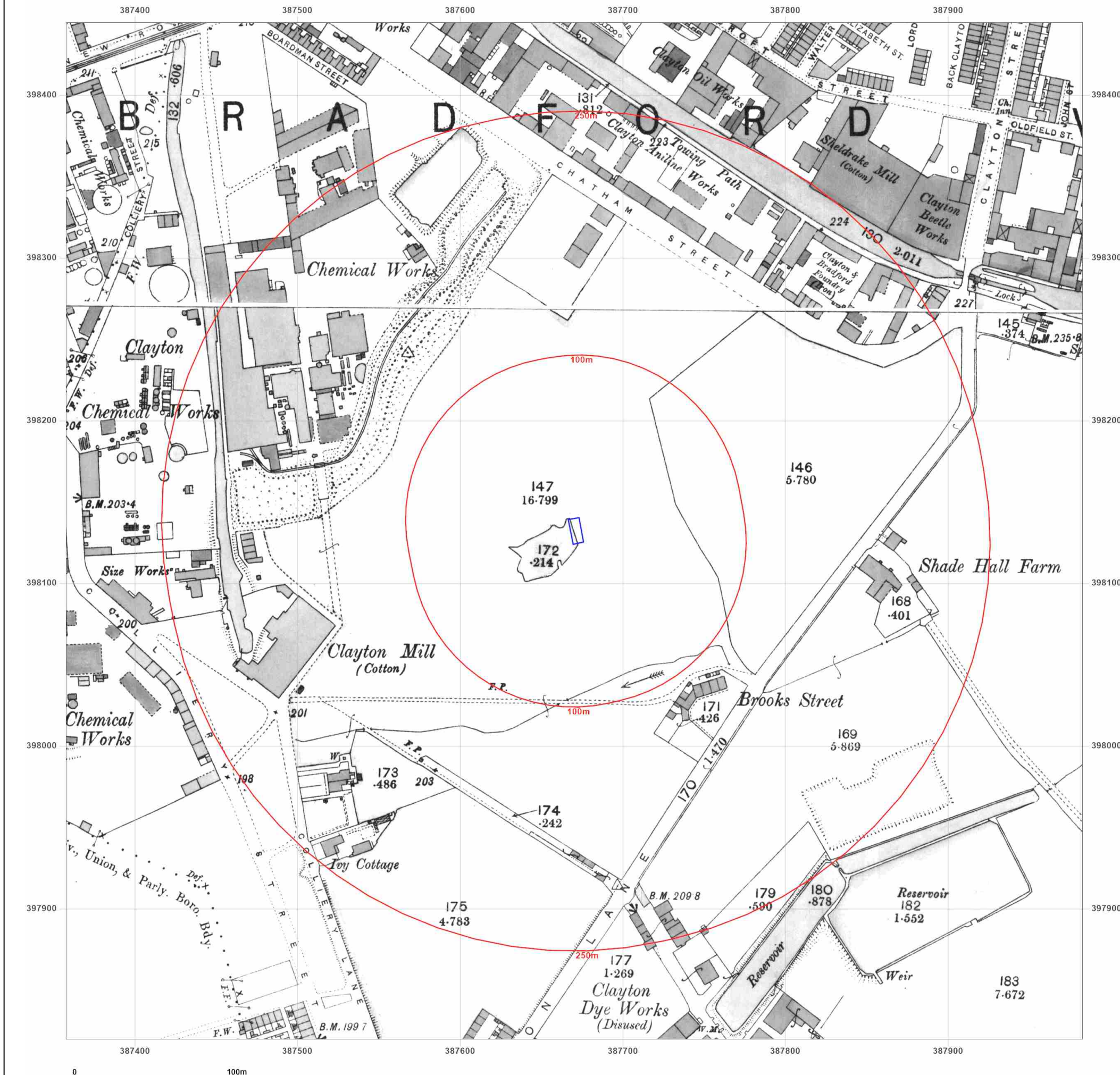


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Map Name: County Series

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Map Name: County Series

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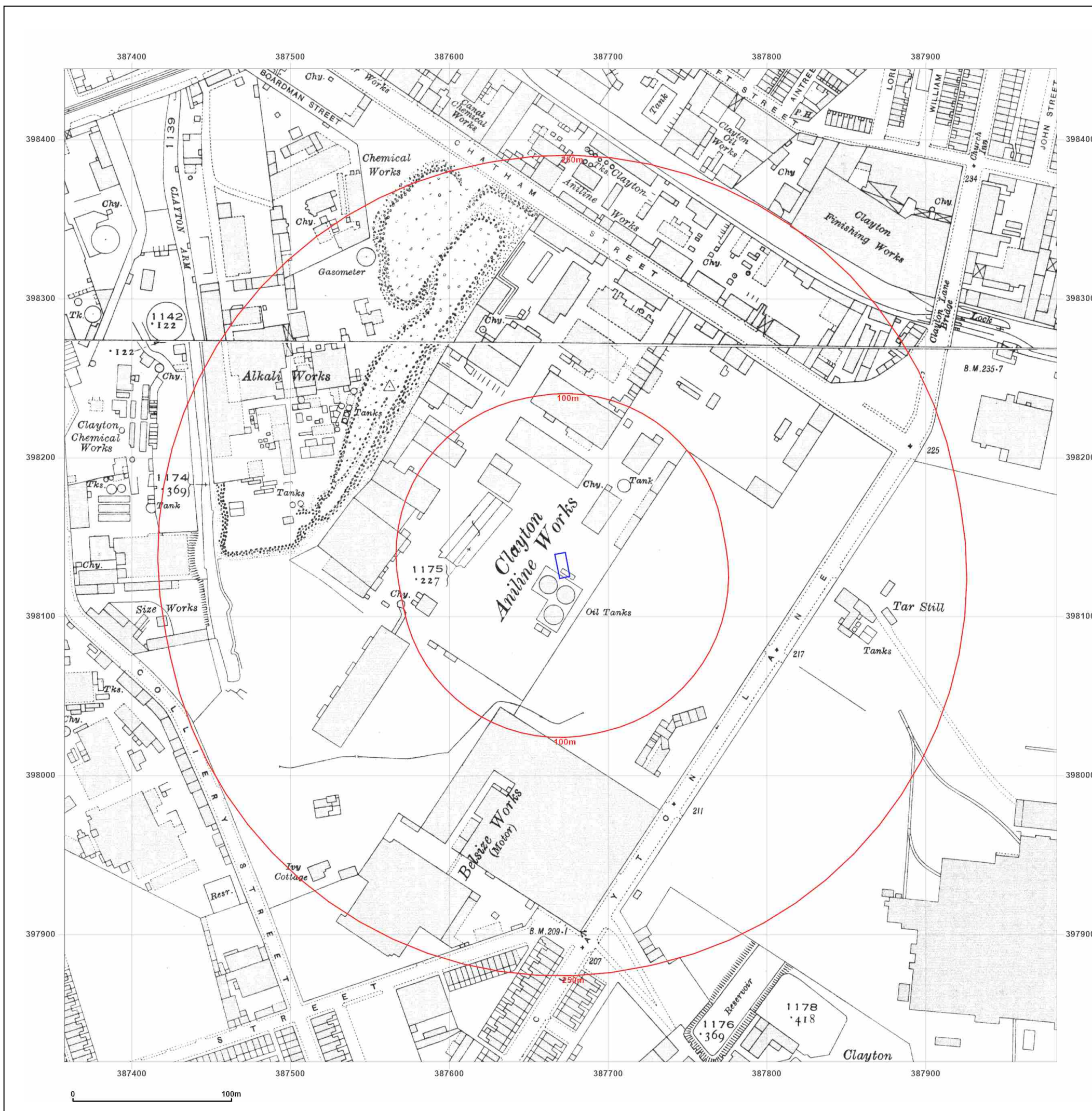


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Map Name: County Series

Map date: 1932-1933

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Grid Ref: 387670, 398132

Map Name: National Grid

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Scale: 1:2,500

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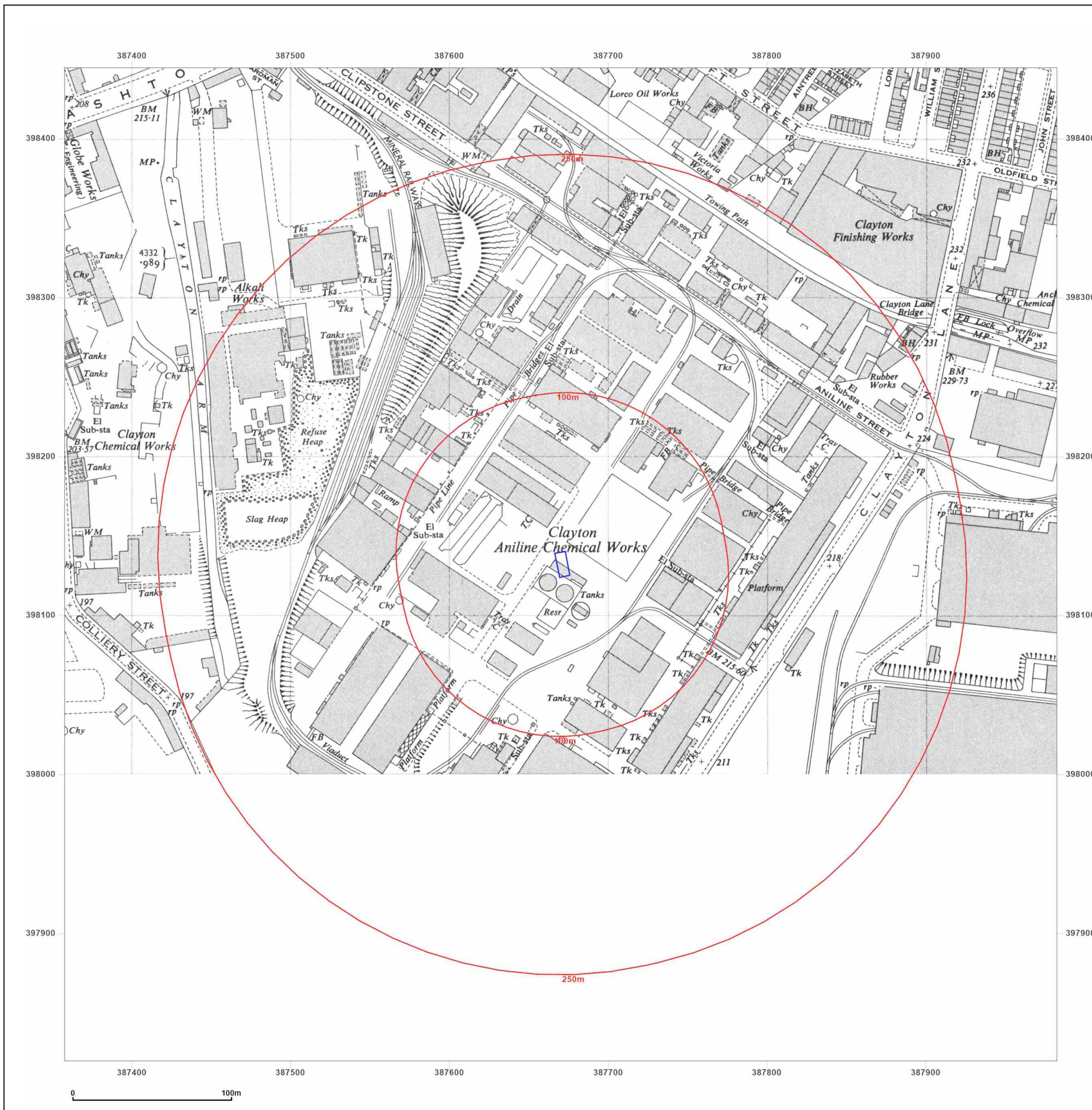


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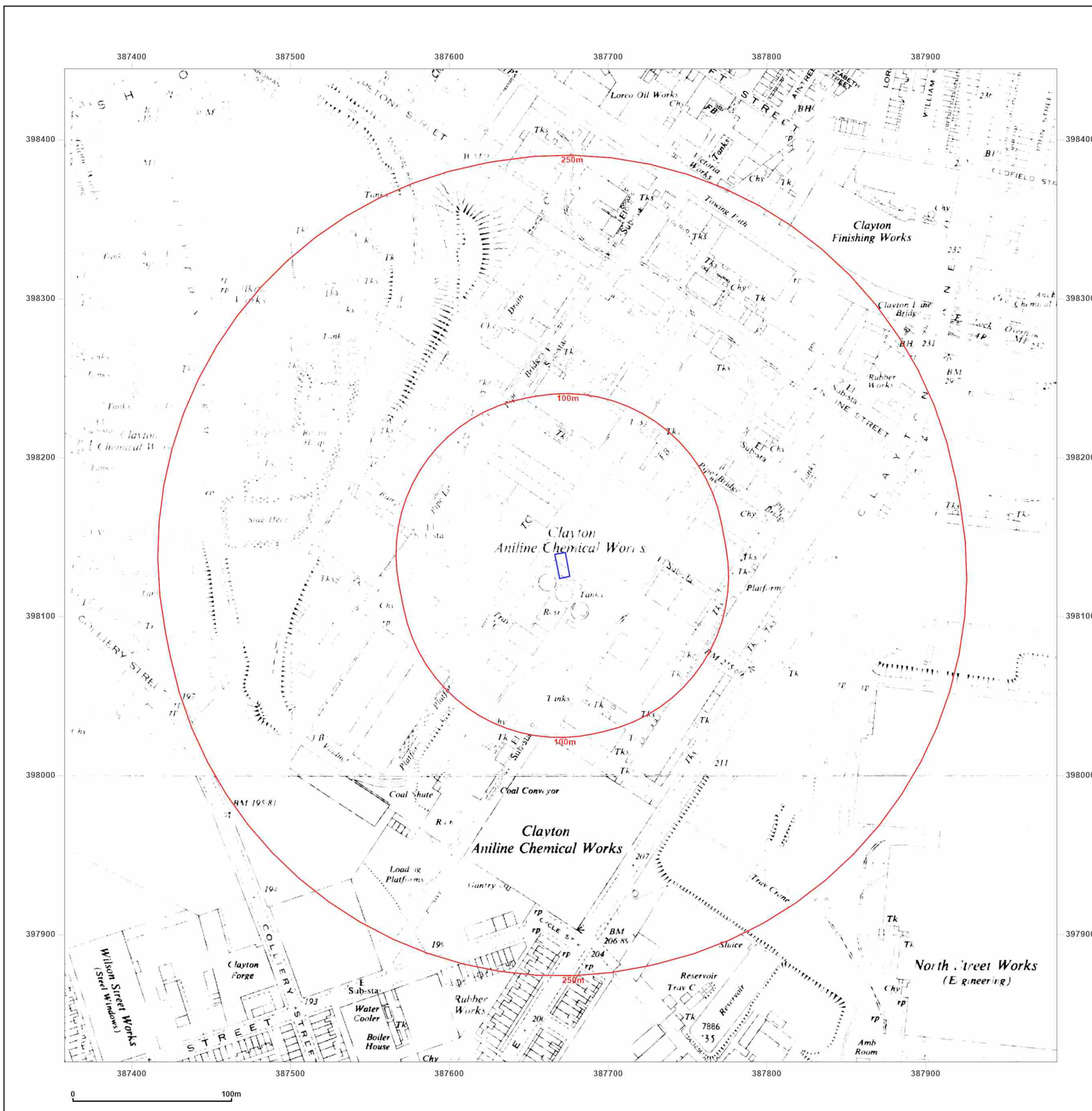


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Grid Ref: 387670, 398132

Map Name: National Grid

Map date: 1953-1956

Scale: 1:1,250

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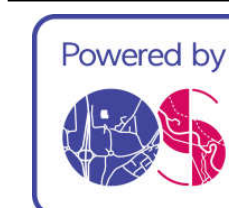
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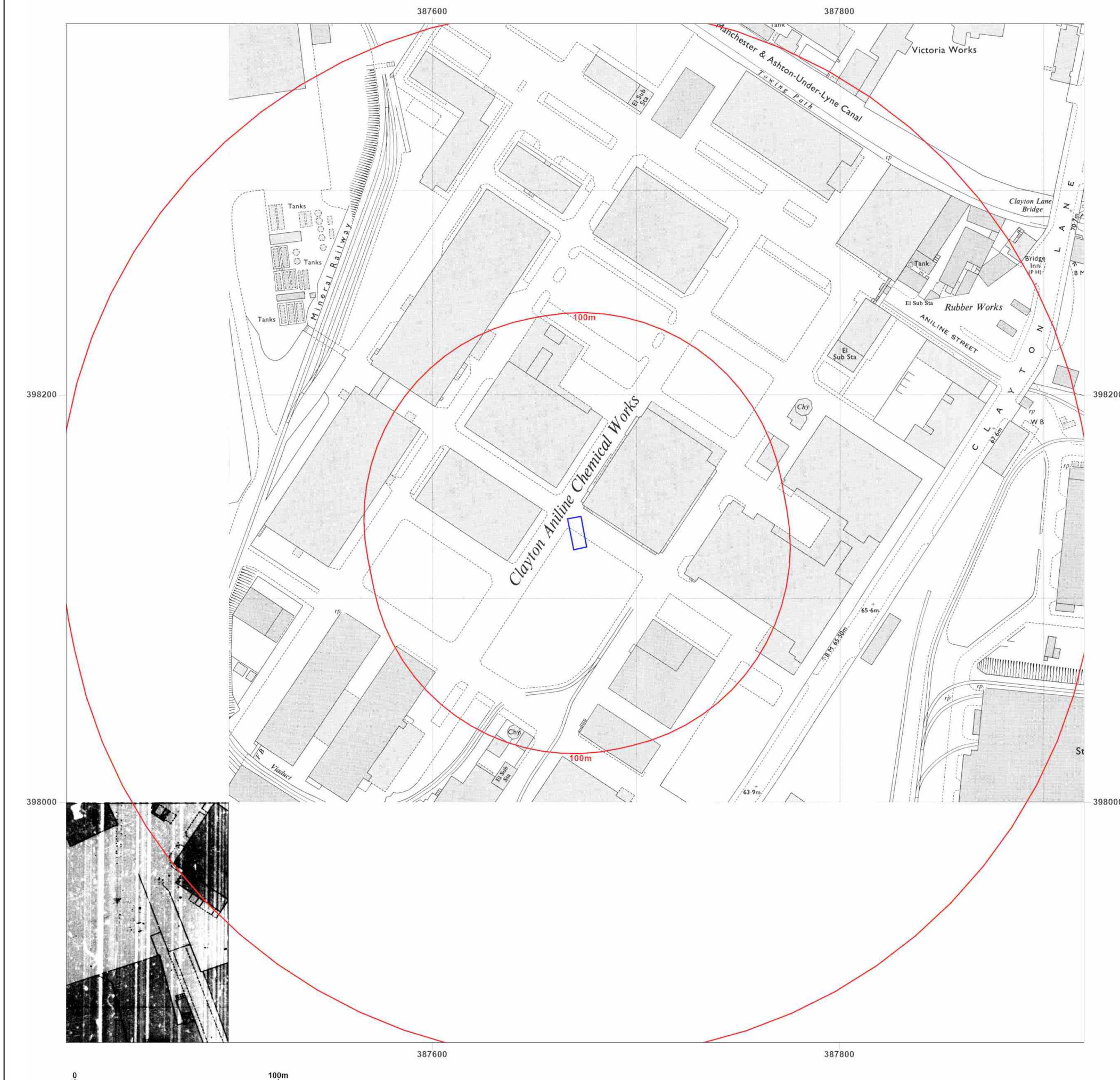


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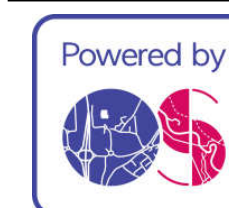


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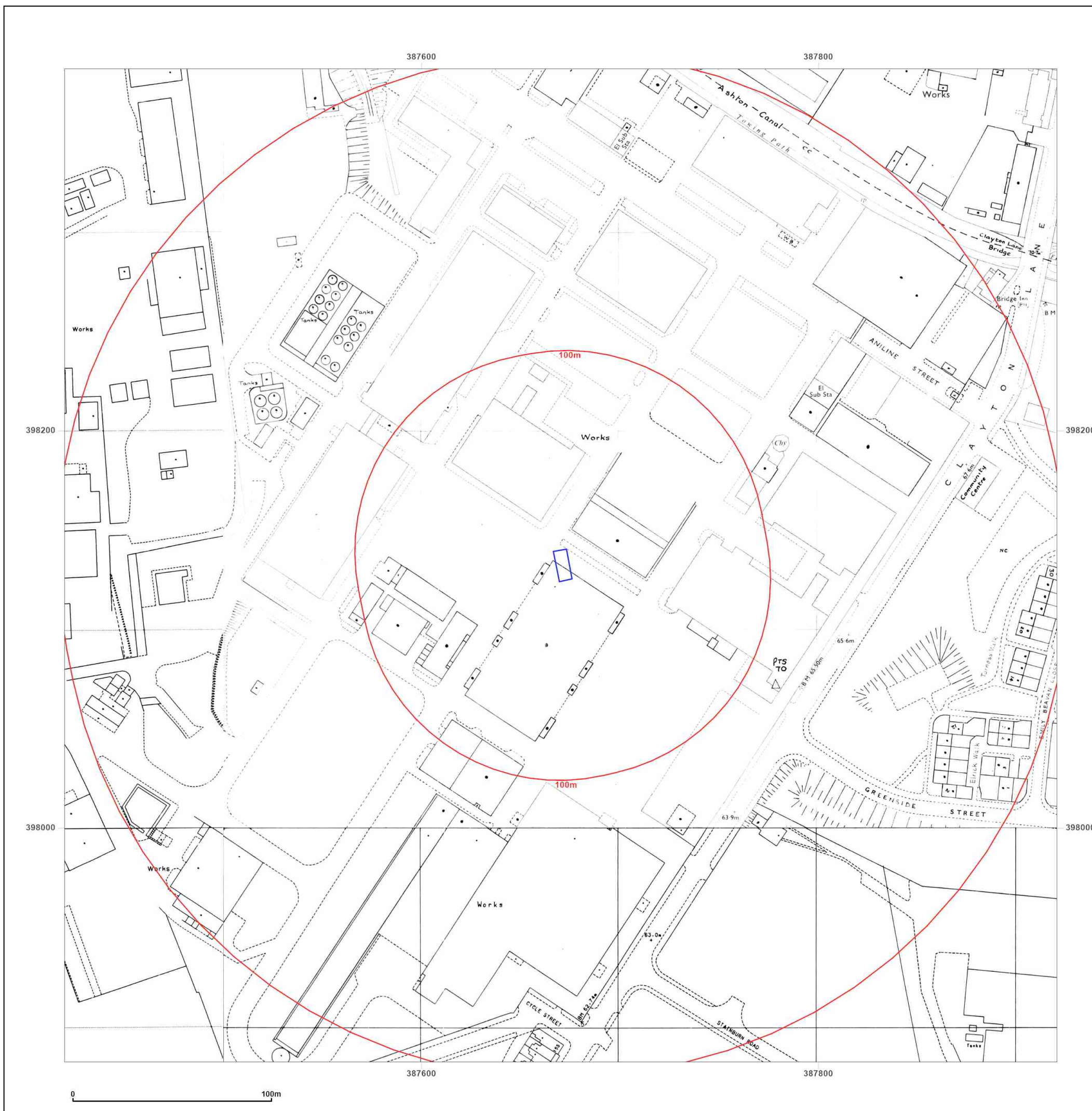


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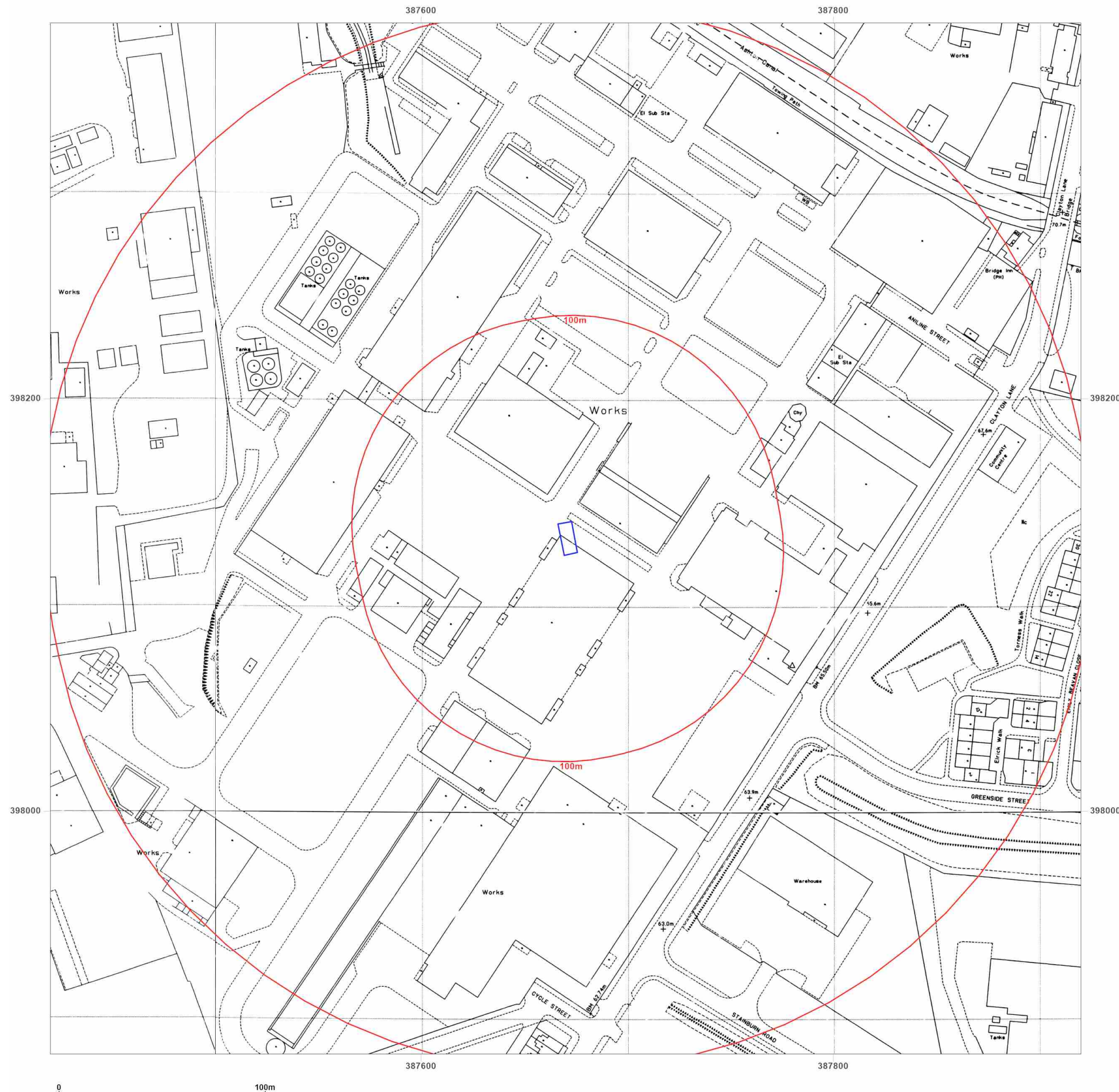


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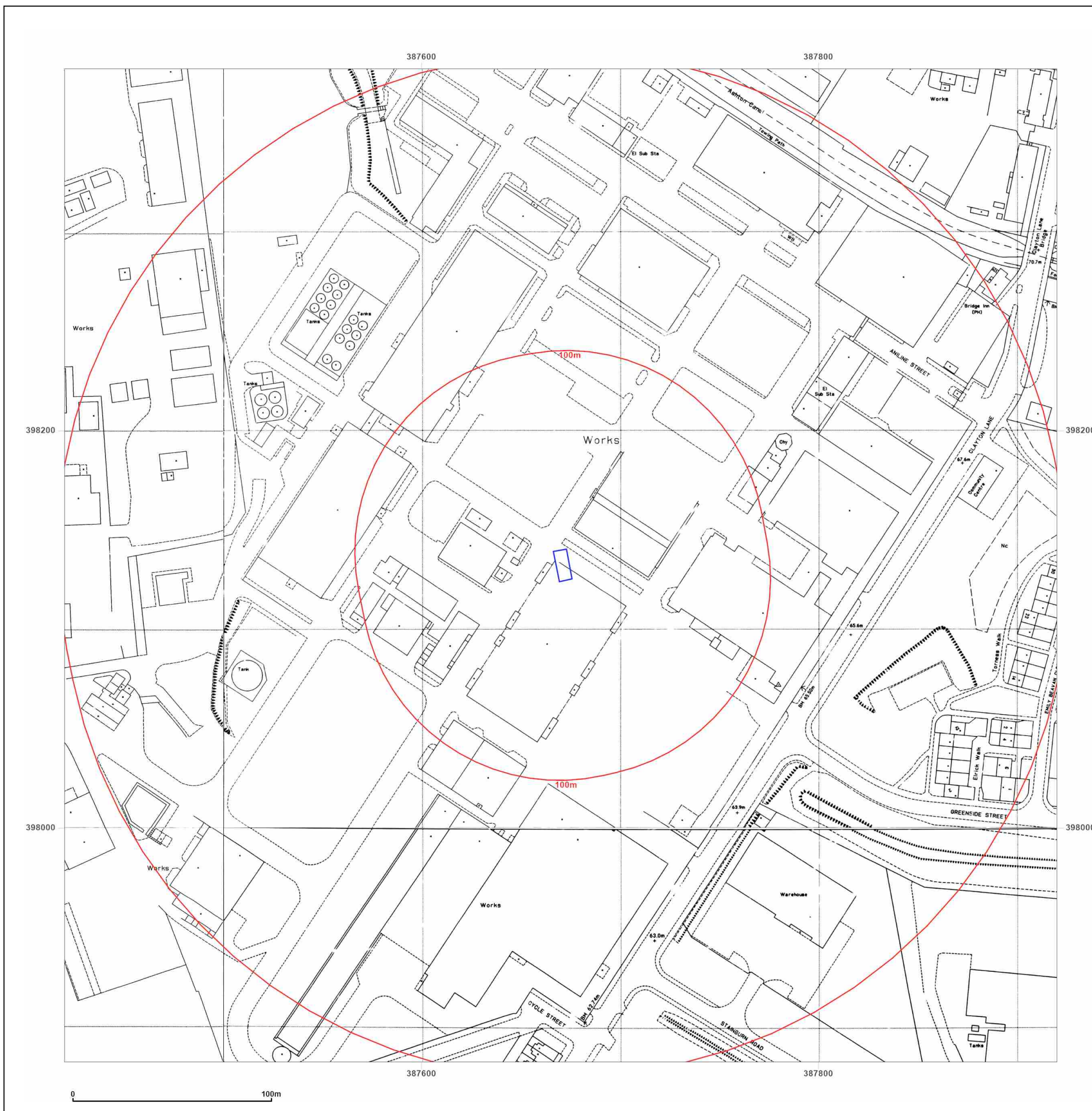


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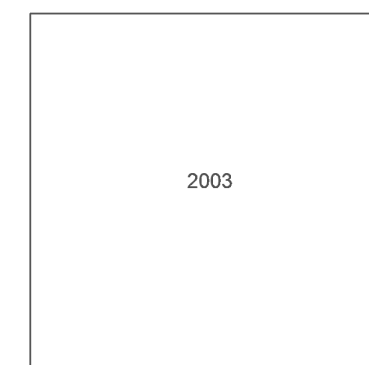
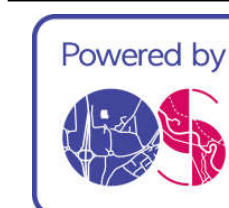
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Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: County Series

Map date: 1848

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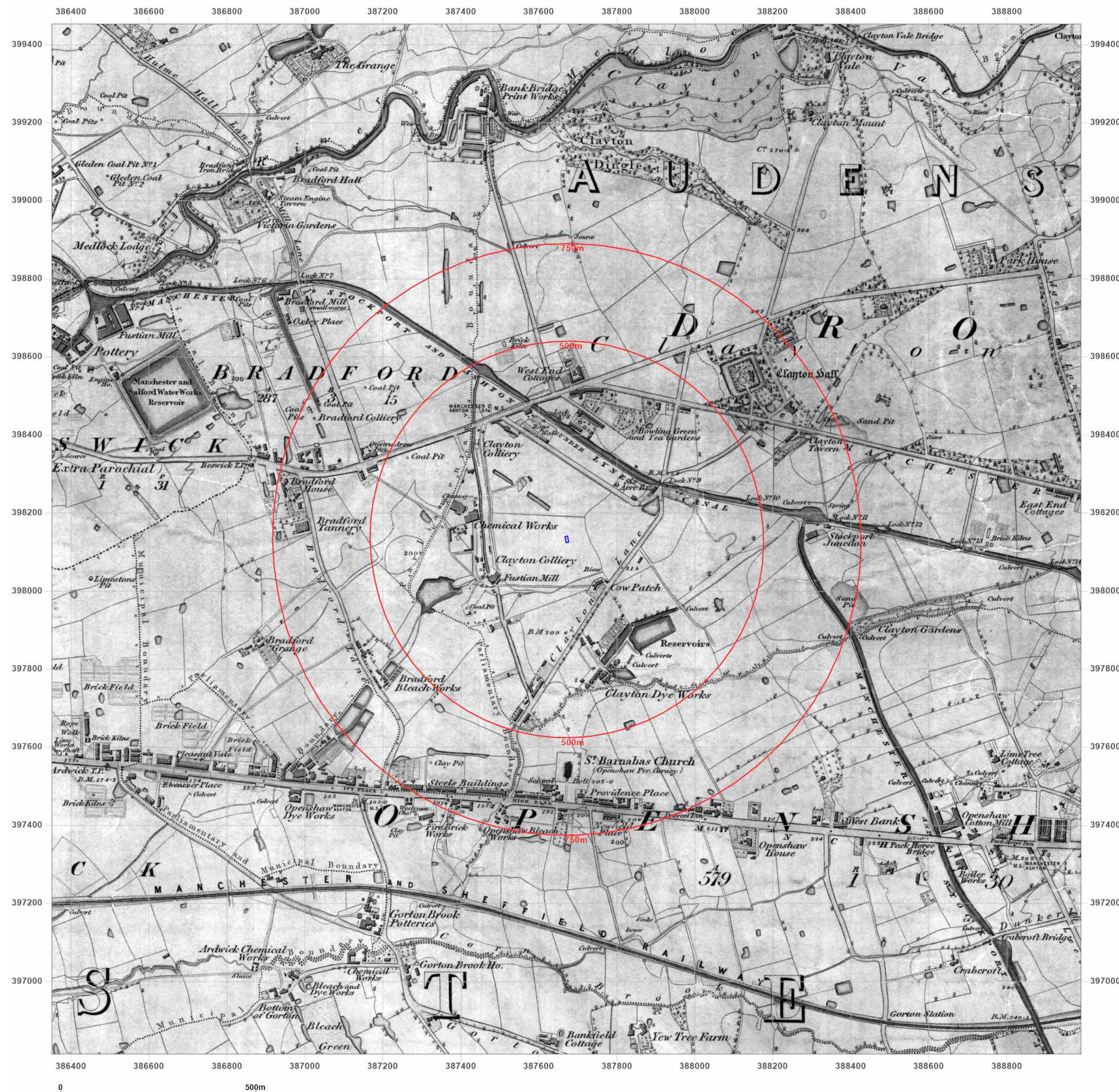


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Site Details:

MANCHESTER CITY F C, 161 M
C F C FACILITIES MANAGEMENT
BUILDING, CLAYTON LANE,
MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: County Series

Map date: 1890-1891

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891
Revised 1891
Edition 1891
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Surveyed 1890
Revised 1890
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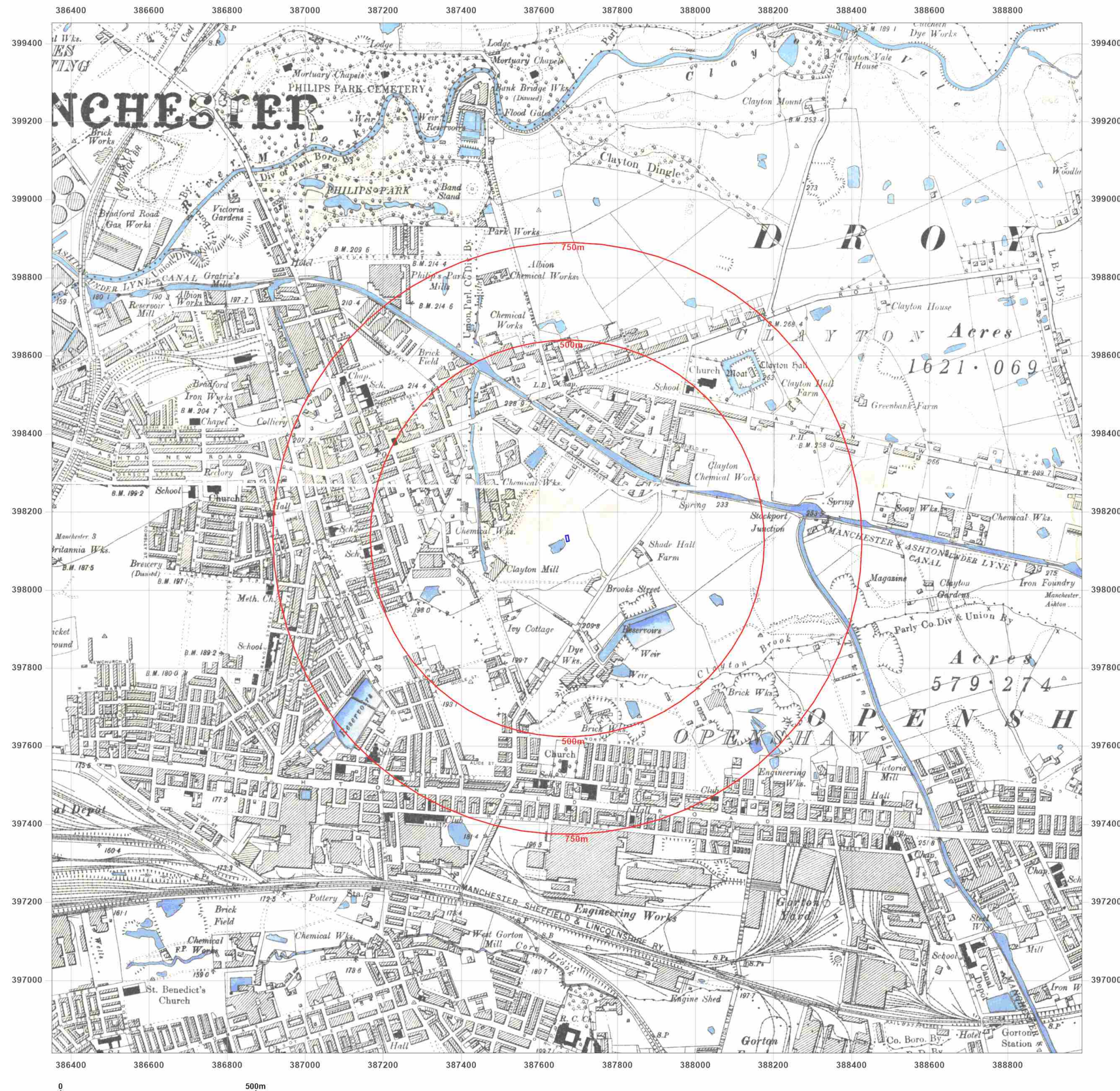


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Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: County Series

Map date: 1905-1906

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1905
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MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: County Series

Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1916
Edition 1923
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Site Details:

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C F C FACILITIES MANAGEMENT
BUILDING, CLAYTON LANE,
MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: County Series

Map date: 1933-1934

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1933
Edition 1933
Copyright N/A
Levelled 1927

Surveyed 1844
Revised 1934
Edition 1934
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Levelled 1927

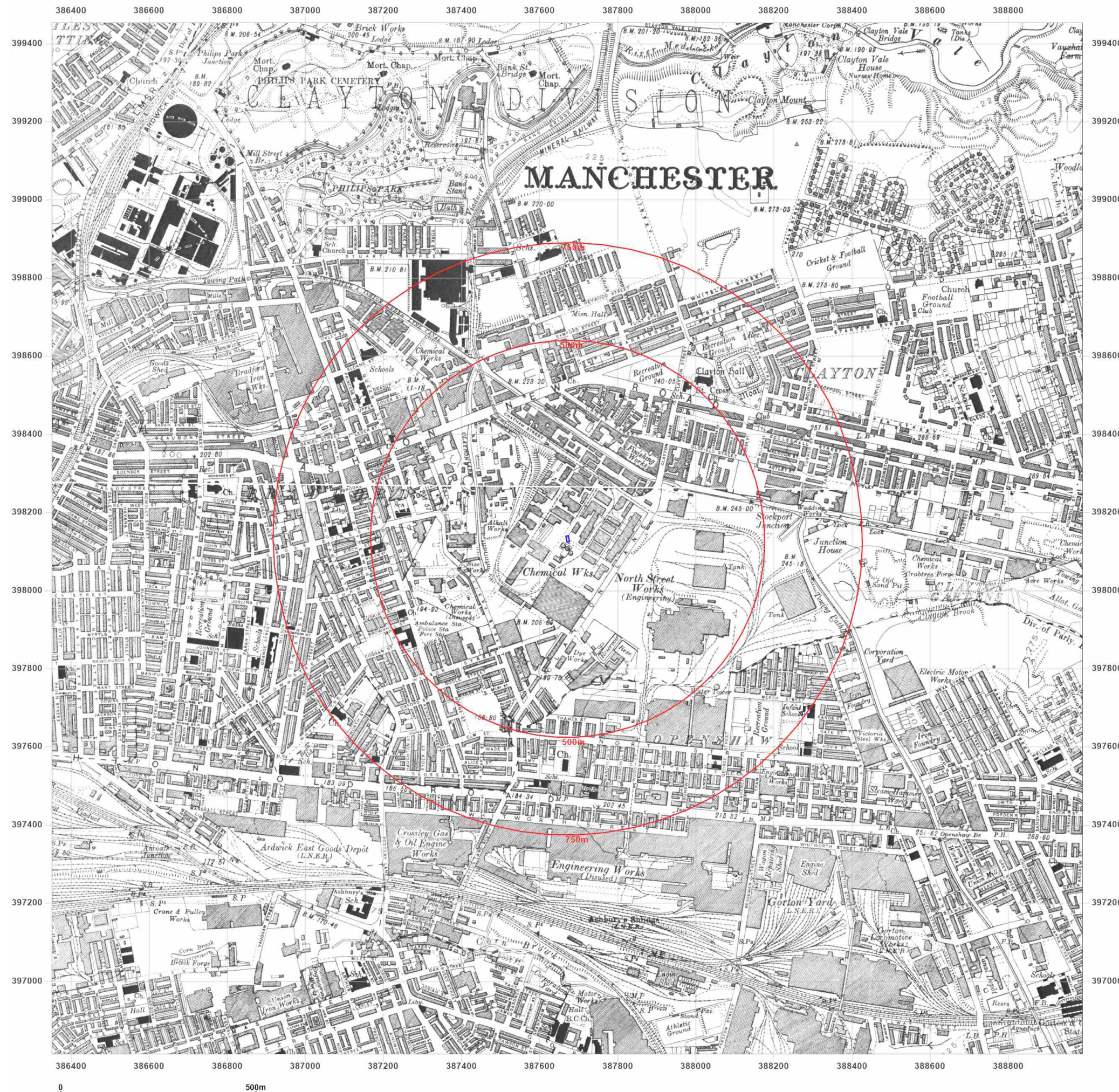


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BUILDING, CLAYTON LANE,
MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1938
Edition 1938
Copyright N/A
Levelled 1927

Surveyed 1844
Revised 1938
Edition 1938
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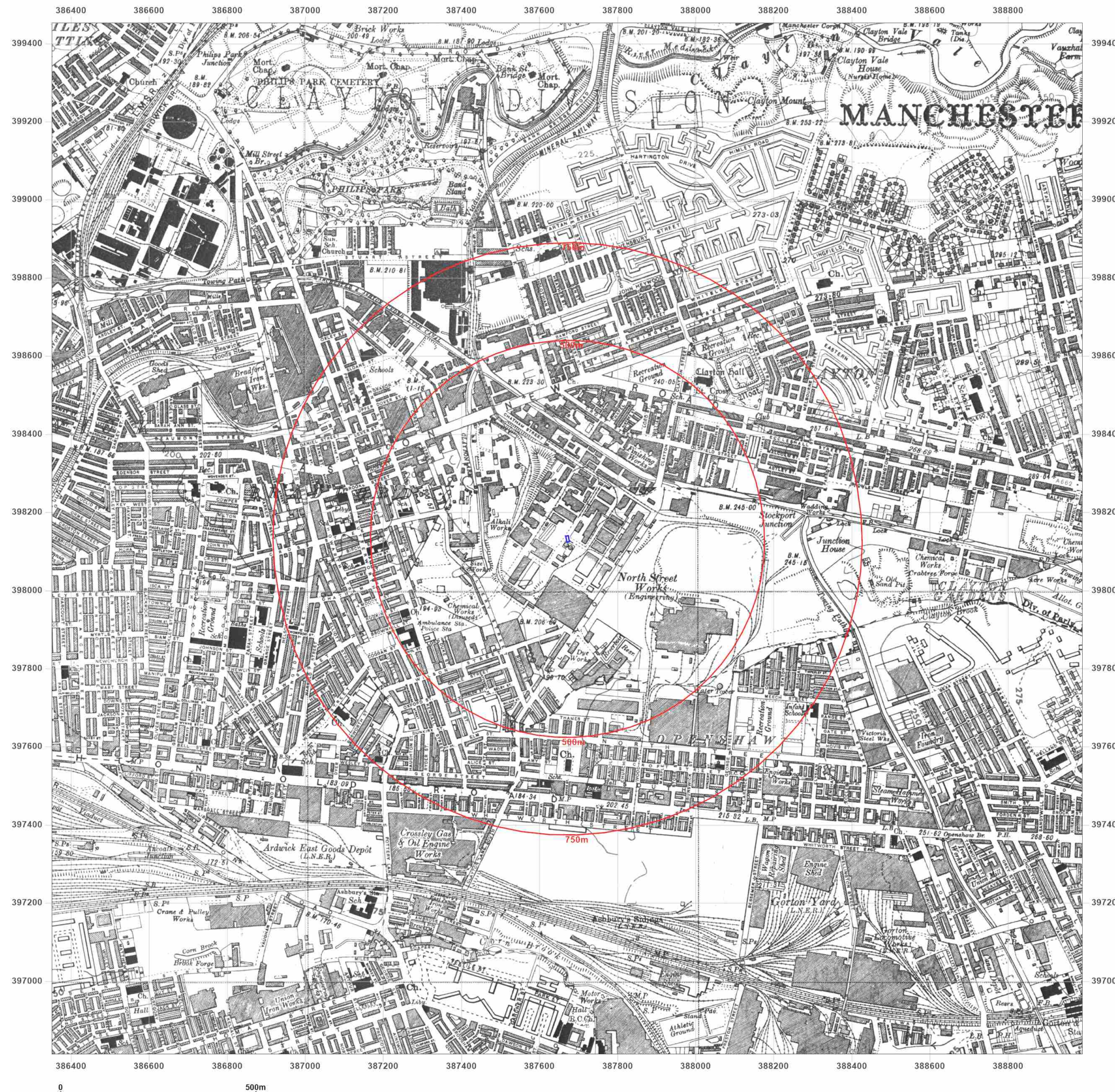


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BUILDING, CLAYTON LANE,
MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: Provisional

Map date: 1956

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1956
Revised 1956
Edition N/A
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Site Details:

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BUILDING, CLAYTON LANE,
MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1968
Revised 1968
Edition N/A
Copyright 1968
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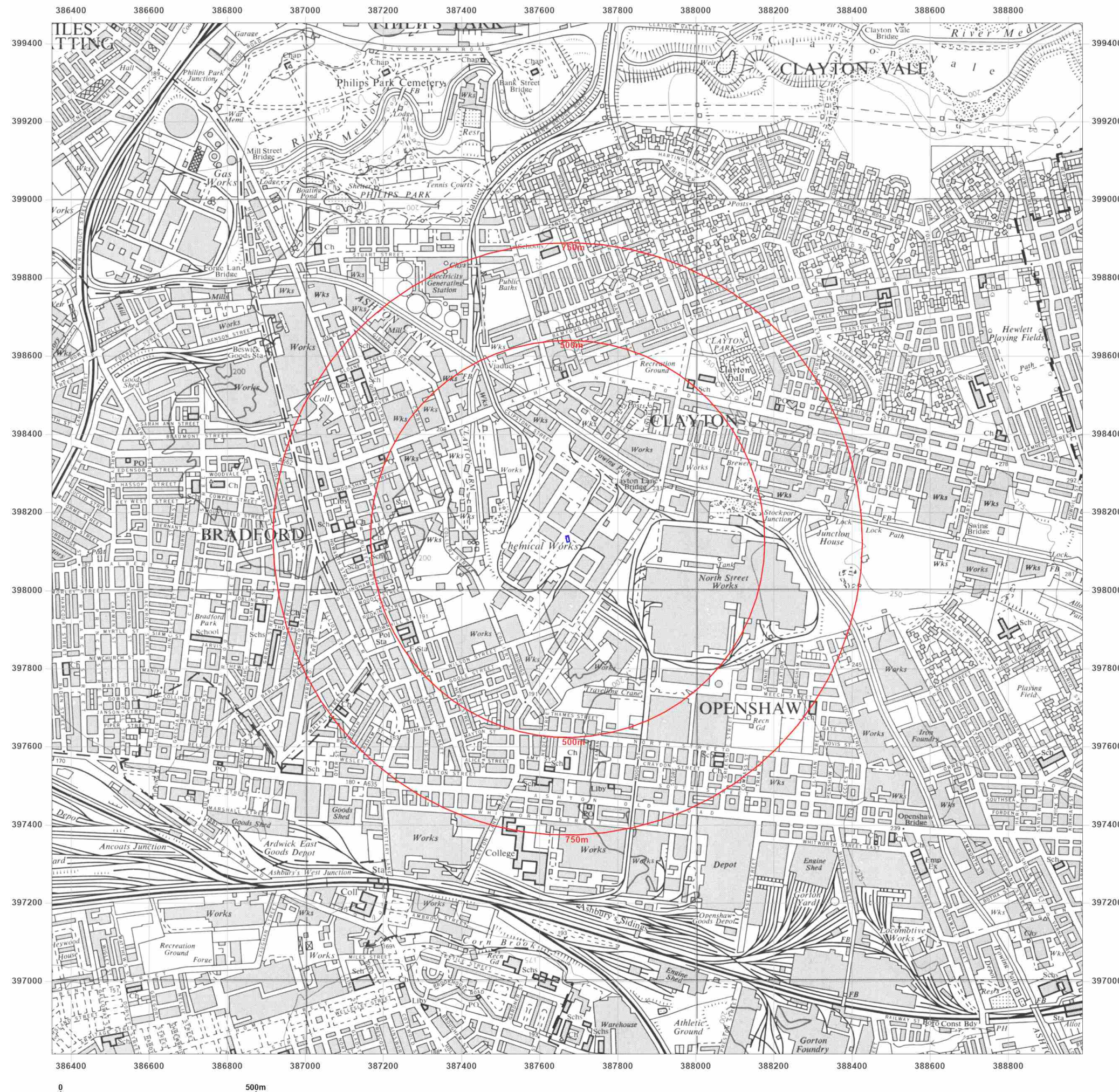


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Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: National Grid

Map date: 1981

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1976
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MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: National Grid

Map date: 1985

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1985
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MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: National Grid

Map date: 1991

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1985
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Site Details:

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BUILDING, CLAYTON LANE,
MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001

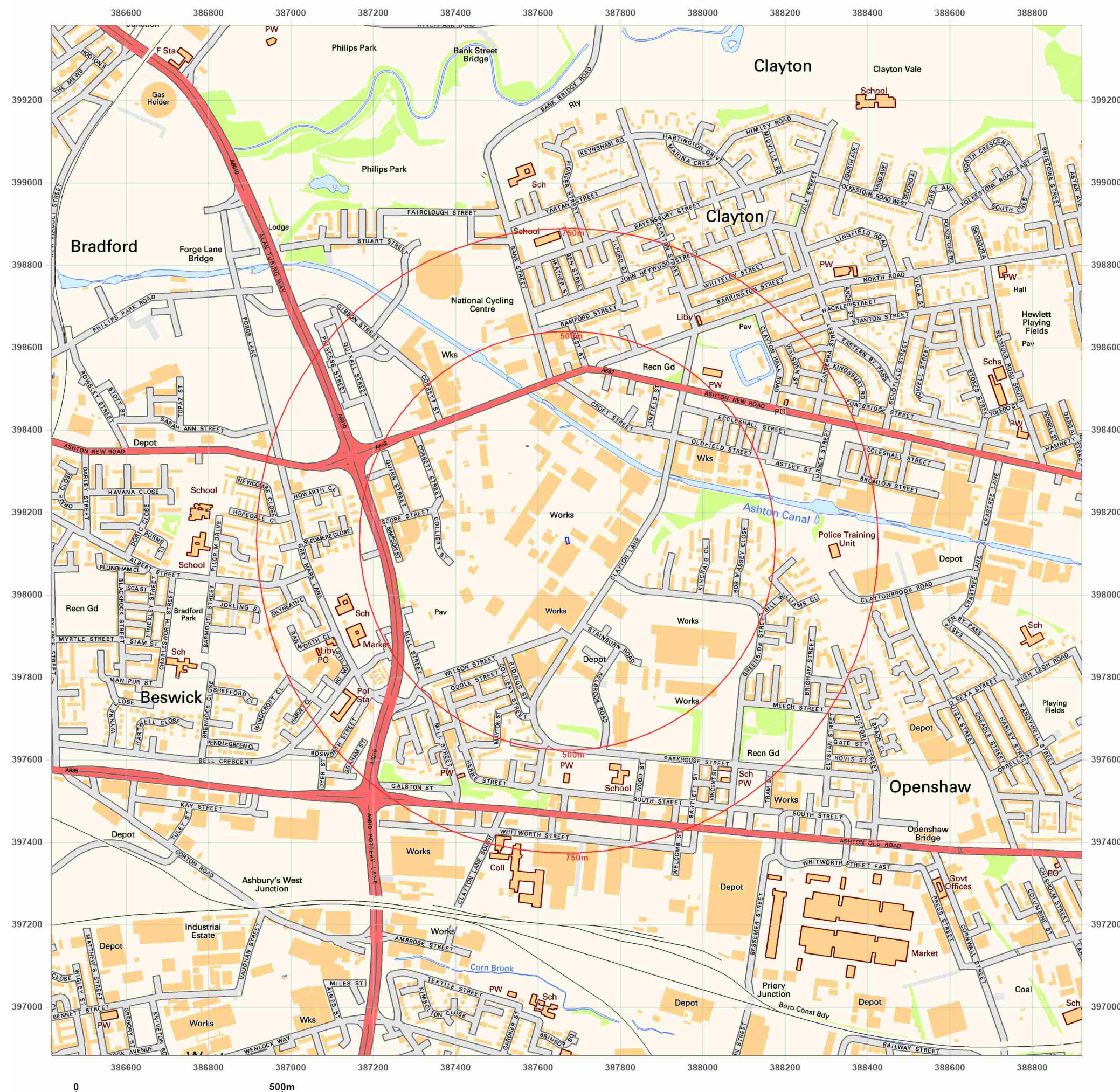


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MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

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2010



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MANCHESTER, M11 4TS

Client Ref: G23254
Report Ref: GS-V8G-GLB-TIN-1WL
Grid Ref: 387670, 398132

Map Name: National Grid

Map date: 2023

Scale: 1:10,000

Printed at: 1:10,000



2023

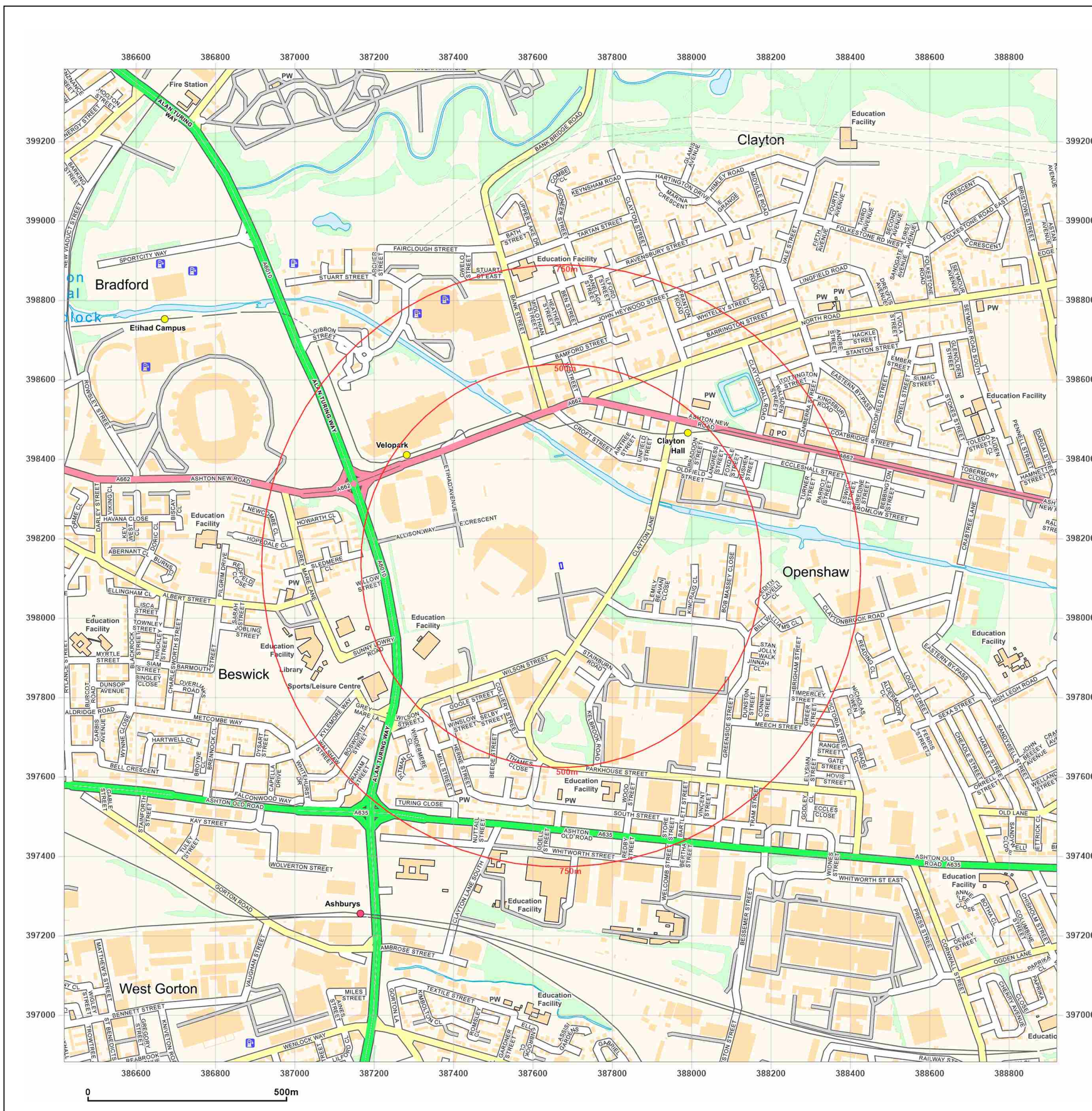


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APPENDIX 2

GROUNDSURE ENVIRO + GEO INSIGHT REPORT

MANCHESTER CITY F C, 161 M C F C FACILITIES MANAGEMENT BUILDING, CLAYTON LANE, MANCHESTER, M11 4TS

Order Details

Date: 26/06/2023
Your ref: G23254
Our Ref: GS-K93-64L-O79-CZX

Site Details

Location: 387672 398128
Area: 0.01 ha
Authority: [Manchester City Council](#) ↗



Summary of findings

[p. 2 >](#) **Aerial image**

[p. 9 >](#)

OS MasterMap site plan

[p.13 >](#) groundsure.com/insightuserguide ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	13	9	66	104	-
22 >	1.2 >	Historical tanks >	0	5	223	188	-
37 >	1.3 >	Historical energy features >	0	0	14	31	-
39	1.4	Historical petrol stations	0	0	0	0	-
39 >	1.5 >	Historical garages >	0	0	1	6	-
40	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
41 >	2.1 >	Historical industrial land uses >	13	13	95	133	-
51 >	2.2 >	Historical tanks >	0	10	331	291	-
73 >	2.3 >	Historical energy features >	0	0	37	67	-
77	2.4	Historical petrol stations	0	0	0	0	-
78 >	2.5 >	Historical garages >	0	0	1	7	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
79	3.1	Active or recent landfill	0	0	0	0	-
79	3.2	Historical landfill (BGS records)	0	0	0	0	-
80	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
80	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
80 >	3.5 >	Historical waste sites >	0	0	1	9	-
82 >	3.6 >	Licensed waste sites >	0	0	0	6	-
83 >	3.7 >	Waste exemptions >	0	0	0	4	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
85 >	4.1 >	Recent industrial land uses >	0	0	2	-	-
86 >	4.2 >	Current or recent petrol stations >	0	0	0	1	-
86	4.3	Electricity cables	0	0	0	0	-
86	4.4	Gas pipelines	0	0	0	0	-
86	4.5	Sites determined as Contaminated Land	0	0	0	0	-

86 >	4.6 >	Control of Major Accident Hazards (COMAH) >	1	0	0	2	-
87	4.7	Regulated explosive sites	0	0	0	0	-
87 >	4.8 >	Hazardous substance storage/usage >	0	0	0	7	-
88 >	4.9 >	Historical licensed industrial activities (IPC) >	0	0	7	31	-
93 >	4.10 >	Licensed industrial activities (Part A(1)) >	0	0	0	56	-
101 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	1	7	-
102 >	4.12 >	Radioactive Substance Authorisations >	0	0	0	1	-
103 >	4.13 >	Licensed Discharges to controlled waters >	0	0	0	4	-
103	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
104 >	4.15 >	Pollutant release to public sewer >	0	0	0	2	-
104 >	4.16 >	List 1 Dangerous Substances >	0	0	2	9	-
105 >	4.17 >	List 2 Dangerous Substances >	0	0	0	1	-
105 >	4.18 >	Pollution Incidents (EA/NRW) >	0	2	0	10	-
107 >	4.19 >	Pollution inventory substances >	0	0	0	4	-
109 >	4.20 >	Pollution inventory waste transfers >	0	0	0	2	-
117	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
118 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
120 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
122 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
123	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
123	5.5	Groundwater vulnerability- local information	None (within 0m)				
124 >	5.6 >	Groundwater abstractions >	0	4	5	12	5
131 >	5.7 >	Surface water abstractions >	0	0	0	6	0
133	5.8	Potable abstractions	0	0	0	0	0
133	5.9	Source Protection Zones	0	0	0	0	-
133	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
134 >	6.1 >	Water Network (OS MasterMap) >	0	0	1	-	-



135 >	6.2 >	Surface water features >	0	0	1	-	-
135 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
135 >	6.4 >	WFD Surface water bodies >	0	0	1	-	-
136 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
137	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
137	7.2	Historical Flood Events	0	0	0	-	-
137	7.3	Flood Defences	0	0	0	-	-
138	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
138	7.5	Flood Storage Areas	0	0	0	-	-
139	7.6	Flood Zone 2	None (within 50m)				
139	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
140 >	8.1 >	Surface water flooding >	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding >					
142 >	9.1 >	Groundwater flooding >	High (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
143	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
144	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
144	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
144	10.4	Special Protection Areas (SPA)	0	0	0	0	0
144	10.5	National Nature Reserves (NNR)	0	0	0	0	0
145 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
145	10.7	Designated Ancient Woodland	0	0	0	0	0
145	10.8	Biosphere Reserves	0	0	0	0	0
145	10.9	Forest Parks	0	0	0	0	0
146	10.10	Marine Conservation Zones	0	0	0	0	0
146 >	10.11 >	Green Belt >	0	0	0	0	2
146	10.12	Proposed Ramsar sites	0	0	0	0	0

146	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
147	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
147	10.15	Nitrate Sensitive Areas	0	0	0	0	0
147	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
148 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
149	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
150	11.1	World Heritage Sites	0	0	0	-	-
150	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
150	11.3	National Parks	0	0	0	-	-
150	11.4	Listed Buildings	0	0	0	-	-
151	11.5	Conservation Areas	0	0	0	-	-
151	11.6	Scheduled Ancient Monuments	0	0	0	-	-
151	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
152 >	12.1 >	Agricultural Land Classification >	Urban (within 250m)				
153	12.2	Open Access Land	0	0	0	-	-
153	12.3	Tree Felling Licences	0	0	0	-	-
153	12.4	Environmental Stewardship Schemes	0	0	0	-	-
153	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
154	13.1	Priority Habitat Inventory	0	0	0	-	-
154	13.2	Habitat Networks	0	0	0	-	-
155 >	13.3 >	Open Mosaic Habitat >	1	0	0	-	-
155	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
156 >	14.1 >	10k Availability >	Identified (within 500m)				
157 >	14.2 >	Artificial and made ground (10k) >	0	0	3	1	-
159 >	14.3 >	Superficial geology (10k) >	1	0	0	0	-

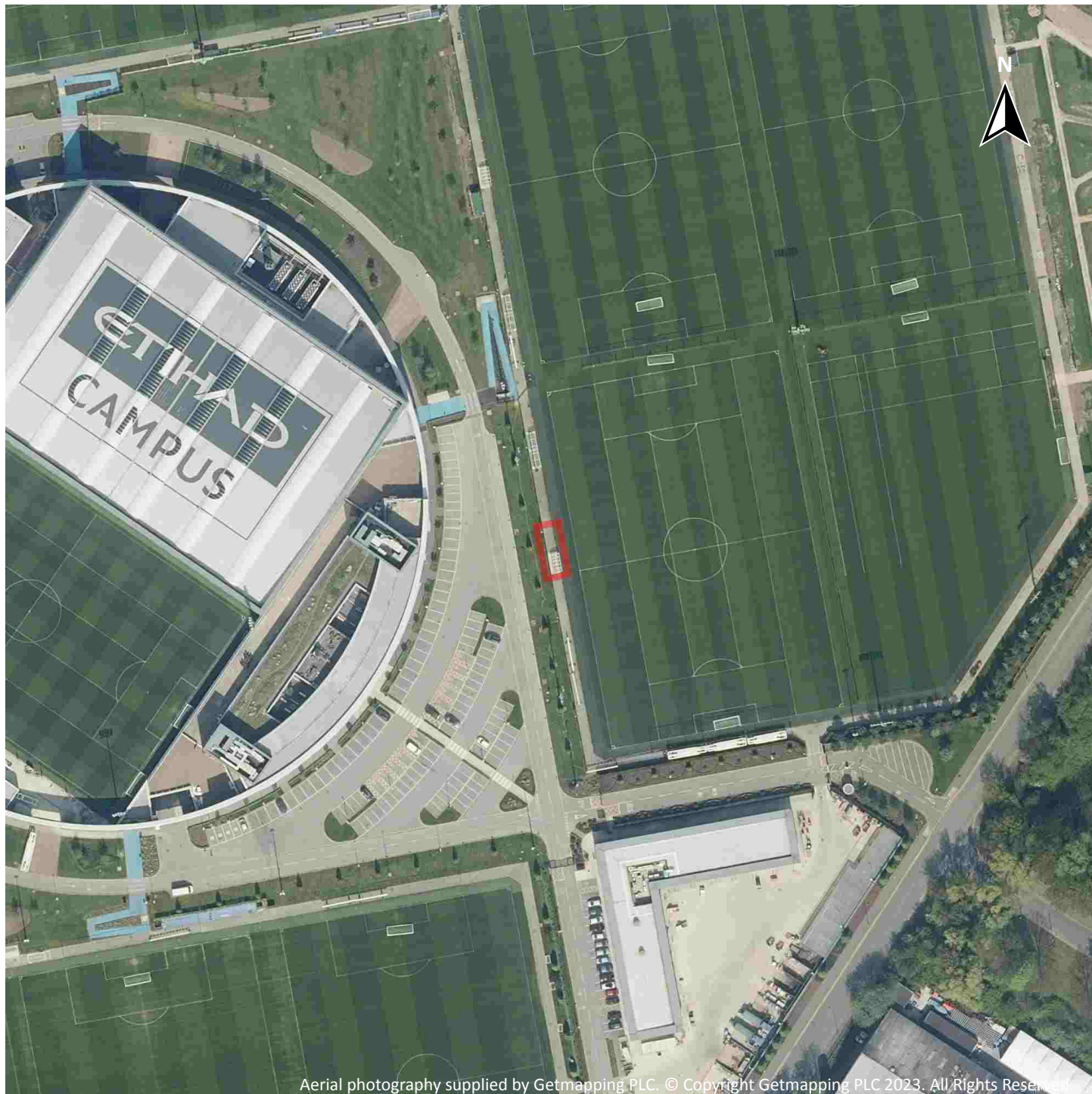
160	14.4	Landslip (10k)	0	0	0	0	-
161 >	14.5 >	Bedrock geology (10k) >	1	1	1	1	-
162 >	14.6 >	Bedrock faults and other linear features (10k) >	0	1	5	2	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
163 >	15.1 >	50k Availability >	Identified (within 500m)				
164 >	15.2 >	Artificial and made ground (50k) >	0	0	1	0	-
165	15.3	Artificial ground permeability (50k)	0	0	-	-	-
166 >	15.4 >	Superficial geology (50k) >	1	0	0	0	-
167 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
167	15.6	Landslip (50k)	0	0	0	0	-
167	15.7	Landslip permeability (50k)	None (within 50m)				
168 >	15.8 >	Bedrock geology (50k) >	1	1	1	1	-
169 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
169 >	15.10 >	Bedrock faults and other linear features (50k) >	0	1	4	2	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
170 >	16.1 >	BGS Boreholes >	0	2	20	-	-
Page	Section	Natural ground subsidence >					
172 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
173 >	17.2 >	Running sands >	Very low (within 50m)				
174 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
175 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
176 >	17.5 >	Landslides >	Very low (within 50m)				
177 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
179 >	18.1 >	BritPits >	0	0	1	3	-
180 >	18.2 >	Surface ground workings >	0	1	39	-	-
182 >	18.3 >	Underground workings >	0	0	0	0	7
183 >	18.4 >	Underground mining extents >	0	0	0	1	-
183	18.5	Historical Mineral Planning Areas	0	0	0	0	-



183 >	18.6 >	Non-coal mining >	0	0	0	0	1
184 >	18.7 >	JPB mining areas >	Identified (within 0m)				
184	18.8	The Coal Authority non-coal mining	0	0	0	0	-
184 >	18.9 >	Researched mining >	0	0	0	2	-
185 >	18.10 >	Mining record office plans >	0	0	1	0	-
185	18.11	BGS mine plans	0	0	0	0	-
185 >	18.12 >	Coal mining >	Identified (within 0m)				
185	18.13	Brine areas	None (within 0m)				
186	18.14	Gypsum areas	None (within 0m)				
186	18.15	Tin mining	None (within 0m)				
186	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
187	19.1	Natural cavities	0	0	0	0	-
188 >	19.2 >	Mining cavities >	0	0	0	0	2
188	19.3	Reported recent incidents	0	0	0	0	-
188	19.4	Historical incidents	0	0	0	0	-
189	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
190 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
192 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	2	-	-	-
192 >	21.2 >	BGS Estimated Urban Soil Chemistry >	1	3	-	-	-
193	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
194	22.1	Underground railways (London)	0	0	0	-	-
194	22.2	Underground railways (Non-London)	0	0	0	-	-
195	22.3	Railway tunnels	0	0	0	-	-
195 >	22.4 >	Historical railway and tunnel features >	3	5	38	-	-
197	22.5	Royal Mail tunnels	0	0	0	-	-

<u>197</u> >	<u>22.6</u> >	<u>Historical railways</u> >	0	1	2	-	-
197	22.7	Railways	0	0	0	-	-
198	22.8	Crossrail 1	0	0	0	0	-
198	22.9	Crossrail 2	0	0	0	0	-
198	22.10	HS2	0	0	0	0	-

Recent aerial photograph

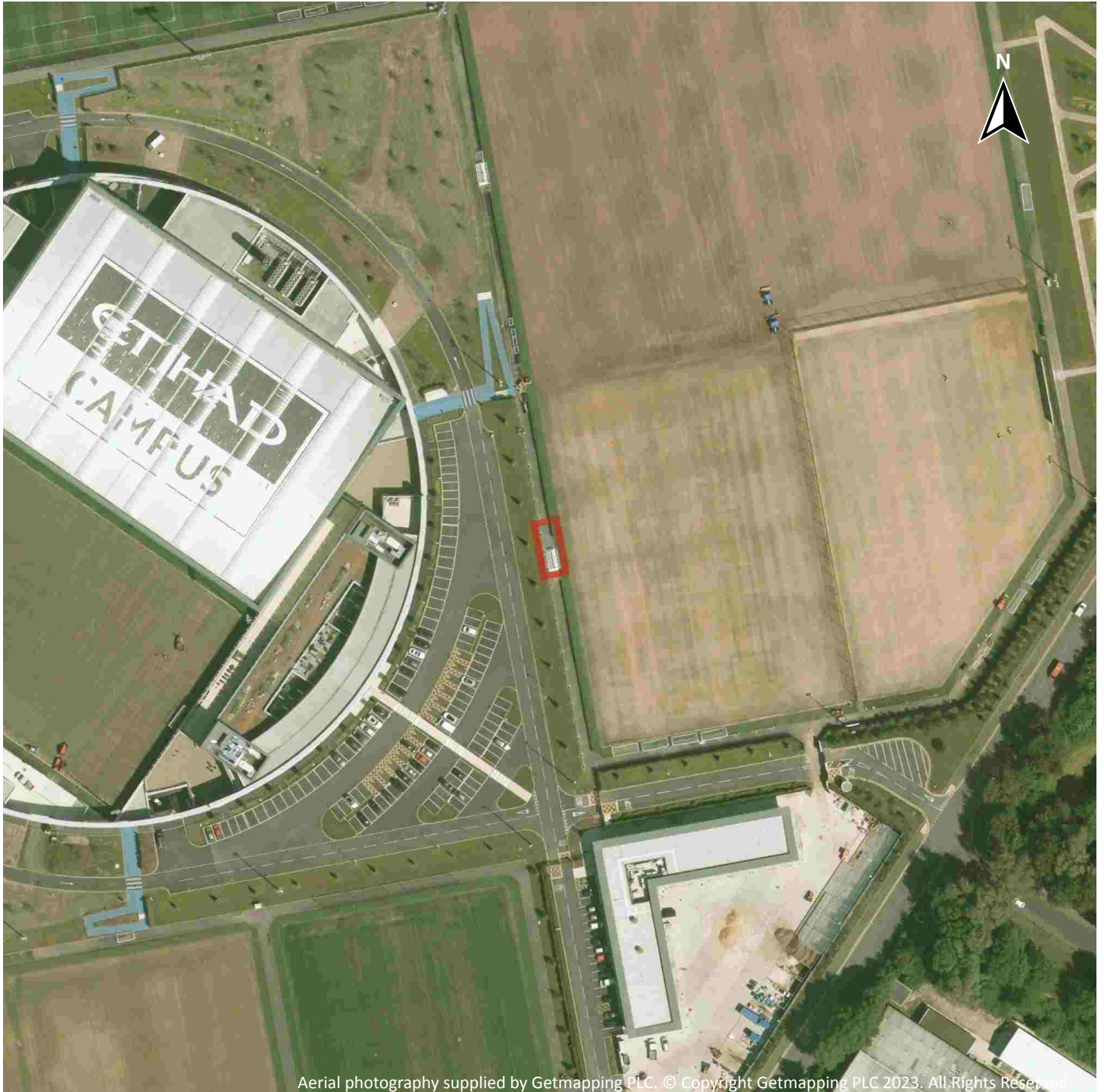


Capture Date: 22/04/2019

Site Area: 0.01ha



Recent site history - 2015 aerial photograph



Capture Date: 11/06/2015

Site Area: 0.01ha



Recent site history - 2009 aerial photograph



Capture Date: 02/06/2009

Site Area: 0.01ha



Recent site history - 2000 aerial photograph



Capture Date: 19/06/2000

Site Area: 0.01ha

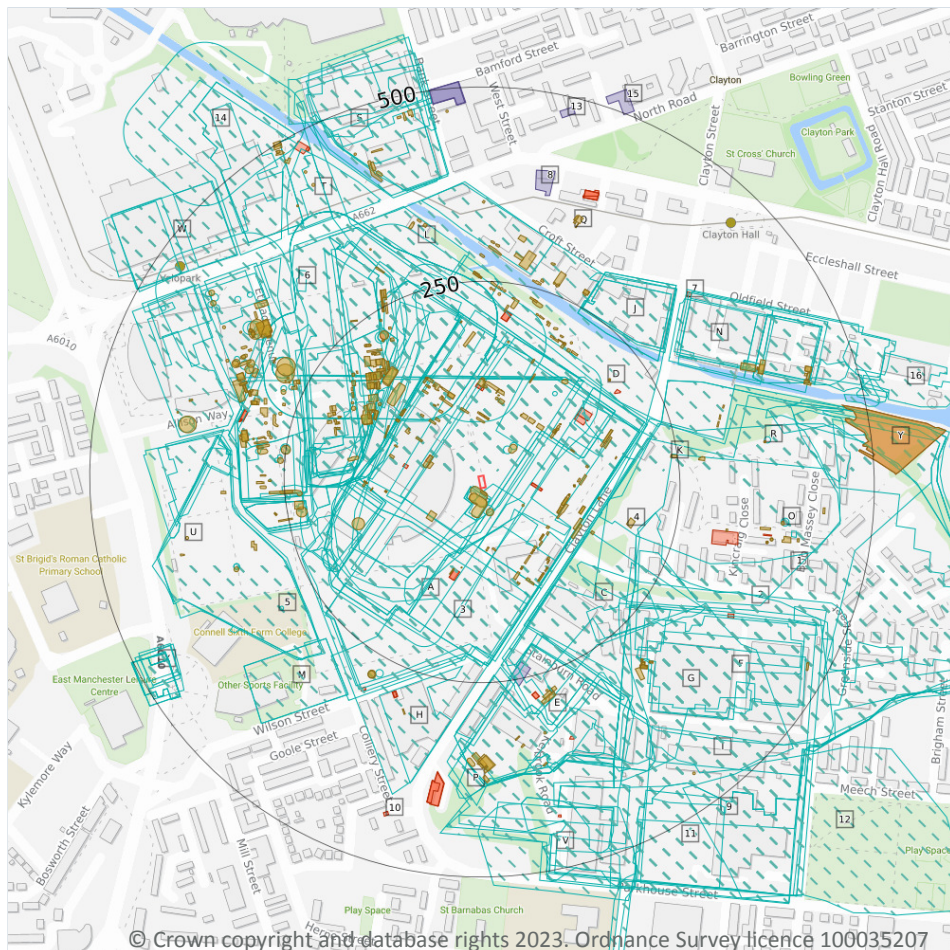


OS MasterMap site plan



Site Area: 0.01ha

1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

1.1 Historical industrial land uses

Records within 500m

192

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 14](#) >

ID	Location	Land use	Dates present	Group ID
1	On site	Railway Sidings	1934 - 1938	882010



ID	Location	Land use	Dates present	Group ID
A	On site	Unspecified Works	1985 - 1991	870723
A	On site	Unspecified Works	1905	851601
A	On site	Unspecified Commercial/Industrial	1956	853511
A	On site	Unspecified Works	1923	856782
A	On site	Chemical Works	1968	884000
A	On site	Unspecified Commercial/Industrial	1938	888176
A	On site	Chemical Works	1934	888408
A	On site	Unspecified Works	1985	940096
A	On site	Unspecified Works	1915	960638
A	On site	Unspecified Works	1978	962557
A	On site	Railway Sidings	1933 - 1934	968150
A	On site	Chemical Works	1921	974713
A	2m SE	Railway Sidings	1978	846139
A	3m S	Oil Tanks	1915	934088
A	6m S	Oil Tanks	1923	852756
A	6m S	Oil Tanks	1905	975013
A	8m SW	Unspecified Tank	1934 - 1938	914329
A	23m S	Unspecified Tank	1934	825249
2	28m SE	Steel Works	1956	810023
A	35m SE	Unspecified Commercial/Industrial	1968	926845
A	40m NE	Unspecified Tank	1915 - 1923	911915
A	70m N	Chemical Works	1890 - 1891	884944
A	79m SW	Unspecified Works	1978	865300
A	92m NW	Chemical Works	1906 - 1915	950978
A	92m NW	Unspecified Commercial/Industrial	1933 - 1934	990094
3	96m SW	Unspecified Works	1915 - 1923	912251
A	121m NW	Refuse Heap	1890 - 1915	858305
A	122m SW	Unspecified Heap	1938	804175



ID	Location	Land use	Dates present	Group ID
A	124m NW	Unspecified Commercial/Industrial	1905 - 1906	934228
A	126m NW	Unspecified Heap	1956	923971
A	127m NW	Unspecified Heap	1934 - 1938	913510
A	128m NW	Unspecified Commercial/Industrial	1923	976600
A	128m NW	Refuse Heap	1923	990889
A	129m W	Unspecified Disused Mill	1905	827218
A	137m NE	Unspecified Tank	1923	825262
B	140m SE	Engineering Works	1923	951144
B	140m SE	Railway Sidings	1968	862695
B	142m SE	Railway Sidings	1956	877918
B	143m SE	Engineering Works	1934	912693
C	143m SE	Motor Works	1905	833283
A	144m NW	Refuse Heap	1921	957108
A	147m W	Unspecified Works	1985 - 1991	943793
A	150m W	Unspecified Works	1985 - 1991	909589
A	150m NW	Unspecified Works	1968	984377
A	150m W	Refuse	1956	802112
A	150m W	Alkali Works	1915	908859
A	150m W	Alkali Works	1934 - 1938	961180
A	153m W	Refuse Heap	1968	925604
B	154m SE	Unspecified Heap	1985 - 1991	854063
A	155m W	Unspecified Works	1923	971621
A	159m W	Refuse Heap	1934 - 1938	935650
A	159m W	Unspecified Works	1978	896127
A	165m SW	Unspecified Mill	1851 - 1890	961717
E	200m S	Unspecified Works	1968	922875
B	203m E	Unspecified Works	1968	923446
B	203m E	Engineering Works	1938	884631



ID	Location	Land use	Dates present	Group ID
F	203m E	Railway Sidings	1915	870808
E	205m S	Unspecified Works	1985	862949
C	206m SE	Unspecified Pit	1890	840558
A	209m SW	Unspecified Ground Workings	1934	800644
A	210m SW	Unspecified Heap	1938	804174
E	210m S	Dye Works	1923	920128
A	211m NW	Unspecified Tank	1938	901748
A	213m NW	Unspecified Tank	1906 - 1933	922414
A	214m W	Colliery	1851	798314
F	214m SE	Railway Sidings	1923	924696
G	218m SE	Dye Works	1851	870141
A	221m W	Unspecified Tanks	1968	815401
A	225m W	Unspecified Works	1915	877861
A	225m W	Unspecified Works	1934	901782
A	225m W	Size Works	1938	991102
A	227m W	Size Works	1923	908918
A	227m W	Unspecified Commercial/Industrial	1851	976601
A	227m W	Chemical Works	1923	883999
B	227m SE	Unspecified Works	1978	878377
A	229m NW	Chemical Works	1923	852811
H	230m S	Unspecified Works	1968	830485
E	232m S	Dye Works	1890 - 1905	987882
A	236m N	Railway Building	1938	820498
A	236m W	Chemical Works	1851	965952
I	239m SE	Unspecified Works	1985	985355
J	241m NE	Finishing Works	1906 - 1938	946441
J	241m NE	Unspecified Commercial/Industrial	1891	972255
E	241m S	Dye Works	1915	866564



ID	Location	Land use	Dates present	Group ID
E	241m S	Dye Works	1934 - 1938	959572
A	245m W	Unspecified Tank	1905	825259
J	249m NE	Unspecified Works	1968	922944
J	251m NE	Unspecified Works	1985 - 1991	884614
J	251m NE	Unspecified Works	1978	910195
A	254m W	Unspecified Tank	1915	976902
L	254m N	Unspecified Works	1968	830471
A	257m W	Unspecified Tank	1923	952557
A	263m NW	Chimney	1851	835765
A	265m W	Chemical Works	1915 - 1923	857688
A	266m N	Unspecified Works	1968	830470
H	266m SW	Unspecified Tank	1985	825248
A	267m SW	Chemical Works	1905	971581
A	268m SW	Disused Chemical Works	1934 - 1938	866287
A	271m NW	Unspecified Tank	1915	825263
A	275m NW	Unspecified Tank	1906 - 1938	854058
A	275m NW	Unspecified Tank	1923	923831
A	275m NW	Unspecified Tank	1891	984869
M	277m SW	Unspecified Works	1985 - 1991	950101
M	277m SW	Unspecified Works	1968	953001
A	279m W	Unspecified Tank	1915 - 1923	871679
E	280m SE	Unspecified Ground Working	1851	821933
N	280m NE	Unspecified Commercial/Industrial	1923	796793
A	284m W	Unspecified Works	1968	830486
B	285m SE	Engineering Works	1915	870994
B	287m SE	Unspecified Works	1991	844894
N	288m NE	Chemical Works	1891	981333
N	292m NE	Chemical Works	1978	918950



ID	Location	Land use	Dates present	Group ID
N	293m NE	Unspecified Works	1968	849751
N	296m NE	Unspecified Works	1985 - 1991	929483
5	296m SW	Coal Pit	1851	808506
A	307m W	Unspecified Works	1985	871686
A	311m NW	Unspecified Commercial/Industrial	1891	898012
A	315m NW	Unspecified Tank	1891	825264
A	317m W	Unspecified Works	1968	854915
A	319m W	Wheel Works	1915 - 1923	949526
A	323m W	Unspecified Commercial/Industrial	1923	976599
A	325m W	Unspecified Commercial/Industrial	1923	976598
6	326m NW	Colliery	1851	798316
A	326m W	Unspecified Tanks	1915	815400
A	326m W	Unspecified Tank	1934	825268
A	327m NW	Unspecified Tank	1891	929119
A	327m NW	Unspecified Tank	1923	825265
E	333m SE	Refuse Heap	1934 - 1938	931175
A	337m NW	Unspecified Tank	1906	954049
A	342m NW	Unspecified Tank	1923	942989
A	342m NW	Unspecified Tank	1923	825266
P	353m S	Unspecified Heap	1890	804173
A	354m NW	Unspecified Works	1968	830473
N	358m E	Brewery	1923	913193
N	360m NE	Brewery	1968	958488
R	364m E	Unspecified Tank	1968	825260
N	369m E	Vinegar Brewery	1906	831121
N	369m E	Brewery	1933 - 1938	854933
N	369m E	Brewery	1921	904415
N	371m E	Refuse Heap	1956 - 1968	927998



ID	Location	Land use	Dates present	Group ID
A	372m W	Unspecified Tank	1923	825267
A	372m NW	Unspecified Tank	1906	825294
9	375m SE	Unspecified Commercial/Industrial	1968	796802
S	375m N	Oil Works	1921 - 1923	864827
T	376m N	Unspecified Works	1921 - 1923	848942
S	379m N	Unspecified Commercial/Industrial	1933	796764
S	379m N	Unspecified Works	1991	926651
A	380m NW	Unspecified Tank	1906	825295
S	381m N	Unspecified Works	1985 - 1991	898710
O	383m E	Unspecified Tank	1968	825250
T	383m NW	Unspecified Works	1968	912430
A	386m NW	Unspecified Works	1968	830472
A	396m NW	Unspecified Tank	1891 - 1906	852618
T	396m NW	Unspecified Works	1978	871981
T	396m NW	Unspecified Works	1985 - 1991	881370
T	397m NW	Chemical Works	1906 - 1933	885077
O	398m E	Unspecified Tank	1934	825258
A	398m NW	Unspecified Depot	1985	818423
V	402m S	Brick Works	1890	818771
V	402m S	Unspecified Pit	1890	840557
A	405m NW	Unspecified Tank	1891	825298
N	406m E	Sand Pit	1915 - 1923	904794
A	416m NW	Unspecified Tank	1906	825297
W	421m NW	Unspecified Works	1985 - 1991	979935
W	422m NW	Unspecified Works	1968	934878
S	422m N	Unspecified Works	1978	847531
T	434m NW	Unspecified Works	1968	866157
11	441m SE	Unspecified Works	1978	847210



ID	Location	Land use	Dates present	Group ID
N	441m E	Refuse Heap	1956 - 1968	891215
X	444m SW	Police Station	1968	964047
X	447m SW	Police Station	1978	933294
X	448m SW	Police Station	1956	851180
S	449m N	Brick Kiln	1851	811031
X	454m SW	Fire Station	1956 - 1968	883197
A	456m NW	Coal Pit	1851	808491
X	457m SW	Police Station	1934	873063
X	457m SW	Police Station	1915	929932
W	457m NW	Unspecified Works	1968	865836
S	457m N	Chemical Works	1891	834550
X	458m SW	Police Station	1923	889996
X	458m SW	Police Station	1905	914704
X	458m SW	Police Station	1938	858028
X	458m SW	Fire Engine Station	1934	936566
X	458m SW	Fire Engine Station	1915	956015
12	463m SE	Brick Works	1890	818779
W	464m NW	Engineering Works	1921 - 1923	917015
N	476m E	Unspecified Ground Workings	1923	800637
14	483m NW	Brick Field	1891	817951
S	485m N	Refuse Heap	1891	829165
N	492m E	Unspecified Pit	1915	840561
16	499m E	Unspecified Works	1968	935136

This data is sourced from Ordnance Survey / Groundsure.



1.2 Historical tanks

Records within 500m

416

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
A	1m S	Tanks	1933 - 1956	144281
A	2m S	Unspecified Tank	1933	116209
A	9m S	Oil Tanks	1908 - 1922	147443
A	28m S	Unspecified Tank	1933	116208
A	45m NE	Unspecified Tank	1908 - 1922	124394
A	52m SE	Unspecified Tank	1933	116207
A	60m W	Unspecified Tank	1933	116210
A	63m NW	Unspecified Tank	1949 - 1956	146208
A	66m SW	Tanks	1956	107032
A	68m N	Tanks	1933	106987
A	72m N	Tanks	1949	137800
A	72m N	Tanks	1956	148736
A	76m N	Tanks	1956	135776
A	76m S	Tanks	1949 - 1956	140052
A	78m S	Unspecified Tank	1949 - 1956	145954
A	82m N	Tanks	1956	106989
A	86m NW	Unspecified Tank	1956	115886
A	87m NW	Unspecified Tank	1933	116212
A	87m NW	Unspecified Tank	1949 - 1956	130627
A	90m NE	Tanks	1949 - 1956	134555
A	90m NE	Tanks	1949 - 1956	140103



ID	Location	Land use	Dates present	Group ID
A	92m NE	Tanks	1949	106986
A	94m SE	Unspecified Tank	1949 - 1956	137750
A	94m NW	Tanks	1949	106988
A	95m N	Tanks	1933	106993
A	95m SE	Unspecified Tank	1949	124403
A	95m SE	Unspecified Tank	1949 - 1956	149350
A	96m N	Tanks	1933	106990
A	97m E	Unspecified Tank	1949 - 1956	145897
A	97m E	Tanks	1949	143724
A	98m SE	Unspecified Tank	1933	116203
A	98m SE	Tanks	1956	107035
A	99m NE	Tanks	1933	143424
A	99m N	Tanks	1933	106992
A	99m SE	Tanks	1933	107027
A	100m E	Tanks	1949	134551
A	100m SE	Unspecified Tank	1933	116206
A	100m E	Tanks	1956	142343
A	101m SE	Tanks	1956	107036
A	102m SE	Unspecified Tank	1949	116205
A	102m SE	Tanks	1949 - 1956	131440
A	104m SE	Tanks	1949 - 1956	147326
A	104m S	Unspecified Tank	1949	116204
A	104m N	Tanks	1956	106994
A	105m NW	Unspecified Tank	1956	115888
A	105m NW	Tanks	1933	107019
A	105m N	Tanks	1956	136070
A	105m NE	Tanks	1956	145795
A	105m N	Tanks	1949	129933



ID	Location	Land use	Dates present	Group ID
A	105m NW	Tanks	1949 - 1956	136076
A	106m NW	Tanks	1949 - 1956	127712
A	106m NE	Tanks	1956	123849
A	106m N	Tanks	1933	128745
A	107m N	Tanks	1956	141111
A	107m E	Unspecified Tank	1956	116200
A	109m S	Unspecified Tank	1949 - 1956	139879
A	109m NW	Unspecified Tank	1949 - 1956	129419
A	111m NW	Tanks	1956	107021
A	111m W	Unspecified Tank	1949 - 1956	126226
A	111m NE	Tanks	1933	122356
A	111m N	Tanks	1956	137053
A	112m SE	Unspecified Tank	1949 - 1956	145907
A	113m SE	Unspecified Tank	1949	144706
A	113m NW	Unspecified Tank	1956	116213
A	113m N	Tanks	1933	148293
A	113m E	Unspecified Tank	1956	127041
A	113m E	Unspecified Tank	1949	133058
A	113m N	Tanks	1949 - 1956	130314
A	114m E	Unspecified Tank	1949	144528
A	116m S	Tanks	1949 - 1956	148595
A	117m E	Unspecified Tank	1956	116199
A	118m NE	Unspecified Tank	1956	116218
A	118m E	Tanks	1949 - 1956	136973
A	119m W	Unspecified Tank	1949	130128
A	119m W	Unspecified Tank	1956	131935
A	119m W	Unspecified Tank	1949	146493
A	120m E	Tanks	1933	106984

ID	Location	Land use	Dates present	Group ID
A	120m SE	Unspecified Tank	1956	116201
A	121m SE	Unspecified Tank	1949	128521
A	121m NW	Unspecified Tank	1949 - 1956	143950
A	123m N	Tanks	1956	106996
A	123m NW	Tanks	1949	106998
A	123m NW	Tanks	1956	106997
A	124m E	Tanks	1949 - 1956	132932
A	124m NW	Unspecified Tank	1949	148424
A	124m NW	Unspecified Tank	1956	126992
A	124m SE	Unspecified Tank	1949 - 1956	133623
A	124m E	Tanks	1949	143331
A	124m NW	Tanks	1949	107020
A	125m SE	Unspecified Tank	1956	116202
A	125m NW	Tanks	1933	106991
A	125m NW	Tanks	1949	107018
A	125m NW	Unspecified Tank	1956	115889
A	127m SE	Tanks	1933	107025
A	128m SE	Tanks	1933	107040
A	128m S	Unspecified Tank	1949 - 1956	138019
A	128m NW	Unspecified Tank	1956	116222
A	129m SE	Tanks	1949	107043
A	130m NW	Tanks	1949 - 1956	126284
A	130m NW	Unspecified Tank	1908	116211
A	130m SE	Tanks	1949 - 1956	123351
A	131m E	Unspecified Tank	1956	116198
A	131m NW	Tanks	1949	106999
A	132m SE	Tanks	1949	128453
A	132m SE	Tanks	1949 - 1956	122910

ID	Location	Land use	Dates present	Group ID
A	133m NE	Tanks	1956	106995
A	134m NW	Tanks	1949	107000
A	136m W	Tanks	1949	107028
A	139m NW	Tanks	1949 - 1956	140666
A	141m N	Unspecified Tank	1949 - 1956	148566
A	142m NW	Tanks	1987 - 1994	138407
A	142m NW	Unspecified Tank	1949	125464
A	142m NW	Unspecified Tank	1949	149190
A	143m W	Unspecified Tank	1956	115885
A	143m W	Tanks	1949	107029
A	145m E	Unspecified Tank	1933	116196
A	147m SE	Unspecified Tank	1949	126295
A	150m NW	Tanks	1933	126460
A	151m NW	Tanks	1922	141942
A	152m NW	Unspecified Tank	1922 - 1933	148480
A	154m NW	Tanks	1987 - 1991	132827
A	154m NW	Tanks	1994	142641
A	155m E	Tanks	1949	132100
A	155m NW	Unspecified Tank	1922	115890
A	156m W	Tanks	1908 - 1922	127800
A	156m W	Unspecified Tank	1994	115884
A	156m NE	Tanks	1949	135168
A	157m NE	Tanks	1956	106905
A	158m NW	Tanks	1933	145111
A	158m NW	Tanks	1956	140497
A	158m NW	Unspecified Tank	1956	115887
A	159m E	Tanks	1933	106985
A	160m E	Tanks	1949 - 1956	126643

ID	Location	Land use	Dates present	Group ID
A	162m NW	Tanks	1956 - 1980	134369
A	164m NW	Tanks	1987 - 1991	128908
A	165m NW	Tanks	1994	130302
A	167m N	Unspecified Tank	1932	116224
A	169m NW	Tanks	1980	128189
A	170m NW	Tanks	1949 - 1970	134955
A	170m E	Unspecified Tank	1956	116197
A	172m NW	Tanks	1949 - 1970	145885
A	174m N	Unspecified Tank	1956	116225
A	175m NW	Tanks	1949	139310
A	175m NW	Tanks	1956 - 1970	126070
A	177m NW	Tanks	1949 - 1980	132520
A	178m NW	Tanks	1970	125368
A	178m NW	Tanks	1949 - 1956	129500
A	178m NW	Tanks	1949 - 1956	146047
A	179m NW	Tanks	1970	149120
A	180m NW	Unspecified Tank	1922 - 1933	140860
A	182m NW	Tanks	1970	134022
A	182m NW	Tanks	1949 - 1956	125997
A	185m NW	Tanks	1956 - 1970	147267
A	186m NW	Unspecified Tank	1893	115892
4	187m E	Tanks	1922	107026
A	188m W	Unspecified Tank	1949 - 1953	131278
A	190m W	Tanks	1893	107015
A	190m NW	Unspecified Tank	1956	115891
A	191m NW	Tanks	1970	134893
A	191m W	Tanks	1949 - 1953	125647
A	192m NW	Tanks	1949	107017

ID	Location	Land use	Dates present	Group ID
A	192m NE	Tanks	1932	130638
A	193m W	Unspecified Tank	1893	115894
A	193m NE	Tanks	1956	106904
A	193m NW	Tanks	1956	106902
A	195m NE	Unspecified Tank	1949	124412
A	196m NW	Tanks	1956	107004
A	196m NE	Unspecified Tank	1949 - 1956	143387
A	197m NW	Unspecified Tank	1949	129303
A	197m NE	Unspecified Tank	1908 - 1922	127575
A	198m NE	Tanks	1949	140552
A	198m NE	Tanks	1949 - 1956	147755
A	198m NE	Unspecified Tank	1949	142031
A	198m N	Unspecified Tank	1956	116223
A	199m NW	Tanks	1970 - 1980	134738
A	200m NW	Tanks	1953	107006
A	200m NW	Unspecified Tank	1949	115895
A	200m W	Unspecified Tank	1949 - 1953	123188
A	202m NW	Tanks	1953	107016
A	202m NW	Tanks	1956	135686
D	202m NE	Unspecified Tank	1970	122422
D	202m NE	Unspecified Tank	1949	132584
D	202m NE	Unspecified Tank	1956	148814
D	203m NE	Unspecified Tank	1949	140290
A	203m NE	Unspecified Tank	1922	116235
A	204m NW	Unspecified Tank	1956	116156
A	204m NW	Tanks	1956	106903
A	204m NE	Unspecified Tank	1949 - 1956	123851
A	205m NW	Tanks	1956	107001

ID	Location	Land use	Dates present	Group ID
A	205m NW	Tanks	1949	139548
A	206m NW	Unspecified Tank	1949 - 1956	129535
A	206m NW	Unspecified Tank	1949	115893
A	208m NW	Unspecified Tank	1956	116158
A	209m NE	Tanks	1908	106906
A	210m NE	Tanks	1956	106907
A	212m NW	Unspecified Tank	1949 - 1956	133157
A	212m NW	Tanks	1949	106909
A	213m N	Unspecified Tank	1932	116227
A	213m N	Tanks	1956	106908
A	213m NW	Gasometer	1908 - 1932	135678
A	215m N	Tanks	1949 - 1956	128110
A	217m N	Tanks	1956	106910
A	218m NW	Unspecified Tank	1956	116155
A	218m NW	Tanks	1949	127871
A	218m N	Tanks	1949 - 1956	127388
A	220m NW	Unspecified Tank	1949 - 1956	138481
A	220m NW	Unspecified Tank	1956	116157
A	225m W	Unspecified Tank	1996	145491
A	228m W	Tanks	1953	122866
A	228m N	Tanks	1908	106911
A	228m W	Unspecified Tank	1953	126605
A	232m N	Unspecified Tank	1932	116226
A	233m N	Unspecified Tank	1908	116228
A	235m NW	Unspecified Tank	1949 - 1956	125137
A	238m N	Unspecified Tank	1908 - 1922	144291
A	238m N	Unspecified Tank	1908 - 1922	147975
A	240m N	Unspecified Tank	1908 - 1922	130097



ID	Location	Land use	Dates present	Group ID
A	240m W	Tanks	1949	129387
A	240m N	Unspecified Tank	1908 - 1922	129690
A	240m NW	Tanks	1956	106917
K	241m E	Tanks	1949 - 1970	137054
A	242m N	Unspecified Tank	1922	116231
A	243m N	Tanks	1908 - 1922	149311
A	244m W	Unspecified Tank	1893 - 1908	126323
A	244m NW	Tanks	1956	143578
A	244m NW	Tanks	1949	147383
A	244m NW	Tanks	1949	144568
A	245m W	Tanks	1953	107034
A	252m W	Unspecified Tank	1893 - 1933	142254
A	254m NW	Tanks	1949 - 1956	122935
A	254m N	Tanks	1949	147429
A	254m N	Tanks	1949	130026
A	254m N	Tanks	1932	137765
A	256m N	Tanks	1949 - 1956	145441
A	256m NW	Unspecified Tank	1956	116154
A	259m NW	Tanks	1949 - 1953	146447
A	259m NW	Tanks	1933	107005
A	259m NW	Tanks	1949	123155
A	259m NW	Tanks	1949	129322
A	260m N	Unspecified Tank	1956	116233
A	260m N	Unspecified Tank	1956 - 1980	131573
A	262m N	Unspecified Tank	1956	116234
A	263m N	Tanks	1949 - 1970	129402
A	263m W	Unspecified Tank	1949	133578
A	264m W	Unspecified Tank	1949	136267

ID	Location	Land use	Dates present	Group ID
A	265m W	Unspecified Tank	1949 - 1953	143284
A	265m W	Unspecified Tank	1933	115897
A	266m NE	Unspecified Tank	1932 - 1949	128827
A	266m W	Tanks	1893	107007
A	266m W	Tanks	1893	107030
A	268m NE	Tanks	1949 - 1956	125749
A	270m NW	Unspecified Tank	1893	131619
A	270m W	Unspecified Tank	1922	115902
A	270m NW	Unspecified Tank	1893	115896
A	270m N	Unspecified Tank	1922 - 1932	130905
A	271m NW	Unspecified Tank	1908	137919
E	271m S	Unspecified Tank	1956 - 1963	131292
E	272m S	Unspecified Tank	1956 - 1963	136547
A	272m W	Tanks	1922	125089
H	272m SW	Unspecified Tank	1981 - 1995	139230
A	273m W	Tanks	1893 - 1933	140329
A	273m W	Tanks	1893	107008
A	273m NW	Unspecified Tank	1908 - 1932	135606
H	273m SW	Unspecified Tank	1989 - 1990	142951
A	273m W	Tanks	1893	107014
A	273m W	Tanks	1893	107031
A	274m W	Tanks	1908	107013
E	274m S	Unspecified Tank	1948 - 1963	138850
A	275m NW	Unspecified Tank	1893	144915
A	276m W	Tanks	1953 - 1980	142664
A	276m NW	Unspecified Tank	1933	126116
K	276m E	Tanks	1949 - 1970	136758
E	276m S	Tanks	1933	107042



ID	Location	Land use	Dates present	Group ID
A	277m W	Tanks	1893	107012
A	280m W	Unspecified Tank	1922	115901
A	280m N	Tanks	1893	106915
A	281m N	Tanks	1956	106912
A	282m W	Tanks	1933	107009
A	284m N	Tanks	1893	106913
A	285m N	Tanks	1956 - 1980	146379
A	286m W	Tanks	1933	142307
A	288m W	Tanks	1980	107010
A	289m NW	Tanks	1970 - 1980	145616
A	292m W	Unspecified Tank	1893	115904
A	294m N	Tanks	1908	106914
A	297m W	Tanks	1980	149111
A	297m W	Tanks	1922	107033
G	298m SE	Unspecified Tank	1963	127421
G	298m SE	Unspecified Tank	1948 - 1956	130676
A	299m N	Tanks	1908	106916
A	299m W	Tanks	1953	129972
A	299m W	Tanks	1953	126100
A	299m W	Tanks	1949	133204
A	299m W	Tanks	1933 - 1949	148054
A	300m W	Tanks	1949	146265
G	300m SE	Tanks	1989 - 1993	144612
A	301m NW	Unspecified Tank	1932	116147
A	301m W	Unspecified Tank	1893	115905
H	301m S	Unspecified Tank	1948 - 1963	127293
G	301m SE	Tanks	1981	133884
G	302m SE	Tanks	1994 - 1995	138488

ID	Location	Land use	Dates present	Group ID
A	303m W	Tanks	1980	107003
G	304m SE	Tanks	1994 - 1995	123845
A	304m N	Unspecified Tank	1932	116232
K	307m E	Unspecified Tank	1956	116217
G	307m SE	Unspecified Tank	1948	146314
G	307m SE	Unspecified Tank	1956 - 1963	144172
A	310m W	Unspecified Tank	1953	128959
A	310m W	Unspecified Tank	1949	135741
A	310m W	Tanks	1949	107002
A	310m W	Unspecified Tank	1922	140591
K	311m E	Unspecified Tank	1956	116215
A	314m NW	Unspecified Tank	1980	116146
O	314m E	Unspecified Tank	1949 - 1970	135938
A	315m W	Tanks	1933	146085
A	316m W	Unspecified Tank	1949 - 1953	143527
A	316m W	Tanks	1949	124694
K	320m E	Unspecified Tank	1956	116216
A	320m NW	Unspecified Tank	1893	131377
A	321m NW	Tanks	1949 - 1953	144164
A	321m NW	Tanks	1994	122430
A	322m NW	Unspecified Tank	1908 - 1932	141627
A	322m NW	Tanks	1980	126525
A	322m NW	Unspecified Tank	1908	116153
E	322m S	Tanks	1948 - 1963	135457
A	323m NW	Tanks	1991	123174
A	323m NW	Tanks	1995 - 1996	130435
E	324m S	Unspecified Tank	1893	116163
A	325m NW	Tanks	1949 - 1953	127812

ID	Location	Land use	Dates present	Group ID
A	325m W	Unspecified Tank	1922	115903
A	326m NW	Tanks	1949	140484
L	328m N	Unspecified Tank	1949 - 1956	132250
A	328m NW	Tanks	1893	106899
A	328m W	Unspecified Tank	1893	115876
L	330m N	Tanks	1932 - 1956	147569
A	333m NW	Unspecified Tank	1893 - 1922	143824
E	333m S	Unspecified Tank	1933	116160
A	334m NW	Unspecified Tank	1949 - 1980	146400
A	335m NW	Tanks	1932	106900
L	335m N	Tanks	1949	141083
A	336m NW	Unspecified Tank	1922	116142
A	339m NW	Tanks	1949 - 1980	126490
A	340m NW	Unspecified Tank	1994 - 1996	148606
A	340m NW	Tanks	1949	144875
P	340m S	Tanks	1956 - 1963	128579
A	340m NW	Unspecified Tank	1991	125828
Q	340m N	Unspecified Tank	1956 - 1970	136270
A	341m NW	Tanks	1991	128183
A	341m NW	Tanks	1893	106901
P	342m S	Tanks	1908	140425
P	343m S	Tanks	1922 - 1933	139855
Q	345m N	Unspecified Tank	1980	126030
A	346m NW	Unspecified Tank	1949	144142
A	346m NW	Tanks	1991 - 1996	141538
P	347m S	Tanks	1981	107038
Q	348m N	Unspecified Tank	1987 - 1991	123928
A	349m NW	Tanks	1980 - 1996	135435

ID	Location	Land use	Dates present	Group ID
A	350m NW	Tanks	1893	106918
A	350m W	Unspecified Tank	1893	115899
A	350m N	Unspecified Tank	1932	116230
A	354m NW	Unspecified Tank	1893	116145
A	356m NW	Unspecified Tank	1932	116143
P	357m S	Unspecified Tank	1948	116159
O	357m E	Tanks	1972	107024
N	357m NE	Tanks	1995 - 1996	148941
E	362m S	Tanks	1933	107041
R	363m E	Unspecified Tank	1950	143296
R	363m E	Unspecified Tank	1950	122548
O	368m E	Tanks	1950	125808
O	368m E	Tanks	1972	139471
O	368m E	Unspecified Tank	1950	116186
A	369m W	Unspecified Tank	1893 - 1922	125313
P	369m S	Tanks	1922	107039
O	372m E	Unspecified Tank	1950	116187
O	372m E	Tanks	1950 - 1972	127950
N	377m E	Tanks	1983	135740
N	377m E	Unspecified Tank	1972 - 1983	132892
N	377m E	Tanks	1995 - 1996	147358
N	377m E	Unspecified Tank	1979	128235
A	378m NW	Unspecified Tank	1893	116144
A	380m W	Tanks	1893	107011
U	381m W	Unspecified Tank	1922	115877
O	383m E	Unspecified Tank	1950	127158
O	387m E	Tanks	1972	107023
U	391m W	Tanks	1893	107037

ID	Location	Land use	Dates present	Group ID
A	394m W	Unspecified Tank	1893	115898
S	399m N	Tanks	1893	145942
A	404m NW	Unspecified Tank	1908	116131
S	406m N	Tanks	1908	106941
O	407m E	Unspecified Tank	1933	116188
A	413m NW	Unspecified Tank	1908	116132
S	415m N	Tanks	1908	141266
T	418m NW	Unspecified Tank	1908	116151
N	429m E	Tanks	1950	123616
T	429m NW	Unspecified Tank	1908	116150
N	429m E	Unspecified Tank	1972	116219
N	432m E	Unspecified Tank	1979	116220
N	434m E	Unspecified Tank	1983	141866
N	435m E	Unspecified Tank	1983	116221
N	435m E	Tanks	1972 - 1983	133020
O	435m E	Unspecified Tank	1972	116195
S	438m N	Tanks	1893	106942
S	442m N	Unspecified Tank	1908	116152
T	449m NW	Unspecified Tank	1908	116149
I	454m SE	Unspecified Tank	1933	116162
S	468m N	Tanks	1949	106938
S	470m N	Unspecified Tank	1922	116229
S	471m N	Tanks	1949	143710
T	471m NW	Tanks	1949 - 1953	133368
Y	471m E	Gas Works	1950	125589
F	471m SE	Tanks	1968 - 1979	128813
S	472m N	Unspecified Tank	1949	116105
T	485m NW	Tanks	1932 - 1949	126372



ID	Location	Land use	Dates present	Group ID
T	489m NW	Unspecified Tank	1953	116148
T	493m NW	Tanks	1932	123263
T	496m NW	Tanks	1949 - 1953	144825

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	45
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Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
A	58m E	Electricity Substation	1949 - 1956	65590
A	59m E	Electricity Substation	1949	69688
A	64m NW	Electricity Substation	1949	62207
A	91m W	Electricity Substation	1949 - 1956	68410
A	109m N	Electricity Substation	1949	73971
A	109m S	Electricity Substation	1949	74084
A	109m S	Electricity Substation	1949 - 1980	79405
A	111m N	Electricity Substation	1949 - 1956	67292
A	138m NE	Electricity Substation	1949 - 1956	67188
A	144m NE	Electricity Substation	1970 - 1994	70493
D	199m NE	Electricity Substation	1949 - 1970	84080
A	200m N	Electricity Substation	1949 - 1991	71318
A	200m N	Electricity Substation	1994	69928
A	213m NW	Gasometer	1908 - 1932	73248
E	271m S	Electricity Substation	1963 - 1981	85382



ID	Location	Land use	Dates present	Group ID
E	271m S	Electricity Substation	1956	72280
H	282m S	Electricity Substation	1948 - 1990	77316
H	283m S	Electricity Substation	1993 - 1995	83779
H	296m SW	Electricity Substation	1981 - 1995	76396
O	297m E	Electricity Substation	1956 - 1970	70055
A	308m W	Electricity Substation	1980	66361
A	308m W	Electricity Substation	1953	71571
A	308m W	Electricity Substation	1949	71828
A	312m W	Electricity Substation	1994	68888
A	312m W	Electricity Substation	1996	69701
A	312m W	Electricity Substation	1995	74124
A	312m W	Electricity Substation	1996	75956
A	313m W	Electricity Substation	1991	74138
E	339m S	Electricity Substation	1995	62209
7	348m NE	Electricity Substation	1956 - 1994	75041
B	352m SE	Electricity Substation	1981 - 1995	82276
O	362m E	Electricity Substation	1972	62206
P	369m S	Electricity Substation	1981	75669
P	369m S	Electricity Substation	1989 - 1990	85338
Q	380m N	Electricity Substation	1949 - 1994	74141
Q	380m N	Electricity Substation	1986 - 1987	79871
Q	380m N	Electricity Substation	1949	68710
P	381m S	Electricity Substation	1993 - 1995	77244
Q	382m N	Electricity Substation	1997	67404
Q	392m N	Electricity Substation	1949	81157
V	432m S	Electricity Substation	1995	62208
10	433m S	Electricity Substation	1981 - 1995	70588
Y	471m E	Gas Works	1950	76941



ID	Location	Land use	Dates present	Group ID
T	472m NW	Electricity Substation	1985	75460
T	472m NW	Electricity Substation	1989	69601

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

7

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 14 >](#)

ID	Location	Land use	Dates present	Group ID
E	228m S	Garage	1948	20331
8	369m N	Garage	1978	20327
13	471m N	Garage	1972	20329
S	478m N	Garage	1972 - 1986	24761
S	478m N	Garage	1997	22667
S	478m N	Garage	1978	21189
15	498m N	Garage	1972	20328

This data is sourced from Ordnance Survey / Groundsure.



1.6 Historical military land

Records within 500m

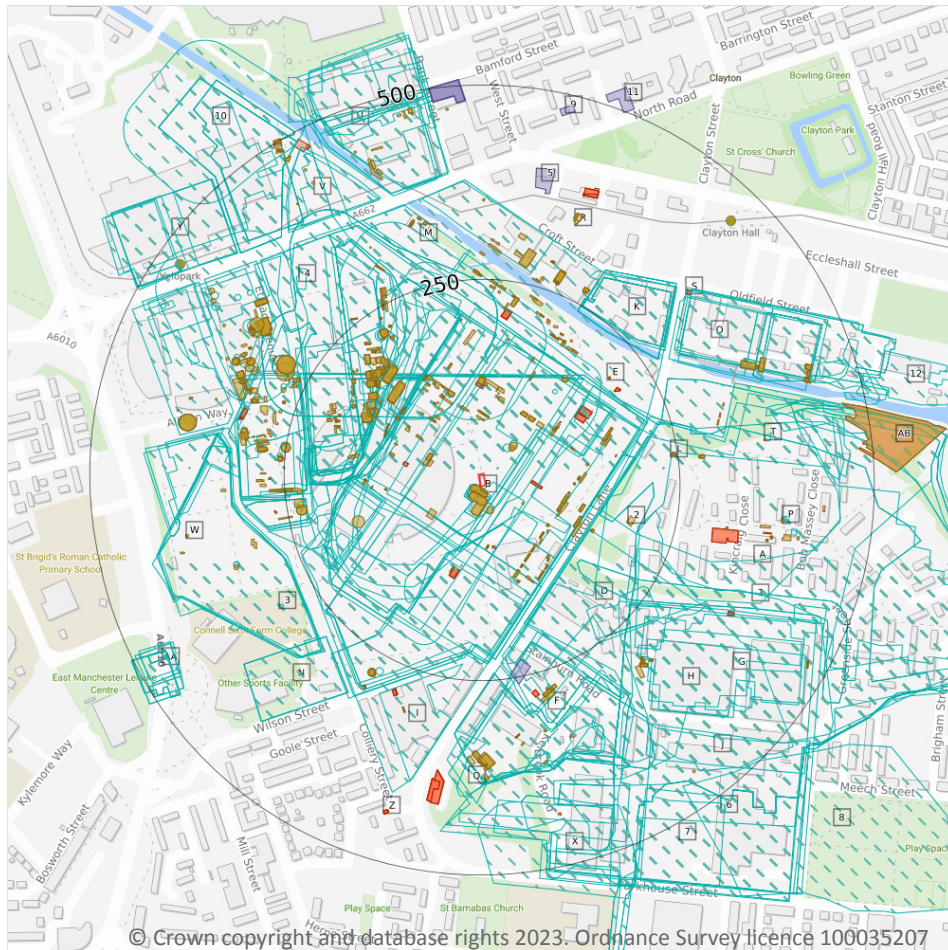
0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.



2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

2.1 Historical industrial land uses

Records within 500m

254

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 41](#) >

ID	Location	Land Use	Date	Group ID
A	On site	Railway Sidings	1938	882010
A	On site	Railway Sidings	1938	882010
B	On site	Unspecified Commercial/Industrial	1938	888176



ID	Location	Land Use	Date	Group ID
B	On site	Railway Sidings	1934	968150
B	On site	Chemical Works	1934	888408
B	On site	Unspecified Works	1915	960638
B	On site	Unspecified Works	1905	851601
B	On site	Chemical Works	1968	884000
B	On site	Unspecified Commercial/Industrial	1956	853511
B	On site	Unspecified Works	1985	940096
B	On site	Unspecified Works	1978	962557
B	On site	Unspecified Works	1991	870723
B	On site	Unspecified Works	1923	856782
B	2m SE	Railway Sidings	1978	846139
B	3m S	Oil Tanks	1915	934088
B	6m S	Oil Tanks	1905	975013
B	6m S	Oil Tanks	1923	852756
B	8m SW	Unspecified Tank	1938	914329
B	9m SW	Unspecified Tank	1934	914329
B	10m S	Unspecified Tank	1938	914329
B	12m S	Unspecified Tank	1934	914329
B	23m S	Unspecified Tank	1934	825249
1	28m SE	Steel Works	1956	810023
B	35m SE	Unspecified Commercial/Industrial	1968	926845
B	40m NE	Unspecified Tank	1923	911915
B	50m NE	Unspecified Tank	1915	911915
B	65m SW	Unspecified Works	1985	870723
B	65m SW	Unspecified Works	1991	870723
B	70m N	Chemical Works	1891	884944
B	79m SW	Unspecified Works	1978	865300
B	92m NW	Unspecified Commercial/Industrial	1933	990094

ID	Location	Land Use	Date	Group ID
B	92m NW	Chemical Works	1921	974713
B	92m NW	Chemical Works	1906	950978
B	96m SW	Unspecified Works	1915	912251
B	103m SW	Unspecified Works	1923	912251
B	121m NW	Refuse Heap	1890	858305
B	121m NW	Chemical Works	1890	884944
B	122m NW	Refuse Heap	1915	858305
B	122m SW	Unspecified Heap	1938	804175
B	124m NW	Refuse Heap	1905	858305
B	124m NW	Unspecified Commercial/Industrial	1905	934228
B	126m NW	Unspecified Heap	1956	923971
B	127m NW	Unspecified Heap	1934	913510
B	128m NW	Unspecified Commercial/Industrial	1923	976600
B	128m NW	Refuse Heap	1923	990889
B	128m NW	Unspecified Heap	1938	913510
B	129m W	Unspecified Disused Mill	1905	827218
B	137m NE	Unspecified Tank	1923	825262
C	140m SE	Engineering Works	1923	951144
C	140m SE	Railway Sidings	1968	862695
B	140m NW	Refuse Heap	1891	858305
C	142m SE	Railway Sidings	1956	877918
B	142m NW	Refuse Heap	1906	858305
C	143m SE	Engineering Works	1934	912693
D	143m SE	Motor Works	1905	833283
B	144m NW	Railway Sidings	1938	882010
B	144m NW	Railway Sidings	1933	968150
B	144m NW	Refuse Heap	1921	957108
B	147m W	Unspecified Works	1985	943793

ID	Location	Land Use	Date	Group ID
B	150m W	Unspecified Works	1985	909589
B	150m W	Unspecified Works	1991	909589
B	150m NW	Unspecified Works	1968	984377
B	150m W	Refuse	1956	802112
B	150m W	Alkali Works	1934	961180
B	150m W	Alkali Works	1915	908859
B	150m NW	Unspecified Works	1991	943793
C	152m E	Railway Sidings	1934	882010
B	153m W	Refuse Heap	1968	925604
B	154m W	Alkali Works	1938	961180
C	154m SE	Unspecified Heap	1985	854063
C	154m SE	Unspecified Heap	1991	854063
B	155m W	Unspecified Works	1923	971621
B	159m W	Refuse Heap	1934	935650
B	159m W	Unspecified Works	1978	896127
B	161m W	Refuse Heap	1938	935650
B	165m SW	Unspecified Mill	1890	961717
B	182m SW	Unspecified Mill	1851	961717
F	200m S	Unspecified Works	1968	922875
C	203m E	Unspecified Works	1968	923446
C	203m E	Engineering Works	1938	884631
G	203m E	Railway Sidings	1915	870808
F	205m S	Unspecified Works	1985	862949
D	206m SE	Unspecified Pit	1890	840558
B	209m SW	Unspecified Ground Workings	1934	800644
B	210m SW	Unspecified Heap	1938	804174
F	210m S	Dye Works	1923	920128
B	211m NW	Unspecified Tank	1938	901748

ID	Location	Land Use	Date	Group ID
B	213m NW	Unspecified Tank	1921	922414
B	213m NW	Unspecified Tank	1906	922414
B	213m NW	Unspecified Tank	1933	922414
B	213m NW	Unspecified Tank	1923	922414
B	214m W	Colliery	1851	798314
G	214m SE	Railway Sidings	1923	924696
H	218m SE	Dye Works	1851	870141
B	221m W	Unspecified Tanks	1968	815401
B	221m W	Unspecified Commercial/Industrial	1934	990094
B	221m W	Chemical Works	1915	950978
B	225m W	Size Works	1938	991102
B	225m W	Unspecified Works	1934	901782
B	225m W	Unspecified Works	1915	877861
B	227m W	Size Works	1923	908918
B	227m W	Unspecified Commercial/Industrial	1851	976601
B	227m W	Chemical Works	1923	883999
C	227m SE	Unspecified Works	1978	878377
B	229m NW	Chemical Works	1923	852811
I	230m S	Unspecified Works	1968	830485
F	232m S	Dye Works	1890	987882
B	236m N	Railway Building	1938	820498
B	236m W	Chemical Works	1851	965952
J	239m SE	Unspecified Works	1985	985355
K	241m NE	Finishing Works	1921	946441
K	241m NE	Finishing Works	1906	946441
K	241m NE	Unspecified Commercial/Industrial	1891	972255
K	241m NE	Finishing Works	1938	946441
K	241m NE	Finishing Works	1933	946441

ID	Location	Land Use	Date	Group ID
K	241m NE	Finishing Works	1923	946441
F	241m S	Dye Works	1938	959572
F	241m S	Dye Works	1934	959572
F	241m S	Dye Works	1915	866564
B	245m W	Unspecified Tank	1905	825259
K	249m NE	Unspecified Works	1968	922944
K	251m NE	Unspecified Works	1985	884614
K	251m NE	Unspecified Works	1978	910195
K	251m NE	Unspecified Works	1991	884614
B	254m W	Unspecified Tank	1915	976902
M	254m N	Unspecified Works	1968	830471
B	257m W	Unspecified Tank	1923	952557
B	263m NW	Chimney	1851	835765
F	263m S	Dye Works	1905	987882
B	265m W	Chemical Works	1915	857688
B	266m N	Unspecified Works	1968	830470
I	266m SW	Unspecified Tank	1985	825248
B	267m SW	Chemical Works	1905	971581
B	268m SW	Disused Chemical Works	1938	866287
B	268m SW	Disused Chemical Works	1934	866287
B	268m SW	Chemical Works	1923	857688
B	271m NW	Unspecified Tank	1915	825263
B	271m NW	Unspecified Commercial/Industrial	1906	934228
B	275m NW	Unspecified Tank	1906	854058
B	275m NW	Unspecified Tank	1891	984869
B	275m NW	Unspecified Tank	1938	854058
B	275m NW	Unspecified Tank	1933	854058
B	275m NW	Unspecified Tank	1923	923831



ID	Location	Land Use	Date	Group ID
N	277m SW	Unspecified Works	1985	950101
N	277m SW	Unspecified Works	1991	950101
N	277m SW	Unspecified Works	1968	953001
B	279m W	Unspecified Tank	1915	871679
F	280m SE	Unspecified Ground Working	1851	821933
O	280m NE	Unspecified Commercial/Industrial	1923	796793
B	282m W	Unspecified Tank	1923	871679
B	284m W	Unspecified Works	1968	830486
C	285m SE	Engineering Works	1915	870994
C	287m SE	Unspecified Works	1991	844894
O	288m NE	Chemical Works	1891	981333
O	292m NE	Chemical Works	1978	918950
O	293m NE	Unspecified Works	1968	849751
O	296m NE	Unspecified Works	1985	929483
O	296m NE	Unspecified Works	1991	929483
3	296m SW	Coal Pit	1851	808506
B	307m W	Unspecified Works	1985	871686
B	311m NW	Unspecified Commercial/Industrial	1891	898012
B	315m NW	Unspecified Tank	1891	825264
B	317m W	Unspecified Works	1968	854915
B	319m W	Wheel Works	1915	949526
B	323m W	Unspecified Commercial/Industrial	1923	976599
B	325m W	Unspecified Commercial/Industrial	1923	976598
4	326m NW	Colliery	1851	798316
B	326m W	Unspecified Tank	1934	825268
B	326m W	Unspecified Tanks	1915	815400
B	327m NW	Unspecified Tank	1891	929119
B	327m NW	Unspecified Tank	1923	825265



ID	Location	Land Use	Date	Group ID
F	333m SE	Refuse Heap	1938	931175
B	337m NW	Unspecified Tank	1906	954049
B	339m W	Wheel Works	1923	949526
F	339m SE	Refuse Heap	1934	931175
B	342m NW	Unspecified Tank	1923	942989
B	342m NW	Unspecified Tank	1923	825266
Q	353m S	Unspecified Heap	1890	804173
B	354m NW	Unspecified Works	1968	830473
O	358m E	Brewery	1923	913193
O	360m NE	Brewery	1968	958488
T	364m E	Unspecified Tank	1968	825260
O	369m E	Brewery	1921	904415
O	369m E	Vinegar Brewery	1906	831121
O	369m E	Brewery	1938	854933
O	369m E	Brewery	1933	854933
O	371m E	Refuse Heap	1968	927998
B	372m W	Unspecified Tank	1923	825267
B	372m NW	Unspecified Tank	1906	825294
6	375m SE	Unspecified Commercial/Industrial	1968	796802
U	375m N	Oil Works	1923	864827
V	376m N	Unspecified Works	1923	848942
O	377m E	Refuse Heap	1956	927998
V	378m N	Unspecified Works	1921	848942
U	379m N	Oil Works	1921	864827
U	379m N	Unspecified Commercial/Industrial	1933	796764
U	379m N	Unspecified Works	1991	926651
B	380m NW	Unspecified Tank	1906	825295
U	381m N	Unspecified Works	1985	898710

ID	Location	Land Use	Date	Group ID
P	383m E	Unspecified Tank	1968	825250
V	383m NW	Unspecified Works	1968	912430
B	386m NW	Unspecified Works	1968	830472
B	396m NW	Unspecified Tank	1891	852618
V	396m NW	Unspecified Works	1985	881370
V	396m NW	Unspecified Works	1978	871981
V	396m NW	Unspecified Works	1991	881370
V	397m NW	Chemical Works	1921	885077
V	397m NW	Chemical Works	1906	885077
V	397m NW	Chemical Works	1933	885077
V	397m NW	Chemical Works	1923	885077
P	398m E	Unspecified Tank	1934	825258
B	398m NW	Unspecified Depot	1985	818423
X	402m S	Unspecified Pit	1890	840557
X	402m S	Brick Works	1890	818771
B	405m NW	Unspecified Tank	1891	825298
B	406m NW	Unspecified Tank	1906	852618
O	406m E	Sand Pit	1923	904794
B	416m NW	Unspecified Tank	1906	825297
O	418m E	Sand Pit	1915	904794
Y	421m NW	Unspecified Works	1985	979935
Y	421m NW	Unspecified Works	1991	979935
Y	422m NW	Unspecified Works	1968	934878
U	422m N	Unspecified Works	1978	847531
V	434m NW	Unspecified Works	1968	866157
7	441m SE	Unspecified Works	1978	847210
O	441m E	Refuse Heap	1968	891215
AA	444m SW	Police Station	1968	964047



ID	Location	Land Use	Date	Group ID
AA	447m SW	Police Station	1978	933294
AA	448m SW	Police Station	1956	851180
U	449m N	Brick Kiln	1851	811031
O	451m E	Refuse Heap	1956	891215
AA	454m SW	Fire Station	1968	883197
B	456m NW	Coal Pit	1851	808491
AA	457m SW	Police Station	1934	873063
AA	457m SW	Police Station	1915	929932
Y	457m NW	Unspecified Works	1968	865836
AA	457m SW	Fire Station	1956	883197
U	457m N	Chemical Works	1891	834550
AA	458m SW	Police Station	1905	914704
AA	458m SW	Police Station	1923	889996
AA	458m SW	Police Station	1938	858028
AA	458m SW	Fire Engine Station	1934	936566
AA	458m SW	Fire Engine Station	1915	956015
8	463m SE	Brick Works	1890	818779
Y	464m NW	Engineering Works	1921	917015
Y	464m NW	Engineering Works	1923	917015
O	476m E	Unspecified Ground Workings	1923	800637
U	480m N	Unspecified Works	1991	898710
10	483m NW	Brick Field	1891	817951
U	484m N	Unspecified Works	1985	898710
U	485m N	Refuse Heap	1891	829165
U	491m N	Unspecified Works	1978	847531
O	492m E	Unspecified Pit	1915	840561
12	499m E	Unspecified Works	1968	935136

This data is sourced from Ordnance Survey / Groundsure.



2.2 Historical tanks

Records within 500m

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Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 41](#) >

ID	Location	Land Use	Date	Group ID
B	1m S	Tanks	1949	144281
B	1m S	Tanks	1956	144281
B	1m S	Tanks	1949	144281
B	2m S	Unspecified Tank	1933	116209
B	9m S	Oil Tanks	1908	147443
B	9m S	Oil Tanks	1922	147443
B	10m S	Tanks	1933	144281
B	28m S	Unspecified Tank	1933	116208
B	45m NE	Unspecified Tank	1922	124394
B	48m NE	Unspecified Tank	1908	124394
B	52m SE	Unspecified Tank	1933	116207
B	60m W	Unspecified Tank	1933	116210
B	63m NW	Unspecified Tank	1949	146208
B	63m NW	Unspecified Tank	1956	146208
B	66m SW	Tanks	1956	107032
B	68m N	Tanks	1933	106987
B	72m N	Tanks	1949	137800
B	72m N	Tanks	1956	148736
B	72m N	Tanks	1949	137800
B	76m N	Tanks	1956	135776
B	76m S	Tanks	1949	140052
B	76m S	Tanks	1956	140052
B	76m S	Tanks	1949	140052



ID	Location	Land Use	Date	Group ID
B	78m S	Unspecified Tank	1949	145954
B	78m S	Unspecified Tank	1956	145954
B	78m S	Unspecified Tank	1949	145954
B	82m N	Tanks	1956	106989
B	86m NW	Unspecified Tank	1956	115886
B	87m NW	Unspecified Tank	1933	116212
B	87m NW	Unspecified Tank	1949	130627
B	87m NW	Unspecified Tank	1956	130627
B	87m NW	Unspecified Tank	1949	130627
B	90m NE	Tanks	1949	134555
B	90m NE	Tanks	1949	134555
B	90m NE	Tanks	1956	134555
B	90m NE	Tanks	1949	140103
B	90m NE	Tanks	1956	140103
B	91m NE	Tanks	1949	140103
B	92m NE	Tanks	1949	106986
B	94m SE	Unspecified Tank	1949	137750
B	94m SE	Unspecified Tank	1956	137750
B	94m SE	Unspecified Tank	1949	137750
B	94m NW	Tanks	1949	106988
B	95m N	Tanks	1933	106993
B	95m SE	Unspecified Tank	1949	124403
B	95m SE	Unspecified Tank	1949	149350
B	95m SE	Unspecified Tank	1956	149350
B	96m N	Tanks	1933	106990
B	97m E	Unspecified Tank	1949	145897
B	97m E	Unspecified Tank	1956	145897
B	97m E	Tanks	1949	143724

ID	Location	Land Use	Date	Group ID
B	98m SE	Unspecified Tank	1933	116203
B	98m SE	Tanks	1956	107035
B	99m NE	Tanks	1933	143424
B	99m N	Tanks	1933	106992
B	99m SE	Tanks	1933	107027
B	100m E	Tanks	1949	134551
B	100m SE	Unspecified Tank	1933	116206
B	100m E	Tanks	1956	142343
B	101m SE	Tanks	1956	107036
B	102m SE	Unspecified Tank	1949	116205
B	102m SE	Tanks	1949	131440
B	102m SE	Tanks	1956	131440
B	104m SE	Tanks	1949	147326
B	104m SE	Tanks	1956	147326
B	104m S	Unspecified Tank	1949	116204
B	104m SE	Tanks	1949	147326
B	104m N	Tanks	1956	106994
B	105m NW	Unspecified Tank	1956	115888
B	105m NW	Tanks	1933	107019
B	105m N	Tanks	1956	136070
B	105m NE	Tanks	1956	145795
B	105m N	Tanks	1949	129933
B	105m NW	Tanks	1949	136076
B	105m NW	Tanks	1956	136076
B	105m N	Tanks	1949	129933
B	106m NW	Tanks	1949	127712
B	106m NW	Tanks	1956	127712
B	106m NE	Tanks	1956	123849

ID	Location	Land Use	Date	Group ID
B	106m N	Tanks	1933	128745
B	107m N	Tanks	1956	141111
B	107m E	Unspecified Tank	1956	116200
B	109m S	Unspecified Tank	1949	139879
B	109m S	Unspecified Tank	1956	139879
B	109m NW	Unspecified Tank	1949	129419
B	109m NW	Unspecified Tank	1956	129419
B	109m NW	Unspecified Tank	1949	129419
B	109m S	Unspecified Tank	1949	139879
B	111m NW	Tanks	1956	107021
B	111m W	Unspecified Tank	1949	126226
B	111m W	Unspecified Tank	1956	126226
B	111m NE	Tanks	1933	122356
B	111m N	Tanks	1956	137053
B	112m SE	Unspecified Tank	1949	145907
B	112m SE	Unspecified Tank	1956	145907
B	113m SE	Unspecified Tank	1949	144706
B	113m NW	Unspecified Tank	1956	116213
B	113m N	Tanks	1933	148293
B	113m E	Unspecified Tank	1949	133058
B	113m E	Unspecified Tank	1956	127041
B	113m N	Tanks	1949	130314
B	113m N	Tanks	1949	130314
B	113m N	Tanks	1956	130314
B	114m E	Unspecified Tank	1949	144528
B	116m S	Tanks	1949	148595
B	116m S	Tanks	1956	148595
B	116m S	Tanks	1949	148595

ID	Location	Land Use	Date	Group ID
B	117m E	Unspecified Tank	1956	116199
B	118m NE	Unspecified Tank	1956	116218
B	118m E	Tanks	1949	136973
B	118m E	Tanks	1956	136973
B	118m E	Tanks	1949	136973
B	119m W	Unspecified Tank	1949	130128
B	119m W	Unspecified Tank	1956	131935
B	119m W	Unspecified Tank	1949	146493
B	120m E	Tanks	1933	106984
B	120m SE	Unspecified Tank	1956	116201
B	121m SE	Unspecified Tank	1949	128521
B	121m NW	Unspecified Tank	1949	143950
B	121m NW	Unspecified Tank	1956	143950
B	122m SE	Unspecified Tank	1949	128521
B	123m N	Tanks	1956	106996
B	123m NW	Tanks	1949	106998
B	123m NW	Tanks	1956	106997
B	124m E	Tanks	1949	132932
B	124m E	Tanks	1956	132932
B	124m NW	Unspecified Tank	1949	148424
B	124m NW	Unspecified Tank	1956	126992
B	124m SE	Unspecified Tank	1949	133623
B	124m SE	Unspecified Tank	1956	133623
B	124m E	Tanks	1949	143331
B	124m NW	Tanks	1949	107020
B	125m SE	Unspecified Tank	1956	116202
B	125m NW	Tanks	1933	106991
B	125m SE	Unspecified Tank	1949	133623

ID	Location	Land Use	Date	Group ID
B	125m NW	Tanks	1949	107018
B	125m NW	Unspecified Tank	1956	115889
B	127m SE	Tanks	1933	107025
B	128m SE	Tanks	1933	107040
B	128m S	Unspecified Tank	1949	138019
B	128m S	Unspecified Tank	1956	138019
B	128m NW	Unspecified Tank	1956	116222
B	128m S	Unspecified Tank	1949	138019
B	129m SE	Tanks	1949	107043
B	130m NW	Tanks	1949	126284
B	130m NW	Tanks	1956	126284
B	130m NW	Unspecified Tank	1908	116211
B	130m NW	Tanks	1949	126284
B	130m SE	Tanks	1949	123351
B	130m SE	Tanks	1956	123351
B	131m E	Unspecified Tank	1956	116198
B	131m NW	Tanks	1949	106999
B	132m SE	Tanks	1949	128453
B	132m SE	Tanks	1949	122910
B	132m SE	Tanks	1956	122910
B	133m NE	Tanks	1956	106995
B	134m NW	Tanks	1949	107000
B	136m W	Tanks	1949	107028
B	139m NW	Tanks	1949	140666
B	139m NW	Tanks	1956	140666
B	139m NW	Tanks	1949	140666
B	141m N	Unspecified Tank	1949	148566
B	141m N	Unspecified Tank	1956	148566



ID	Location	Land Use	Date	Group ID
B	142m NW	Tanks	1987	138407
B	142m NW	Tanks	1991	138407
B	142m NW	Unspecified Tank	1949	125464
B	142m NW	Tanks	1994	138407
B	142m NW	Unspecified Tank	1949	149190
B	143m W	Unspecified Tank	1956	115885
B	143m W	Tanks	1949	107029
B	145m E	Unspecified Tank	1933	116196
B	147m SE	Unspecified Tank	1949	126295
B	148m SE	Unspecified Tank	1949	126295
B	150m NW	Tanks	1933	126460
B	151m NW	Tanks	1922	141942
B	152m NW	Unspecified Tank	1922	148480
B	153m NW	Unspecified Tank	1933	148480
B	154m NW	Tanks	1987	132827
B	154m NW	Tanks	1991	132827
B	154m NW	Tanks	1994	142641
B	155m E	Tanks	1949	132100
B	155m NW	Unspecified Tank	1922	115890
B	156m W	Tanks	1908	127800
B	156m W	Unspecified Tank	1994	115884
B	156m NE	Tanks	1949	135168
B	156m NE	Tanks	1949	135168
B	157m NE	Tanks	1956	106905
B	158m NW	Tanks	1933	145111
B	158m NW	Tanks	1956	140497
B	158m NW	Unspecified Tank	1956	115887
B	159m E	Tanks	1933	106985

ID	Location	Land Use	Date	Group ID
B	160m E	Tanks	1949	126643
B	160m E	Tanks	1956	126643
B	160m W	Tanks	1922	127800
B	162m NW	Tanks	1980	134369
B	162m NW	Tanks	1970	134369
B	162m NW	Tanks	1956	134369
B	164m NW	Tanks	1987	128908
B	164m NW	Tanks	1991	128908
B	165m NW	Tanks	1994	130302
B	167m N	Unspecified Tank	1932	116224
B	169m NW	Tanks	1980	128189
B	170m NW	Tanks	1970	134955
B	170m NW	Tanks	1949	134955
B	170m NW	Tanks	1956	134955
B	170m E	Unspecified Tank	1956	116197
B	172m NW	Tanks	1970	145885
B	172m NW	Tanks	1949	145885
B	172m NW	Tanks	1956	145885
B	174m N	Unspecified Tank	1956	116225
B	175m NW	Tanks	1949	139310
B	175m NW	Tanks	1970	126070
B	175m NW	Tanks	1956	126070
B	177m NW	Tanks	1980	132520
B	178m NW	Tanks	1970	125368
B	178m NW	Tanks	1949	129500
B	178m NW	Tanks	1956	129500
B	178m NW	Tanks	1949	146047
B	178m NW	Tanks	1956	146047

ID	Location	Land Use	Date	Group ID
B	178m NW	Tanks	1949	132520
B	179m NW	Tanks	1970	149120
B	180m NW	Unspecified Tank	1922	140860
B	182m NW	Tanks	1970	134022
B	182m NW	Tanks	1949	125997
B	182m NW	Tanks	1956	125997
B	182m NW	Unspecified Tank	1933	140860
B	185m NW	Tanks	1970	147267
B	185m NW	Tanks	1956	147267
B	186m NW	Unspecified Tank	1893	115892
2	187m E	Tanks	1922	107026
B	188m W	Unspecified Tank	1953	131278
B	188m W	Unspecified Tank	1949	131278
B	189m W	Unspecified Tank	1949	131278
B	190m W	Tanks	1893	107015
B	190m NW	Unspecified Tank	1956	115891
B	191m NW	Tanks	1970	134893
B	191m W	Tanks	1953	125647
B	191m W	Tanks	1949	125647
B	191m W	Tanks	1949	125647
B	192m NW	Tanks	1949	107017
B	192m NE	Tanks	1932	130638
B	193m W	Unspecified Tank	1893	115894
B	193m NE	Tanks	1956	106904
B	193m NW	Tanks	1956	106902
B	195m NE	Unspecified Tank	1949	124412
B	195m NE	Unspecified Tank	1949	124412
B	196m NW	Tanks	1956	107004



ID	Location	Land Use	Date	Group ID
B	196m NE	Unspecified Tank	1949	143387
B	196m NE	Unspecified Tank	1956	143387
B	197m NW	Unspecified Tank	1949	129303
B	197m NW	Unspecified Tank	1949	129303
B	197m NE	Unspecified Tank	1908	127575
B	197m NE	Unspecified Tank	1922	127575
B	198m NE	Tanks	1949	140552
B	198m NE	Tanks	1949	147755
B	198m NE	Tanks	1956	147755
B	198m NE	Unspecified Tank	1949	142031
B	198m NE	Tanks	1949	147755
B	198m N	Unspecified Tank	1956	116223
B	199m NW	Tanks	1980	134738
B	199m NW	Tanks	1970	134738
B	200m NW	Tanks	1953	107006
B	200m NW	Unspecified Tank	1949	115895
B	200m W	Unspecified Tank	1953	123188
B	200m W	Unspecified Tank	1949	123188
B	202m NW	Tanks	1953	107016
B	202m NW	Tanks	1956	135686
E	202m NE	Unspecified Tank	1970	122422
E	202m NE	Unspecified Tank	1949	132584
E	202m NE	Unspecified Tank	1956	148814
E	203m NE	Unspecified Tank	1949	140290
B	203m NE	Unspecified Tank	1922	116235
B	204m NW	Unspecified Tank	1956	116156
B	204m NW	Tanks	1956	106903
B	204m NE	Unspecified Tank	1949	123851

ID	Location	Land Use	Date	Group ID
B	204m NE	Unspecified Tank	1956	123851
B	205m NW	Tanks	1956	107001
B	205m NW	Tanks	1949	139548
B	206m NW	Unspecified Tank	1949	129535
B	206m NW	Unspecified Tank	1956	129535
B	206m NW	Tanks	1949	139548
B	206m NW	Unspecified Tank	1949	115893
B	208m NW	Unspecified Tank	1956	116158
B	209m NE	Tanks	1908	106906
B	210m NE	Tanks	1956	106907
B	212m NW	Unspecified Tank	1949	133157
B	212m NW	Unspecified Tank	1956	133157
B	212m NW	Tanks	1949	106909
B	213m N	Unspecified Tank	1932	116227
B	213m N	Tanks	1956	106908
B	213m NW	Gasometer	1908	135678
B	213m NW	Gasometer	1922	135678
B	213m NW	Gasometer	1932	135678
B	215m N	Tanks	1949	128110
B	215m N	Tanks	1949	128110
B	215m N	Tanks	1956	128110
B	217m N	Tanks	1956	106910
B	218m NW	Unspecified Tank	1956	116155
B	218m NW	Tanks	1949	127871
B	218m N	Tanks	1949	127388
B	218m NW	Tanks	1949	127871
B	218m N	Tanks	1949	127388
B	218m N	Tanks	1956	127388

ID	Location	Land Use	Date	Group ID
B	220m NW	Unspecified Tank	1949	138481
B	220m NW	Unspecified Tank	1956	138481
B	220m NW	Unspecified Tank	1956	116157
B	221m NW	Unspecified Tank	1949	138481
B	225m W	Unspecified Tank	1996	145491
B	225m W	Unspecified Tank	1996	145491
B	228m W	Tanks	1953	122866
B	228m N	Tanks	1908	106911
B	228m W	Unspecified Tank	1953	126605
B	232m N	Unspecified Tank	1932	116226
B	233m N	Unspecified Tank	1908	116228
B	235m NW	Unspecified Tank	1949	125137
B	236m NW	Unspecified Tank	1949	125137
B	236m NW	Unspecified Tank	1956	125137
B	238m N	Unspecified Tank	1908	144291
B	238m N	Unspecified Tank	1922	144291
B	238m N	Unspecified Tank	1908	147975
B	238m N	Unspecified Tank	1922	147975
B	240m N	Unspecified Tank	1908	130097
B	240m N	Unspecified Tank	1922	130097
B	240m W	Tanks	1949	129387
B	240m W	Tanks	1949	129387
B	240m N	Unspecified Tank	1908	129690
B	240m N	Unspecified Tank	1922	129690
B	240m NW	Tanks	1956	106917
L	241m E	Tanks	1949	137054
L	241m E	Tanks	1970	137054
L	241m E	Tanks	1949	137054

ID	Location	Land Use	Date	Group ID
L	241m E	Tanks	1956	137054
B	242m N	Unspecified Tank	1922	116231
B	243m N	Tanks	1908	149311
B	243m N	Tanks	1922	149311
B	244m W	Unspecified Tank	1893	126323
B	244m W	Unspecified Tank	1908	126323
B	244m NW	Tanks	1956	143578
B	244m NW	Tanks	1949	147383
B	244m NW	Tanks	1949	144568
B	245m W	Tanks	1953	107034
B	252m W	Unspecified Tank	1893	142254
B	252m W	Unspecified Tank	1908	142254
B	253m W	Unspecified Tank	1922	142254
B	253m W	Unspecified Tank	1933	142254
B	254m NW	Tanks	1949	122935
B	254m NW	Tanks	1956	122935
B	254m N	Tanks	1949	147429
B	254m N	Tanks	1949	130026
B	254m NW	Tanks	1949	122935
B	254m N	Tanks	1932	137765
B	256m N	Tanks	1949	145441
B	256m N	Tanks	1956	145441
B	256m NW	Unspecified Tank	1956	116154
B	259m NW	Tanks	1953	146447
B	259m NW	Tanks	1949	146447
B	259m NW	Tanks	1933	107005
B	259m NW	Tanks	1949	123155
B	259m NW	Tanks	1949	129322

ID	Location	Land Use	Date	Group ID
B	260m N	Unspecified Tank	1956	116233
B	260m N	Unspecified Tank	1970	131573
B	260m N	Unspecified Tank	1956	131573
B	261m N	Unspecified Tank	1980	131573
B	262m N	Unspecified Tank	1956	116234
B	263m N	Tanks	1949	129402
B	263m N	Tanks	1949	129402
B	263m W	Unspecified Tank	1949	133578
B	264m W	Unspecified Tank	1949	136267
B	265m N	Tanks	1970	129402
B	265m N	Tanks	1956	129402
B	265m W	Unspecified Tank	1953	143284
B	265m W	Unspecified Tank	1949	143284
B	265m W	Unspecified Tank	1949	143284
B	265m W	Unspecified Tank	1933	115897
B	266m NE	Unspecified Tank	1932	128827
B	266m W	Tanks	1893	107007
B	266m W	Tanks	1893	107030
B	268m NE	Unspecified Tank	1949	128827
B	268m NE	Tanks	1949	125749
B	268m NE	Tanks	1956	125749
B	270m NW	Unspecified Tank	1893	131619
B	270m W	Unspecified Tank	1922	115902
B	270m NW	Unspecified Tank	1893	115896
B	270m N	Unspecified Tank	1922	130905
B	270m N	Unspecified Tank	1932	130905
B	271m NW	Unspecified Tank	1908	137919
F	271m S	Unspecified Tank	1956	131292

ID	Location	Land Use	Date	Group ID
F	271m S	Unspecified Tank	1963	131292
F	272m S	Unspecified Tank	1963	136547
B	272m W	Tanks	1922	125089
F	272m S	Unspecified Tank	1956	136547
I	272m SW	Unspecified Tank	1981	139230
B	273m W	Tanks	1922	140329
B	273m W	Tanks	1933	140329
I	273m SW	Unspecified Tank	1995	139230
I	273m SW	Unspecified Tank	1994	139230
I	273m SW	Unspecified Tank	1993	139230
B	273m W	Tanks	1893	107008
B	273m NW	Unspecified Tank	1908	135606
B	273m NW	Unspecified Tank	1922	135606
B	273m NW	Unspecified Tank	1932	135606
I	273m SW	Unspecified Tank	1989	142951
I	273m SW	Unspecified Tank	1990	142951
B	273m W	Tanks	1893	107014
B	273m W	Tanks	1893	107031
B	274m W	Tanks	1908	107013
F	274m S	Unspecified Tank	1948	138850
F	274m S	Unspecified Tank	1956	138850
F	274m S	Unspecified Tank	1963	138850
B	274m W	Tanks	1893	140329
B	274m W	Tanks	1908	140329
B	275m NW	Unspecified Tank	1893	144915
B	276m W	Tanks	1953	142664
B	276m NW	Unspecified Tank	1933	126116
L	276m E	Tanks	1970	136758

ID	Location	Land Use	Date	Group ID
L	276m E	Tanks	1949	136758
L	276m E	Tanks	1956	136758
F	276m S	Tanks	1933	107042
L	277m E	Tanks	1949	136758
B	277m W	Tanks	1893	107012
B	279m W	Tanks	1980	142664
B	280m W	Unspecified Tank	1922	115901
B	280m N	Tanks	1893	106915
B	281m N	Tanks	1956	106912
B	282m W	Tanks	1933	107009
B	284m N	Tanks	1893	106913
B	285m N	Tanks	1970	146379
B	285m N	Tanks	1956	146379
B	286m W	Tanks	1933	142307
B	286m N	Tanks	1980	146379
B	288m W	Tanks	1980	107010
B	289m NW	Tanks	1970	145616
B	289m NW	Tanks	1980	145616
B	292m W	Unspecified Tank	1893	115904
B	294m N	Tanks	1908	106914
B	297m W	Tanks	1980	149111
B	297m W	Tanks	1922	107033
H	298m SE	Unspecified Tank	1963	127421
H	298m SE	Unspecified Tank	1948	130676
H	298m SE	Unspecified Tank	1956	130676
B	299m N	Tanks	1908	106916
B	299m W	Tanks	1953	129972
B	299m W	Tanks	1953	126100

ID	Location	Land Use	Date	Group ID
B	299m W	Tanks	1949	133204
B	299m W	Tanks	1949	148054
B	300m W	Tanks	1949	133204
B	300m W	Tanks	1949	146265
H	300m SE	Tanks	1989	144612
H	300m SE	Tanks	1990	144612
B	301m W	Tanks	1933	148054
B	301m NW	Unspecified Tank	1932	116147
B	301m W	Unspecified Tank	1893	115905
I	301m S	Unspecified Tank	1948	127293
I	301m S	Unspecified Tank	1956	127293
I	301m S	Unspecified Tank	1963	127293
H	301m SE	Tanks	1981	133884
H	302m SE	Tanks	1993	144612
H	302m SE	Tanks	1995	138488
H	302m SE	Tanks	1994	138488
B	303m W	Tanks	1980	107003
H	304m SE	Tanks	1995	123845
H	304m SE	Tanks	1994	123845
B	304m N	Unspecified Tank	1932	116232
L	307m E	Unspecified Tank	1956	116217
H	307m SE	Unspecified Tank	1948	146314
H	307m SE	Unspecified Tank	1956	144172
H	307m SE	Unspecified Tank	1963	144172
B	310m W	Unspecified Tank	1953	128959
B	310m W	Unspecified Tank	1949	135741
B	310m W	Tanks	1949	107002
B	310m W	Unspecified Tank	1922	140591

ID	Location	Land Use	Date	Group ID
L	311m E	Unspecified Tank	1956	116215
B	314m NW	Unspecified Tank	1980	116146
P	314m E	Unspecified Tank	1970	135938
P	314m E	Unspecified Tank	1949	135938
P	314m E	Unspecified Tank	1956	135938
B	315m W	Tanks	1933	146085
B	316m W	Unspecified Tank	1953	143527
B	316m W	Unspecified Tank	1949	143527
B	316m W	Tanks	1949	124694
L	320m E	Unspecified Tank	1956	116216
B	320m NW	Unspecified Tank	1893	131377
B	321m NW	Tanks	1953	144164
B	321m NW	Tanks	1949	144164
B	321m NW	Tanks	1994	122430
B	322m NW	Unspecified Tank	1908	141627
B	322m NW	Unspecified Tank	1922	141627
B	322m NW	Unspecified Tank	1932	141627
B	322m NW	Tanks	1980	126525
B	322m NW	Unspecified Tank	1908	116153
F	322m S	Tanks	1948	135457
F	322m S	Tanks	1956	135457
F	322m S	Tanks	1963	135457
B	323m NW	Tanks	1991	123174
B	323m NW	Tanks	1996	130435
B	323m NW	Tanks	1996	130435
B	323m NW	Tanks	1995	130435
F	324m S	Unspecified Tank	1893	116163
B	325m NW	Tanks	1953	127812



ID	Location	Land Use	Date	Group ID
B	325m NW	Tanks	1949	127812
B	325m W	Unspecified Tank	1922	115903
B	326m NW	Tanks	1949	140484
M	328m N	Unspecified Tank	1949	132250
M	328m N	Unspecified Tank	1956	132250
B	328m NW	Tanks	1893	106899
B	328m W	Unspecified Tank	1893	115876
M	330m N	Tanks	1949	147569
M	330m N	Tanks	1956	147569
M	331m N	Tanks	1932	147569
M	331m N	Tanks	1949	147569
B	333m NW	Unspecified Tank	1893	143824
F	333m S	Unspecified Tank	1933	116160
B	334m NW	Unspecified Tank	1980	146400
B	334m NW	Unspecified Tank	1953	146400
B	334m NW	Unspecified Tank	1949	146400
B	334m NW	Unspecified Tank	1949	146400
B	335m NW	Unspecified Tank	1922	143824
B	335m NW	Tanks	1932	106900
M	335m N	Tanks	1949	141083
M	336m N	Tanks	1949	141083
B	336m NW	Unspecified Tank	1922	116142
B	339m NW	Tanks	1980	126490
B	339m NW	Tanks	1953	126490
B	339m NW	Tanks	1949	126490
B	340m NW	Unspecified Tank	1996	148606
B	340m NW	Unspecified Tank	1996	148606
B	340m NW	Unspecified Tank	1995	148606

ID	Location	Land Use	Date	Group ID
B	340m NW	Unspecified Tank	1994	148606
B	340m NW	Tanks	1949	144875
Q	340m S	Tanks	1963	128579
Q	340m S	Tanks	1956	128579
B	340m NW	Unspecified Tank	1991	125828
R	340m N	Unspecified Tank	1970	136270
R	340m N	Unspecified Tank	1956	136270
B	341m NW	Tanks	1991	128183
B	341m NW	Tanks	1893	106901
Q	342m S	Tanks	1908	140425
Q	343m S	Tanks	1922	139855
Q	343m S	Tanks	1933	139855
R	345m N	Unspecified Tank	1980	126030
B	346m NW	Unspecified Tank	1949	144142
B	346m NW	Tanks	1996	141538
B	346m NW	Tanks	1996	141538
B	346m NW	Tanks	1995	141538
B	346m NW	Tanks	1994	141538
B	347m NW	Tanks	1991	141538
Q	347m S	Tanks	1981	107038
R	348m N	Unspecified Tank	1987	123928
R	348m N	Unspecified Tank	1991	123928
B	349m NW	Tanks	1980	135435
B	349m NW	Tanks	1996	135435
B	349m NW	Tanks	1996	135435
B	349m NW	Tanks	1995	135435
B	349m NW	Tanks	1994	135435
B	350m NW	Tanks	1893	106918

ID	Location	Land Use	Date	Group ID
B	350m NW	Tanks	1991	135435
B	350m W	Unspecified Tank	1893	115899
B	350m N	Unspecified Tank	1932	116230
B	354m NW	Unspecified Tank	1893	116145
B	356m NW	Unspecified Tank	1932	116143
Q	357m S	Unspecified Tank	1948	116159
P	357m E	Tanks	1972	107024
O	357m NE	Tanks	1996	148941
O	357m NE	Tanks	1995	148941
F	362m S	Tanks	1933	107041
T	363m E	Unspecified Tank	1950	143296
T	363m E	Unspecified Tank	1950	122548
P	368m E	Tanks	1950	125808
P	368m E	Tanks	1972	139471
P	368m E	Unspecified Tank	1950	116186
B	369m W	Unspecified Tank	1893	125313
B	369m W	Unspecified Tank	1908	125313
B	369m W	Unspecified Tank	1922	125313
Q	369m S	Tanks	1922	107039
P	372m E	Unspecified Tank	1950	116187
P	372m E	Tanks	1972	127950
P	372m E	Tanks	1950	127950
O	377m E	Tanks	1983	135740
O	377m E	Unspecified Tank	1972	132892
O	377m E	Unspecified Tank	1983	132892
O	377m E	Tanks	1996	147358
O	377m E	Tanks	1995	147358
O	377m E	Unspecified Tank	1979	128235

ID	Location	Land Use	Date	Group ID
B	378m NW	Unspecified Tank	1893	116144
B	380m W	Tanks	1893	107011
W	381m W	Unspecified Tank	1922	115877
P	383m E	Unspecified Tank	1950	127158
P	383m E	Unspecified Tank	1950	127158
P	387m E	Tanks	1972	107023
W	391m W	Tanks	1893	107037
B	394m W	Unspecified Tank	1893	115898
U	399m N	Tanks	1893	145942
B	404m NW	Unspecified Tank	1908	116131
U	406m N	Tanks	1908	106941
P	407m E	Unspecified Tank	1933	116188
B	413m NW	Unspecified Tank	1908	116132
U	415m N	Tanks	1908	141266
V	418m NW	Unspecified Tank	1908	116151
O	429m E	Tanks	1950	123616
O	429m E	Tanks	1950	123616
V	429m NW	Unspecified Tank	1908	116150
O	429m E	Unspecified Tank	1972	116219
O	432m E	Unspecified Tank	1979	116220
O	434m E	Unspecified Tank	1983	141866
O	434m E	Unspecified Tank	1983	141866
O	435m E	Tanks	1972	133020
O	435m E	Unspecified Tank	1983	116221
P	435m E	Unspecified Tank	1972	116195
O	435m E	Tanks	1979	133020
O	435m E	Tanks	1983	133020
U	438m N	Tanks	1893	106942

ID	Location	Land Use	Date	Group ID
U	442m N	Unspecified Tank	1908	116152
V	449m NW	Unspecified Tank	1908	116149
J	454m SE	Unspecified Tank	1933	116162
U	468m N	Tanks	1949	106938
U	470m N	Unspecified Tank	1922	116229
U	471m N	Tanks	1949	143710
V	471m NW	Tanks	1953	133368
V	471m NW	Tanks	1949	133368
AB	471m E	Gas Works	1950	125589
U	471m N	Tanks	1949	143710
G	471m SE	Tanks	1968	128813
U	472m N	Unspecified Tank	1949	116105
G	472m SE	Tanks	1979	128813
V	485m NW	Tanks	1932	126372
V	486m NW	Tanks	1949	126372
V	486m NW	Tanks	1949	126372
V	489m NW	Unspecified Tank	1953	116148
V	493m NW	Tanks	1932	123263
V	496m NW	Tanks	1949	144825
V	496m NW	Tanks	1953	144825
V	496m NW	Tanks	1949	144825

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

104

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 41](#) >



ID	Location	Land Use	Date	Group ID
B	58m E	Electricity Substation	1949	65590
B	58m E	Electricity Substation	1956	65590
B	59m E	Electricity Substation	1949	69688
B	64m NW	Electricity Substation	1949	62207
B	91m W	Electricity Substation	1949	68410
B	91m W	Electricity Substation	1956	68410
B	109m N	Electricity Substation	1949	73971
B	109m S	Electricity Substation	1949	74084
B	109m S	Electricity Substation	1980	79405
B	110m S	Electricity Substation	1970	79405
B	110m S	Electricity Substation	1949	79405
B	110m S	Electricity Substation	1956	79405
B	111m N	Electricity Substation	1949	67292
B	111m N	Electricity Substation	1956	67292
B	138m NE	Electricity Substation	1949	67188
B	138m NE	Electricity Substation	1956	67188
B	138m NE	Electricity Substation	1949	67188
B	144m NE	Electricity Substation	1970	70493
B	145m NE	Electricity Substation	1994	70493
B	146m NE	Electricity Substation	1980	70493
B	146m NE	Electricity Substation	1987	70493
B	146m NE	Electricity Substation	1991	70493
E	199m NE	Electricity Substation	1970	84080
E	199m NE	Electricity Substation	1949	84080
E	199m NE	Electricity Substation	1956	84080
E	199m NE	Electricity Substation	1949	84080
B	200m N	Electricity Substation	1980	71318
B	200m N	Electricity Substation	1987	71318

ID	Location	Land Use	Date	Group ID
B	200m N	Electricity Substation	1991	71318
B	200m N	Electricity Substation	1994	69928
B	201m N	Electricity Substation	1970	71318
B	201m N	Electricity Substation	1949	71318
B	201m N	Electricity Substation	1956	71318
B	201m N	Electricity Substation	1949	71318
B	213m NW	Gasometer	1908	73248
B	213m NW	Gasometer	1922	73248
B	213m NW	Gasometer	1932	73248
F	271m S	Electricity Substation	1981	85382
F	271m S	Electricity Substation	1956	72280
F	271m S	Electricity Substation	1963	85382
I	282m S	Electricity Substation	1963	77316
I	282m SW	Electricity Substation	1948	77316
I	282m SW	Electricity Substation	1981	77316
I	282m SW	Electricity Substation	1956	77316
I	283m S	Electricity Substation	1995	83779
I	283m S	Electricity Substation	1994	83779
I	283m S	Electricity Substation	1993	83779
I	283m SW	Electricity Substation	1989	77316
I	283m SW	Electricity Substation	1990	77316
I	296m SW	Electricity Substation	1989	76396
I	296m SW	Electricity Substation	1990	76396
I	296m SW	Electricity Substation	1981	76396
I	296m SW	Electricity Substation	1995	76396
I	296m SW	Electricity Substation	1994	76396
I	296m SW	Electricity Substation	1993	76396
P	297m E	Electricity Substation	1970	70055

ID	Location	Land Use	Date	Group ID
P	297m E	Electricity Substation	1956	70055
B	308m W	Electricity Substation	1980	66361
B	308m W	Electricity Substation	1953	71571
B	308m W	Electricity Substation	1949	71828
B	309m W	Electricity Substation	1949	71828
B	312m W	Electricity Substation	1996	75956
B	312m W	Electricity Substation	1996	69701
B	312m W	Electricity Substation	1995	74124
B	312m W	Electricity Substation	1994	68888
B	313m W	Electricity Substation	1991	74138
F	339m S	Electricity Substation	1995	62209
S	348m NE	Electricity Substation	1970	75041
S	348m NE	Electricity Substation	1956	75041
S	349m NE	Electricity Substation	1980	75041
S	349m NE	Electricity Substation	1987	75041
S	349m NE	Electricity Substation	1991	75041
S	349m NE	Electricity Substation	1994	75041
C	352m SE	Electricity Substation	1995	82276
C	352m SE	Electricity Substation	1994	82276
C	352m SE	Electricity Substation	1993	82276
C	352m SE	Electricity Substation	1981	82276
C	352m SE	Electricity Substation	1989	82276
C	352m SE	Electricity Substation	1990	82276
P	362m E	Electricity Substation	1972	62206
Q	369m S	Electricity Substation	1981	75669
Q	369m S	Electricity Substation	1989	85338
Q	369m S	Electricity Substation	1990	85338
R	380m N	Electricity Substation	1987	79871

ID	Location	Land Use	Date	Group ID
R	380m N	Electricity Substation	1991	74141
R	380m N	Electricity Substation	1949	74141
R	380m N	Electricity Substation	1949	68710
R	381m N	Electricity Substation	1994	74141
Q	381m S	Electricity Substation	1995	77244
Q	381m S	Electricity Substation	1994	77244
Q	381m S	Electricity Substation	1993	77244
R	382m N	Electricity Substation	1986	79871
R	382m N	Electricity Substation	1997	67404
R	392m N	Electricity Substation	1949	81157
X	432m S	Electricity Substation	1995	62208
Z	433m S	Electricity Substation	1981	70588
Z	433m S	Electricity Substation	1995	70588
Z	433m S	Electricity Substation	1994	70588
Z	433m S	Electricity Substation	1993	70588
Z	433m S	Electricity Substation	1989	70588
Z	433m S	Electricity Substation	1990	70588
AB	471m E	Gas Works	1950	76941
V	472m NW	Electricity Substation	1985	75460
V	472m NW	Electricity Substation	1989	69601

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



2.5 Historical garages

Records within 500m

8

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

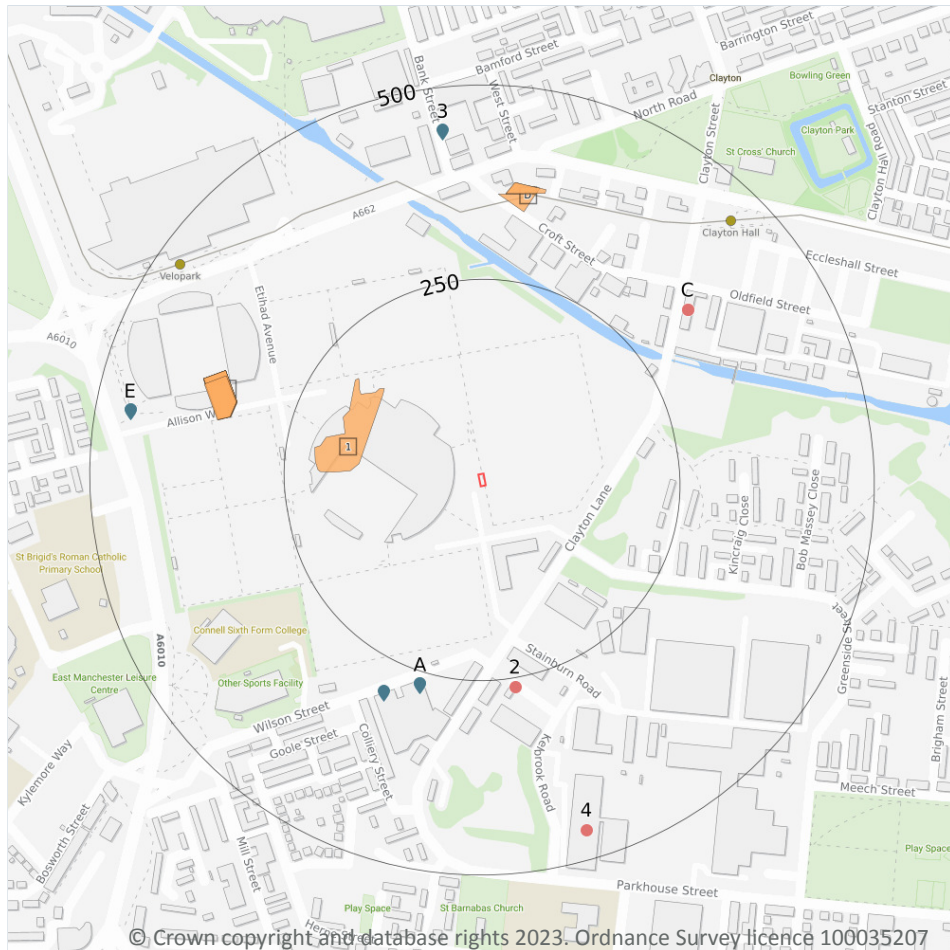
Features are displayed on the Past land use - un-grouped map on [page 41](#) >

ID	Location	Land Use	Date	Group ID
F	228m S	Garage	1948	20331
5	369m N	Garage	1978	20327
9	471m N	Garage	1972	20329
U	478m N	Garage	1972	24761
U	478m N	Garage	1986	24761
U	478m N	Garage	1997	22667
U	478m N	Garage	1978	21189
11	498m N	Garage	1972	20328

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical waste sites
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m**0**

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m**0**

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m**10**

Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on [page 79 >](#)

ID	Location	Address	Further Details	Date
1	149m W	Site Address: N/A	Type of Site: Refuse Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1956
B	323m W	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979
B	324m W	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1996

ID	Location	Address	Further Details	Date
B	324m W	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1996
B	324m W	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1995
B	324m W	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1994
B	324m W	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1991
D	340m N	Site Address: N/A	Type of Site: Waste Paper Works Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1970
D	360m N	Site Address: N/A	Type of Site: Waste Paper Works Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1971
D	361m N	Site Address: N/A	Type of Site: Waste Paper Works Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1978

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.



3.6 Licensed waste sites

Records within 500m

6

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on [page 79](#) >

ID	Location	Details		
A	267m S	Site Name: A S Waste Removals Ltd Site Address: Unit 1, 108, Wilson Street, Openshaw, Manchester, M11 2AZ Correspondence Address: -	Type of Site: Vehicle Depollution Facility 5000 tps Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ASW003 EPR reference: EA/EPR/GP3495VF/V002 Operator: A S Waste Removals Ltd Waste Management licence No: 101518 Annual Tonnage: 4999	Issue Date: 17/06/2010 Effective Date: - Modified: 25/05/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
A	267m S	Site Name: A S Waste Removals Ltd Site Address: Unit 1, 108, Wilson Street, Openshaw, Manchester, Lancs, M11 2AZ Correspondence Address: -	Type of Site: 75kte Vehicle Depollution Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ASW003 EPR reference: GP3495VF/A001 Operator: A S Waste Removals Ltd Waste Management licence No: 101518 Annual Tonnage: 0	Issue Date: 17/06/2010 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
A	294m SW	Site Name: Van Parts Ltd Site Address: Unit 4, Wilson Street, Openshaw, Manchester, M11 2AZ Correspondence Address: -	Type of Site: ELV Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VAN005 EPR reference: EA/EPR/EP3194CX/A001 Operator: Vanparts Limited Waste Management licence No: 50399 Annual Tonnage: 1040	Issue Date: 16/01/2006 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
3	442m N	Site Name: Recon Packaging Ltd Site Address: Bank Street, Clayton, Manchester, M11 4BT Correspondence Address: -	Type of Site: Material Recycling Treatment Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RPL004 EPR reference: EA/EPR/GP3192CM/V002 Operator: Recon Packaging Ltd Waste Management licence No: 53467 Annual Tonnage: 417	Issue Date: 04/12/1998 Effective Date: - Modified: 24/08/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
E	455m W	Site Name: F W Singleton Ltd Site Address: Land/premises At, Score Street, Clayton, Manchester, M11 2SN Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FWS001 EPR reference: EA/EPR/JP3092CU/S002 Operator: F W Singleton Ltd Waste Management licence No: 53626 Annual Tonnage: 383333	Issue Date: 08/12/1995 Effective Date: - Modified: - Surrendered Date: 23/05/2013 Expiry Date: - Cancelled Date: - Status: Surrendered
E	455m W	Site Name: F W Singleton Ltd Site Address: Land/premises At, Score Street, Clayton, Manchester, M11 2SN Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FWS001 EPR reference: EA/EPR/JP3092CU/S002 Operator: F W Singleton Ltd Waste Management licence No: 53626 Annual Tonnage: 383333.272	Issue Date: 08/12/1995 Effective Date: - Modified: - Surrendered Date: May 23 2013 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m

4

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

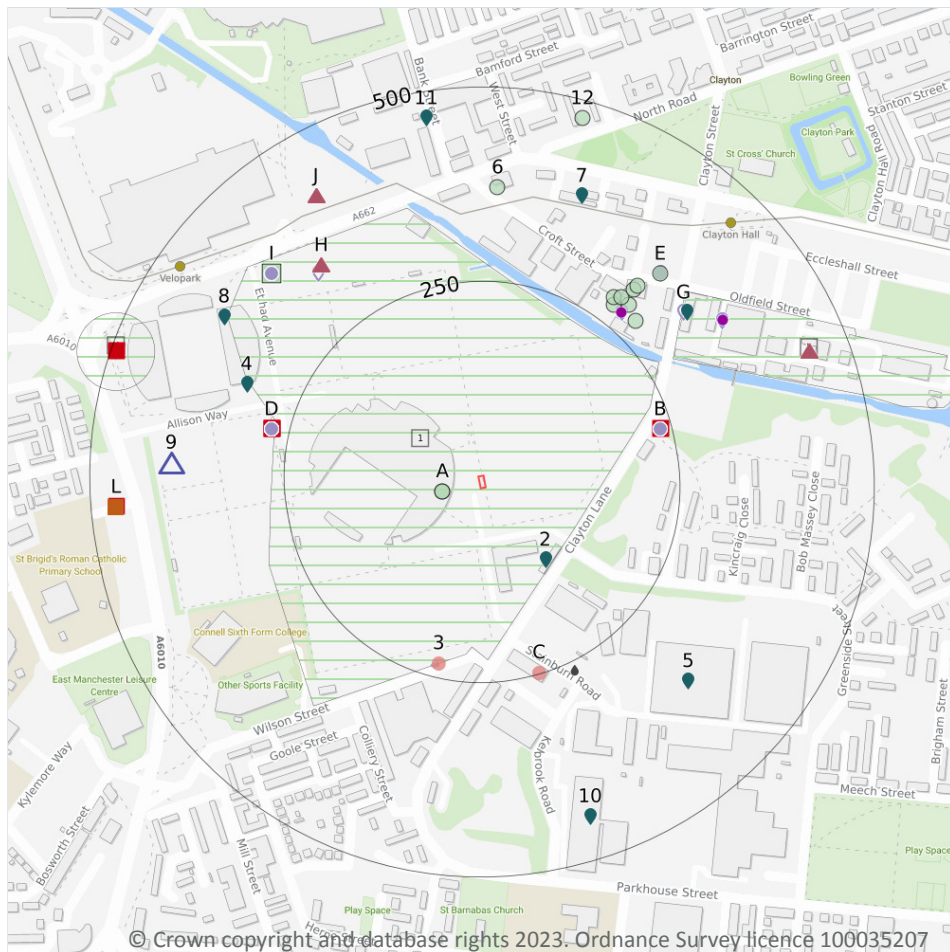
Features are displayed on the Waste and landfill map on [page 79](#) >



ID	Location	Site	Reference	Category	Sub-Category	Description
2	263m S	-	WEX216020	Treating waste exemption	Not on a farm	Anaerobic digestion at premises not used for agriculture and burning of resultant biogas
C	336m NE	Evonik Chemicals Limited, Clayton Lane, Clayton, M11 4SR	WEX234634	Treating waste exemption	Not on a farm	Crushing waste fluorescent tubes
C	336m NE	Evonik Chemicals Limited, Clayton Lane, Clayton, M11 4SR	WEX088752	Treating waste exemption	Not on a farm	Crushing waste fluorescent tubes
4	463m S	3, KELBROOK ROAD, MANCHESTER, M11 2DD	WEX067284	Storing waste exemption	Not on a farm	Storage of waste in a secure place

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- △ Current or recent petrol stations
- Control of Major Accident Hazards
- ▲ Hazardous substance storage/usage
- Historical licensed industrial activities
- Part A(1) industrial activities
- Licensed pollutant release (Part A(2)/B)
- Radioactive Substance Authorisations
- Licensed Discharges to controlled waters
- Pollutant release to public sewer
- List 1 Dangerous Substances
- List 2 Dangerous Substances
- Pollution Incidents (EA/NRW)
- Pollution inventory substances
- Pollution inventory waste transfers

4.1 Recent industrial land uses

Records within 250m

2

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 85](#) >

ID	Location	Company	Address	Activity	Category
3	232m S	Electricity Sub Station	Greater Manchester, M11	Electrical Features	Infrastructure and Facilities
C	248m S	Dale Lifting & Handling Specialists	Parkhouse Street Industrial Estate 2, Kelbrook Road, Manchester, Greater Manchester, M11 2QA	Lifting and Handling Equipment	Industrial Products

This data is sourced from Ordnance Survey.



4.2 Current or recent petrol stations

Records within 500m**1**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID	Location	Company	Address	LPG	Status
9	396m W	ESSO	26-52, Grey Mare Lane, Bradford, Manchester, Greater Manchester, M11 3DG	Not Applicable	Obsolete

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m**0**

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**3**

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

Features are displayed on the Current industrial land use map on [page 85 >](#)



ID	Location	Company	Address	Operational status	Tier
1	On site	Ciba Speciality Chemicals	Ciba Speciality Chemicals, Ashton New Road, Clayton, M11 4AP	Historical COMAH Site	-
F	286m NE	Evonik Chemicals Limited	Evonik Chemicals Limited, Clayton, Manchester, Clayton Lane, Manchester, Greater Manchester, M11 4SR	Current COMAH Site	COMAH Lower Tier Operator
K	443m W	Rhodia Ltd	Rhodia Ltd, Ashton New Road, Manchester, M11 4AT	Historical NIHHS Site	-

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m

0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

7

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID	Location	Details	
H	338m NW	Application reference number: 092423/HSC/2010/N2 Application status: Historical Consent Application date: 12/04/2010 Address: OMG UK Limited, Ashton New Road, Clayton, Manchester, M11 4AT	Details: Deemed Consent - Manufacture and sales of performance chemicals for use in the Rubber, Surface Coatings and Chemical Industry Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
H	338m NW	Application reference number: 093567/HSC/2010/N2 Application status: Historical Consent Application date: 08/09/2010 Address: OMG UK Limited, Ashton New Road, Clayton, Manchester, M11 4AT	Details: Revocation of hazardous substances consent granted under ref 092423/HSC/2010/N2 Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified



ID	Location	Details	
J	417m NW	Application reference number: 094262/HSC/2010/N2 Application status: Historical Consent Application date: 15/09/2010 Address: Ashton New Road, Clayton, Manchester, M11 4AP	Details: Revocation of hazardous substances consents granted under refs: 000002/HSC/NORTH2/92 and 057477/HSC/NORTH2/99 Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
J	417m NW	Application reference number: 057477/HSC/NORTH2/99 Application status: Historical Consent Application date: 02/09/1999 Address: CIBA Speciality Chemicals PLC, Ashton New Road, Clayton, Manchester, M11 4AP	Details: Hazardous Substances Deemed Consent - Manufacture of dyestuffs and related chemicals Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
J	417m NW	Application reference number: 000002/HSC/NORTH2/92 Application status: Historical Consent Application date: 12/11/1992 Address: Clayton Aniline Co. Ltd., Ashton New Road, Clayton, Manchester, M11 4AP	Details: Storage of sulphur trioxide (as Oleum) and chlorine. Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
F	447m E	Application reference number: 062763/HSC/NORTH2/01 Application status: Historical Consent Application date: 05/04/2002 Address: Air Products (Chemicals) Plc, Clayton Lane, Clayton, Manchester, Greater Manchester, England, M11 4SR	Details: Above Ground Storage Of Various Substances Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
F	447m E	Application reference number: No Details Application status: Approved Application date: 05/04/2002 Address: Evonik Chemicals Ltd, Clayton Lane, Clayton, Manchester, Greater Manchester, England, M11 4SR	Details: Above Ground Storage Of Various Substances Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

38

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

Features are displayed on the Current industrial land use map on [page 85](#) >



ID	Location	Details	
B	234m E	Operator: Air Products (chemicals) Plc Address: Clayton Lane, Clayton, Manchester, M11 4SR Process: Manufacture And Use Of Organic Chemicals Permit Number: AK7078	Original Permit Number: IPCAIRAPP Date Approved: 18-2-1994 Effective Date: 1-3-1994 Status: Superseded By Variation
B	234m E	Operator: Air Products (chemicals) Plc Address: Clayton Lane, Manchester, Greater Manchester, M11 4SR Process: Manufacture And Use Of Organic Chemicals Permit Number: AK7086	Original Permit Number: IPCAIRAPP Date Approved: 18-2-1994 Effective Date: 1-3-1994 Status: Revoked
B	234m E	Operator: Air Products (chemicals) Plc Address: Clayton Lane, Clayton, Manchester, M11 4SR Process: Manufacture And Use Of Organic Chemicals Permit Number: AL2675	Original Permit Number: IPCAPP Date Approved: 18-2-1994 Effective Date: 1-3-1994 Status: Revoked
B	234m E	Operator: Air Products (chemicals) Plc Address: Clayton Lane, Clayton, Manchester, M11 4SR Process: Manufacture And Use Of Organic Chemicals Permit Number: AP6958	Original Permit Number: IPCMINVAR Date Approved: 18-1-1995 Effective Date: 18-1-1995 Status: Superseded By Variation
B	234m E	Operator: Air Products (chemicals) Plc Address: Clayton Lane, Clayton, Manchester, M11 4SR Process: Manufacture And Use Of Organic Chemicals Permit Number: AR9427	Original Permit Number: IPCMINVAR Date Approved: 25-8-1995 Effective Date: 11-9-1995 Status: Superseded By Variation
B	234m E	Operator: Air Products (chemicals) Plc Address: Clayton Lane, Clayton, Manchester, M11 4SR Process: Manufacture And Use Of Organic Chemicals Permit Number: AZ8609	Original Permit Number: IPCMINVAR Date Approved: 3-11-1997 Effective Date: 10-11-1997 Status: Superseded By Variation
B	234m E	Operator: Air Products (chemicals) Plc Address: Clayton Lane, Clayton, Manchester, M11 4SR Process: Manufacture And Use Of Organic Chemicals Permit Number: BE1488	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc
D	273m W	Operator: Omg (UK) Ltd Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: AK5334	Original Permit Number: IPCAPP Date Approved: 17-2-1994 Effective Date: 28-2-1994 Status: Superseded By Variation
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: AK6055	Original Permit Number: IPCAIRAPP Date Approved: 23-2-1994 Effective Date: 23-2-1994 Status: Superseded By Variation
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: AK6063	Original Permit Number: IPCAIRAPP Date Approved: 23-2-1994 Effective Date: 23-2-1994 Status: Superseded By Variation



ID	Location	Details	
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: AR1698	Original Permit Number: IPCMINVAR Date Approved: 3-5-1996 Effective Date: 6-5-1996 Status: Superseded By Variation
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: AR1728	Original Permit Number: IPCMINVAR Date Approved: 1-8-1995 Effective Date: 7-8-1995 Status: Superseded By Variation
D	273m W	Operator: Rhodia Ltd Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: AS6195	Original Permit Number: IPCAPP Date Approved: 14-12-1995 Effective Date: 15-12-1995 Status: Superseded By Variation
D	273m W	Operator: Rhodia Ltd Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: AS6209	Original Permit Number: IPCAPP Date Approved: 14-12-1995 Effective Date: 15-12-1995 Status: Superseded By Variation
D	273m W	Operator: Omg (UK) Ltd Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: AX0488	Original Permit Number: IPCMINVAR Date Approved: 18-4-1997 Effective Date: 28-4-1997 Status: Superseded By Variation
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BD1407	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BD1415	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
D	273m W	Operator: Rhodia Ltd Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BD2144	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc
D	273m W	Operator: Rhodia Ltd Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BD2152	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc



ID	Location	Details	
D	273m W	Operator: Omg (UK) Ltd Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BD7502	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BT9054	Original Permit Number: IPCMINVAR Date Approved: 12-2-2003 Effective Date: 17-2-2003 Status: Superseded By Variation
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BT9062	Original Permit Number: IPCMINVAR Date Approved: 12-2-2003 Effective Date: 17-2-2003 Status: Superseded By Variation
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BY0569	Original Permit Number: IPCMINVAR Date Approved: 25-6-2004 Effective Date: 1-7-2004 Status: Revoked
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: BY0585	Original Permit Number: IPCMINVAR Date Approved: 25-6-2004 Effective Date: 1-7-2004 Status: Superseded By Variation
D	273m W	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, Greater Manchester, M11 4AT Process: Manufacture And Use Of Organic Chemicals Permit Number: CA3084	Original Permit Number: IPCMINVAR Date Approved: 13-3-2006 Effective Date: 1-4-2006 Status: Revoked
E	344m NE	Operator: Synprotec Ltd Address: 303 Clayton Road, Clayton, Manchester, M11 4SX Process: Manufacture And Use Of Organic Chemicals Permit Number: AJ1279	Original Permit Number: IPCAPP Date Approved: 16-11-1993 Effective Date: 16-11-1993 Status: Superseded By Variation
E	344m NE	Operator: Synprotec Ltd Address: 303 Clayton Road, Clayton, Manchester, M11 4SX Process: Manufacture And Use Of Organic Chemicals Permit Number: BA8596	Original Permit Number: IPCMAJVAR Date Approved: 7-7-1998 Effective Date: 20-7-1998 Status: Superseded By Variation
E	344m NE	Operator: Synprotec Ltd Address: 303 Clayton Road, Clayton, Manchester, M11 4SX Process: Manufacture And Use Of Organic Chemicals Permit Number: BE3766	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation



ID	Location	Details	
E	344m NE	Operator: Synprotec Ltd Address: 303 Clayton Road, Clayton, Manchester, M11 4SX Process: Manufacture And Use Of Organic Chemicals Permit Number: BG3147	Original Permit Number: IPCMINVAR Date Approved: 24-6-1999 Effective Date: 24-6-1999 Status: Revoked - Now Ippc
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, M11 4AP Process: Combustion Processes Permit Number: AA2330	Original Permit Number: IPCAPP Date Approved: 28-8-1992 Effective Date: 28-8-1992 Status: Superseded By Variation
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: Ashton New Road, Clayton, Manchester, M11 4AP Process: Combustion Processes Permit Number: AI2996	Original Permit Number: IPCMINVAR Date Approved: 16-9-1993 Effective Date: 16-9-1993 Status: Revoked
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: PO Box 2, Ashton New Road, Clayton, Manchester, M11 4AP Process: Manufacture And Use Of Organic Chemicals Permit Number: AK3579	Original Permit Number: IPCAIRAPP Date Approved: 23-2-1994 Effective Date: 23-2-1994 Status: Superseded By Variation
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: PO Box 2, Ashton New Road, Clayton, Manchester, M11 4AP Process: Manufacture And Use Of Organic Chemicals Permit Number: AO5042	Original Permit Number: IPCMINVAR Date Approved: 3-10-1994 Effective Date: 3-10-1994 Status: Superseded By Variation
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: PO Box 2, Ashton New Road, Clayton, Manchester, M11 4AP Process: Manufacture And Use Of Organic Chemicals Permit Number: AP3614	Original Permit Number: IPCMINVAR Date Approved: 28-2-1995 Effective Date: 1-3-1995 Status: Superseded By Variation
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: PO Box 2, Ashton New Road, Clayton, Manchester, M11 4AP Process: Manufacture And Use Of Organic Chemicals Permit Number: AV8879	Original Permit Number: IPCMINVAR Date Approved: 2-12-1996 Effective Date: 9-12-1996 Status: Superseded By Variation
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: PO Box 2, Ashton New Road, Clayton, Manchester, M11 4AP Process: Manufacture And Use Of Organic Chemicals Permit Number: BD6263	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: PO Box 2, Ashton New Road, Clayton, Manchester, M11 4AP Process: Manufacture And Use Of Organic Chemicals Permit Number: BT9046	Original Permit Number: IPCMINVAR Date Approved: 12-2-2003 Effective Date: 17-2-2003 Status: Superseded By Variation



ID	Location	Details	
I	372m NW	Operator: Ciba Specialty Chemicals Plc Address: PO Box 2, Ashton New Road, Clayton, Manchester, M11 4AP Process: Manufacture And Use Of Organic Chemicals Permit Number: BY0577	Original Permit Number: IPCMINVAR Date Approved: 25-6-2004 Effective Date: 1-7-2004 Status: Revoked

This data is sourced from the Environment Agency and Natural Resources Wales.

4.10 Licensed industrial activities (Part A(1))

Records within 500m	56
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Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID	Location	Details	
D	273m W	Operator: SOLVAY SOLUTIONS UK LIMITED Installation Name: Latex Plant, Clayton Process: ASSOCIATED PROCESS Permit Number: PP3131SY Original Permit Number: PP3131SY	EPR Reference: EPR/PP3131SY Issue Date: 05/07/2005 Effective Date: 05/07/2005 Last date noted as effective: 25/05/2023 Status: Superseded
D	273m W	Operator: HEXION SPECIALTY CHEMICALS CLAYTON LIMITED Installation Name: Rhodia UK Ltd Process: ASSOCIATED PROCESS Permit Number: UP3136LU Original Permit Number: UP3136LU	EPR Reference: EPR/UP3136LU Issue Date: 16/02/2009 Effective Date: 16/02/2009 Last date noted as effective: 25/05/2023 Status: Surrendered
D	273m W	Operator: HEXION SPECIALTY CHEMICALS CLAYTON LIMITED Installation Name: Rhodia UK Ltd Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: UP3136LU Original Permit Number: UP3136LU	EPR Reference: EPR/UP3136LU Issue Date: 16/02/2009 Effective Date: 16/02/2009 Last date noted as effective: 25/05/2023 Status: Surrendered
D	273m W	Operator: SOLVAY SOLUTIONS UK LIMITED Installation Name: Latex Plant, Clayton Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: PP3131SY Original Permit Number: PP3131SY	EPR Reference: EPR/PP3131SY Issue Date: 05/07/2005 Effective Date: 05/07/2005 Last date noted as effective: 25/05/2023 Status: Superseded

ID	Location	Details	
D	273m W	Operator: HEXION SPECIALTY CHEMICALS CLAYTON LIMITED Installation Name: Rhodia UK Ltd Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: UP3136LU Original Permit Number: UP3136LU	EPR Reference: EPR/UP3136LU Issue Date: 16/02/2009 Effective Date: 16/02/2009 Last date noted as effective: 25/05/2023 Status: Surrendered
D	273m W	Operator: RHODIA INDUSTRIAL SPECIALTIES PLC Installation Name: RHODIA LATEX PLANT Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: BM0079IX Original Permit Number: BM0079IX	EPR Reference: EPR/BM0079IX Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 25/05/2023 Status: Superseded
D	273m W	Operator: RHODIA INDUSTRIAL SPECIALTIES PLC Installation Name: RHODIA LATEX PLANT Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: BM0079IX Original Permit Number: BM0079IX	EPR Reference: EPR/BM0079IX Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 25/05/2023 Status: Superseded
D	273m W	Operator: SOLVAY SOLUTIONS UK LIMITED Installation Name: Latex Plant, Clayton Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: PP3131SY Original Permit Number: PP3131SY	EPR Reference: EPR/PP3131SY Issue Date: 05/07/2005 Effective Date: 05/07/2005 Last date noted as effective: 25/05/2023 Status: Superseded
D	273m W	Operator: RHODIA INDUSTRIAL SPECIALTIES PLC Installation Name: RHODIA LATEX PLANT Process: ASSOCIATED PROCESS Permit Number: BM0079IX Original Permit Number: BM0079IX	EPR Reference: EPR/BM0079IX Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 25/05/2023 Status: Superseded
D	273m W	Operator: OMG (UK) LTD Installation Name: - Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: BS3492 Original Permit Number: BS3492	EPR Reference: - Issue Date: 09/03/2004 Effective Date: 09/03/2004 Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
D	273m W	Operator: RHODIA INDUSTRIAL SPECIALTIES PLC Installation Name: - Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: BM0079 Original Permit Number: BM0079	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS



ID	Location	Details	
D	273m W	Operator: OMG (UK) LTD Installation Name: OMG UK LTD Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: XP3431LM Original Permit Number: BS3492IW	EPR Reference: - Issue Date: 24/11/2006 Effective Date: 24/11/2006 Last date noted as effective: 21/03/2023 Status: Superseded
D	273m W	Operator: OMG (UK) LTD Installation Name: OMG UK LTD Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: KP3330HG Original Permit Number: BS3492IW	EPR Reference: - Issue Date: - Effective Date: 23/12/2010 Last date noted as effective: 21/03/2023 Status: Surrender Effective
E	274m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS Permit Number: PP3236ST Original Permit Number: BM0303IW	EPR Reference: EPR/PP3236ST Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 25/05/2023 Status: Effective
E	274m NE	Operator: Carbogen Amcis Limited Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: EP3738EJ Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 21/03/2023 Status: Effective
E	274m NE	Operator: Carbogen Amcis Limited Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; PHOSPHORUS CONTAINING COMPOUNDS EG SUBSTITUTED PHOSPHINES Permit Number: EP3738EJ Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 21/03/2023 Status: Effective
E	274m NE	Operator: Carbogen Amcis Limited Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS Permit Number: EP3738EJ Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 21/03/2023 Status: Effective
E	274m NE	Operator: Carbogen Amcis Limited Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; ORGANOMETALLIC COMPOUNDS EG LEAD ALKYLs Permit Number: EP3738EJ Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 21/03/2023 Status: Effective



ID	Location	Details	
E	274m NE	Operator: Carbogen Amcis Limited Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: EP3738EJ Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 21/03/2023 Status: Effective
E	274m NE	Operator: Carbogen Amcis Limited Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; SULPHUR CONTAINING COMPOUNDS EG SULPHIDES Permit Number: EP3738EJ Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 21/03/2023 Status: Effective
E	274m NE	Operator: Carbogen Amcis Limited Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: EP3738EJ Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 21/03/2023 Status: Effective
E	274m NE	Operator: Carbogen Amcis Limited Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: EP3738EJ Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 21/03/2023 Status: Effective
E	274m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; ORGANOMETALLIC COMPOUNDS EG LEAD ALKYLs Permit Number: PP3236ST Original Permit Number: BM0303IW	EPR Reference: EPR/PP3236ST Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 25/05/2023 Status: Effective
E	274m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: PP3236ST Original Permit Number: BM0303IW	EPR Reference: EPR/PP3236ST Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 25/05/2023 Status: Effective
E	274m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: PP3236ST Original Permit Number: BM0303IW	EPR Reference: EPR/PP3236ST Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 25/05/2023 Status: Effective



ID	Location	Details	
E	274m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; SULPHUR CONTAINING COMPOUNDS EG SULPHIDES Permit Number: PP3236ST Original Permit Number: BM0303IW	EPR Reference: EPR/PP3236ST Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 25/05/2023 Status: Effective
E	274m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: PP3236ST Original Permit Number: BM0303IW	EPR Reference: EPR/PP3236ST Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 25/05/2023 Status: Effective
E	274m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; PHOSPHORUS CONTAINING COMPOUNDS EG SUBSTITUTED PHOSPHINES Permit Number: PP3236ST Original Permit Number: BM0303IW	EPR Reference: EPR/PP3236ST Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 25/05/2023 Status: Effective
E	274m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: PP3236ST Original Permit Number: BM0303IW	EPR Reference: EPR/PP3236ST Issue Date: 19/12/2013 Effective Date: 19/12/2013 Last date noted as effective: 25/05/2023 Status: Effective
G	331m NE	Operator: Air Products (Chemicals) Limited Installation Name: CLAYTON WORKS Process: ASSOCIATED PROCESS Permit Number: YP3031PB Original Permit Number: BL9623IK	EPR Reference: - Issue Date: 16/12/2004 Effective Date: 01/01/2005 Last date noted as effective: 21/03/2023 Status: Superseded
G	331m NE	Operator: Air Products (Chemicals) Limited Installation Name: CLAYTON WORKS Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: YP3031PB Original Permit Number: BL9623IK	EPR Reference: - Issue Date: 16/12/2004 Effective Date: 01/01/2005 Last date noted as effective: 21/03/2023 Status: Superseded
H	332m NW	Operator: OMG (UK) LIMITED Installation Name: OMG UK LTD Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: BS3492IW Original Permit Number: BS3492IW	EPR Reference: EPR/BS3492IW Issue Date: 23/12/2010 Effective Date: 23/12/2010 Last date noted as effective: 25/05/2023 Status: Surrendered



ID	Location	Details	
H	332m NW	Operator: Hexion Specialty Chemicals Clayton Ltd Installation Name: Rhodia UK Ltd Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: SP3538GH Original Permit Number: UP3136LU	EPR Reference: EA/EPR/UP3136LU/S002 Issue Date: - Effective Date: 16/02/2009 Last date noted as effective: 21/03/2023 Status: Surrender Effective
H	332m NW	Operator: Hexion Specialty Chemicals Clayton Ltd Installation Name: Rhodia UK Ltd Process: ASSOCIATED PROCESS Permit Number: SP3538GH Original Permit Number: UP3136LU	EPR Reference: EA/EPR/UP3136LU/S002 Issue Date: - Effective Date: 16/02/2009 Last date noted as effective: 21/03/2023 Status: Surrender Effective
H	332m NW	Operator: Hexion Specialty Chemicals Clayton Ltd Installation Name: Rhodia UK Ltd Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: SP3538GH Original Permit Number: UP3136LU	EPR Reference: EA/EPR/UP3136LU/S002 Issue Date: - Effective Date: 16/02/2009 Last date noted as effective: 21/03/2023 Status: Surrender Effective
E	344m NE	Operator: CARBOGEN AMCIS LIMITED Installation Name: 303 Clayton Road EPR/PP3236ST Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: EPR/BM0303IW Issue Date: 16/05/2005 Effective Date: 16/05/2005 Last date noted as effective: 25/05/2023 Status: Superseded
E	344m NE	Operator: SYNPROTEC LTD Installation Name: - Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: BM0303 Original Permit Number: BM0303	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
E	344m NE	Operator: SYNPROTEC LTD Installation Name: - Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: BM0303 Original Permit Number: BM0303	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
E	344m NE	Operator: SYNPROTEC LTD Installation Name: - Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS Permit Number: BM0303 Original Permit Number: BM0303	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS



ID	Location	Details	
E	344m NE	Operator: SYNPROTEC LTD Installation Name: - Process: ORGANIC CHEMICALS; PHOSPHORUS CONTAINING COMPOUNDS EG SUBSTITUTED PHOSPHINES Permit Number: BM0303 Original Permit Number: BM0303	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
E	344m NE	Operator: SYNPROTEC LTD Installation Name: - Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: BM0303 Original Permit Number: BM0303	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
E	344m NE	Operator: SYNPROTEC LTD Installation Name: - Process: ORGANIC CHEMICALS; SYNTHETIC RUBBERS Permit Number: BM0303 Original Permit Number: BM0303	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
E	344m NE	Operator: SYNPROTEC LTD Installation Name: - Process: ORGANIC CHEMICALS; ORGANOMETALLIC COMPOUNDS EG LEAD ALKYL Permit Number: BM0303 Original Permit Number: BM0303	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
E	344m NE	Operator: SYNPROTEC LTD Installation Name: - Process: ORGANIC CHEMICALS; SULPHUR CONTAINING COMPOUNDS EG SULPHIDES Permit Number: BM0303 Original Permit Number: BM0303	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
E	344m NE	Operator: Synprotec Ltd Installation Name: 303 Clayton Lane EPR/BM0303IW Process: ORGANIC CHEMICALS; SULPHUR CONTAINING COMPOUNDS EG SULPHIDES Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 21/03/2023 Status: Superseded
E	344m NE	Operator: Synprotec Ltd Installation Name: 303 Clayton Lane EPR/BM0303IW Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 21/03/2023 Status: Superseded



ID	Location	Details	
E	344m NE	Operator: Synprotec Ltd Installation Name: 303 Clayton Lane EPR/BM0303IW Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 21/03/2023 Status: Superseded
E	344m NE	Operator: Synprotec Ltd Installation Name: 303 Clayton Lane EPR/BM0303IW Process: ASSOCIATED PROCESS Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 21/03/2023 Status: Superseded
E	344m NE	Operator: Synprotec Ltd Installation Name: 303 Clayton Lane EPR/BM0303IW Process: ORGANIC CHEMICALS; ORGANOMETALLIC COMPOUNDS EG LEAD ALKYL Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 21/03/2023 Status: Superseded
E	344m NE	Operator: Synprotec Ltd Installation Name: 303 Clayton Lane EPR/BM0303IW Process: ORGANIC CHEMICALS; PHOSPHORUS CONTAINING COMPOUNDS EG SUBSTITUTED PHOSPHINES Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 21/03/2023 Status: Superseded
E	344m NE	Operator: Synprotec Ltd Installation Name: 303 Clayton Lane EPR/BM0303IW Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 21/03/2023 Status: Superseded
E	344m NE	Operator: Synprotec Ltd Installation Name: 303 Clayton Lane EPR/BM0303IW Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: BM0303IW Original Permit Number: BM0303IW	EPR Reference: - Issue Date: 22/03/2004 Effective Date: 22/03/2004 Last date noted as effective: 21/03/2023 Status: Superseded
G	366m NE	Operator: Evonik Chemicals Limited Installation Name: Evonik Chemicals Limited - EPR/BL9623IK Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: HP3607LB Original Permit Number: BL9623IK	EPR Reference: - Issue Date: 11/03/2021 Effective Date: 11/03/2021 Last date noted as effective: 21/03/2023 Status: Effective



ID	Location	Details	
G	366m NE	Operator: Evonik Chemicals Limited Installation Name: Evonik Chemicals Limited - EPR/BL9623IK Process: ASSOCIATED PROCESS Permit Number: HP3607LB Original Permit Number: BL9623IK	EPR Reference: - Issue Date: 11/03/2021 Effective Date: 11/03/2021 Last date noted as effective: 21/03/2023 Status: Effective
G	366m NE	Operator: Evonik Chemicals Limited Installation Name: Air Products (Chemicals) Clayton EPR/BL9623IK Process: ASSOCIATED PROCESS Permit Number: QP3739YK Original Permit Number: BL9623IK	EPR Reference: - Issue Date: 11/09/2017 Effective Date: 11/09/2017 Last date noted as effective: 21/03/2023 Status: Superseded
G	366m NE	Operator: Evonik Chemicals Limited Installation Name: Air Products (Chemicals) Clayton EPR/BL9623IK Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: QP3739YK Original Permit Number: BL9623IK	EPR Reference: - Issue Date: 11/09/2017 Effective Date: 11/09/2017 Last date noted as effective: 21/03/2023 Status: Superseded

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

8

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID	Location	Address	Details	
2	120m SE	Rotunda Plc, Clayton Lane, Clayton, M11 2AT	Process: Rubber Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
4	321m NW	Stormproofings Ltd, Corbett Street, Clayton, M11 4BD	Process: Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
G	334m NE	Air Products (Chemicals) Plc, Clayton Lane, Clayton, M11 4SR	Process: Use of Organic Chemicals Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified



ID	Location	Address	Details	
5	360m SE	Thos Storey Fabrications Ltd, Stainburn Road, Openshaw, Manchester, M11 2ER	Process: Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
7	381m N	Djs Auto Centre, Ashton New Rd, M11 4SG	Process: Waste Oil Burner 0.4 MW Status: New Legislation Applies Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
8	386m NW	Frances Shaw And Co, Corbett Street, Clayton, M11 4BB	Process: Rubber Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
10	444m S	Cascade Ltd, 3 Kelbrook Road, Parkhouse Industrial Estate, Openshaw, M11 2DD	Process: Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
11	465m N	Vitacom Ltd, Bank St, M11 4AS	Process: Rubber Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	1
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Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID	Location	Address	Details	
I	372m NW	Salford Royal Nhs Foundation Trust, Ashton New Road, Clayton, Manchester, M11 4AP	Operator: Salford Royal Nhs Foundation Trust Type: Disposal Of Radioactive Waste (was Rsa60 Section 6). Permission number: AB9798 Date of approval: 31/03/1991	Effective from: 31/03/1991 Last date of update: 01/01/2015 Status: Revoked/cancelled

This data is sourced from the Environment Agency and Natural Resources Wales.



4.13 Licensed Discharges to controlled waters

Records within 500m

4

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on [page 85](#) >

ID	Location	Address	Details	
C	261m SE	PARROTT STREET/BROMLOW STREET CSO, PARROTT ST/BROMLOW ST JUNCTION, OPENSHAW, MANCHESTER, GREATER MANCHESTER, M11 4QW	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0107 Permit Version: 2 Receiving Water: UNNAMED WATERCOURSE	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: 04/02/2016
C	261m SE	ASHTON NEW RD/BEBBINGTON, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0323 Permit Version: 1 Receiving Water: BLACK BROOK	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 01/01/1995 Revocation Date: 01/01/1995
C	261m SE	ASHTON NEW RD/BEBBINGTON, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982734 Permit Version: 1 Receiving Water: BALCK BROOK	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 30/09/1994 Revocation Date: 01/08/2005
C	261m SE	PARROTT STREET/BROMLOW STREET CSO, PARROTT ST/BROMLOW ST JUNCTION, OPENSHAW, MANCHESTER, GREATER MANCHESTER, M11 4QW	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0107 Permit Version: 1 Receiving Water: UNNAMED WATERCOURSE	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: 02/09/2010

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.15 Pollutant release to public sewer

Records within 500m

2

Discharges of Special Category Effluents to the public sewer.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID	Location	Address	Details	
L	467m W	FH TOMKINS BUCKLE CO LTD, SCORE STREET, SCORE STREET, MANCHESTER, MANCHESTER, M11 2BW	Permission reference: BG2612 Local Authority: MANCHESTER CITY COUNCIL First received date: 01/07/2010	Last received date: 01/01/2018 Status: RECEIVED
L	467m W	CLIFFORD WHATMOUGH LTD (DISSOLVED), SCORE STREET, SCORE STREET, MANCHESTER, MANCHESTER, M11 2BW	Permission reference: AW4917 Local Authority: MANCHESTER CITY COUNCIL First received date: 01/07/2010	Last received date: 01/01/2018 Status: RECEIVED

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m

11

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID	Location	Name	Status	Receiving Water	Authorised Substances
B	235m E	Anchor Chemical Outfalls 1/2/5	Not Active	Manchester Ship Canal	Mercury (other)
B	235m E	Air Products (chemicals) Clayton	Active	Manchester Ship Canal	Mercury (other)
D	273m W	Rhodia Ltd Outlet S1	Not Active	Manchester Ship Canal	Mercury (other), Cadmium
D	273m W	Rhodia Ltd Outlet S2	Not Active	Manchester Ship Canal	Cadmium
D	273m W	Rhodia Ltd Outlet S4	Not Active	Manchester Ship Canal	Mercury (other), Cadmium
D	273m W	Omg Uk Ltd	Active	Manchester Ship Canal	Mercury (other), Cadmium



ID	Location	Name	Status	Receiving Water	Authorised Substances
I	373m NW	Clayton Aniline	Not Active	Manchester Ship Canal	Mercury (other), Cadmium
I	373m NW	Ciba Geigy Plc Outlets S1/s2(clayton Aniline)	Not Active	Manchester Ship Canal	Mercury (other), Cadmium
L	468m W	F H Tomkins Buckle Co Ltd, Union Eyelet Works, Manchester	Not Active	Manchester Ship Canal	Cadmium
K	493m W	Rhodia Industrial Specialities Ltd,	Active	Manchester Ship Canal	Cadmium
K	493m W	Rhodia Industrial Specialities Ltd,	Active	Manchester Ship Canal	Cadmium

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m

1

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID	Location	Name	Status	Receiving Water	Authorised Substances
I	373m NW	Ciba Geigy Plc, Clayton, Manchester	Not Active	River Mersey Manchester Ship Canal	Chromium, Copper, Zinc, Toluene

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m

12

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on [page 85 >](#)



ID	Location	Details	
A	49m W	Incident Date: 31/05/2001 Incident Identification: 10156 Pollutant: Organic Chemicals/Products Pollutant Description: Dyes and Inks	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
A	49m W	Incident Date: 31/05/2001 Incident Identification: 10156 Pollutant: Organic Chemicals/Products Pollutant Description: Dyes and Inks	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
E	275m NE	Incident Date: 23/07/2003 Incident Identification: 176591 Pollutant: Organic Chemicals/Products Pollutant Description: Other Organic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
E	279m NE	Incident Date: 27/03/2002 Incident Identification: 67108 Pollutant: Organic Chemicals/Products Pollutant Description: Hydrocarbons	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
E	284m NE	Incident Date: 29/04/2002 Incident Identification: 75428 Pollutant: Inorganic Chemicals/Products Pollutant Description: Acids	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
E	288m NE	Incident Date: 05/09/2002 Incident Identification: 105974 Pollutant: Organic Chemicals/Products Pollutant Description: Other Organic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
E	290m NE	Incident Date: 05/09/2002 Incident Identification: 105987 Pollutant: Organic Chemicals/Products Pollutant Description: Other Organic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
E	307m NE	Incident Date: 26/07/2002 Incident Identification: 94717 Pollutant: Organic Chemicals/Products Pollutant Description: Solvents	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
E	314m NE	Incident Date: 21/08/2001 Incident Identification: 25901 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
E	344m NE	Incident Date: 17/06/2002 Incident Identification: 85898 Pollutant: Organic Chemicals/Products Pollutant Description: Solvents	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

ID	Location	Details	
6	371m N	Incident Date: 28/01/2003 Incident Identification: 133803 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
12	476m N	Incident Date: 18/07/2001 Incident Identification: 17244 Pollutant: Organic Chemicals/Products Pollutant Description: Other Organic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m	4
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The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID: E, Location: 274m NE, Permit: BM0303IW
 Operator: Carbogen Amcis Limited
 Activity: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS
 Address: 303 Clayton Road Clayton Lane Greater Manchester M11 4SX
 Sector: Chemicals, Sub-sector: Chemicals
 Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Sulphur oxides (SO2 and SO3) as SO2	100000kg	Below Reporting Threshold
Air	Carbon dioxide	10000000kg	Below Reporting Threshold
Air	Ammonia	1000kg	Below Reporting Threshold
Air	Carbon monoxide	100000kg	Below Reporting Threshold
Air	Nitrous oxide	10000kg	Below Reporting Threshold
Air	Nitrogen oxides (NO and NO2) as NO2	100000kg	Below Reporting Threshold
Air	Chlorine and inorganic chlorine compounds - as HCl	10000kg	Below Reporting Threshold
Air	Non-methane volatile organic compounds (NMVOCs)	10000kg	Below Reporting Threshold

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Air	Dichloromethane (DCM) (Methylene chloride)	1000kg	Below Reporting Threshold

ID: G, Location: 366m NE, Permit: BL9623IK
 Operator: Evonik Chemicals Limited
 Activity: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES
 Address: Clayton Lane Clayton Greater Manchester M11 4SR
 Sector: Chemicals, Sub-sector: Chemicals
 Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Wastewater	Mercury	0.1kg	Below Reporting Threshold
Air	Sulphur oxides (SO2 and SO3) as SO2	100000kg	Below Reporting Threshold
Wastewater	Nitrogen - as total N	50000kg	Below Reporting Threshold
Air	Carbon dioxide	10000000kg	Below Reporting Threshold
Air	Carbon monoxide	100000kg	Below Reporting Threshold
Air	Methane	10000kg	Below Reporting Threshold
Air	Nitrogen oxides (NO and NO2) as NO2	100000kg	Below Reporting Threshold
Air	Non-methane volatile organic compounds (NMVOCs)	10000kg	Below Reporting Threshold

ID: G, Location: 366m NE, Permit: BL9623IK
 Operator: Evonik Chemicals Limited
 Activity: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES
 Address: Clayton Lane Clayton Greater Manchester M11 4SR
 Sector: Chemicals, Sub-sector: Chemicals
 Releases:

Route	Substance	Reporting threshold (kg)	Quantity (kg)
Wastewater	Total organic carbon (TOC)	50000kg	77000kg

ID: G, Location: 366m NE, Permit: BL9623IK
 Operator: Evonik Chemicals Limited
 Activity: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES
 Address: Clayton Lane Clayton Greater Manchester M11 4SR
 Sector: Chemicals, Sub-sector: Chemicals
 Releases:



Route	Substance	Reporting threshold (kg)	Quantity (kg)
Wastewater	Xylene - all isomers	10kg	18.2kg

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m	2
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The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

Features are displayed on the Current industrial land use map on [page 85 >](#)

ID: E, Location: 274m NE, Permit: BM0303IW
 Operator: Carbogen Amcis Limited
 Activity: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS
 Address: 303 Clayton Road Clayton Lane Greater Manchester M11 4SX
 Sector: Chemicals, Sub-sector: Chemicals
 Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	0.33	absolute value	15 01 02	plastic packaging	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	0.042	absolute value	15 01 02	plastic packaging	No
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	0.45	absolute value	15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	No



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.06	absolute value	15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	No
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	0.012	absolute value	16 03 04	inorganic wastes other than those mentioned in 16 03 03	No
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	0.73	absolute value	16 03 06	organic wastes other than those mentioned in 16 03 05	No
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	4.7	absolute value	16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01	No
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	8.15	absolute value	16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	1.2	absolute value	16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01	No
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.025	absolute value	20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	No



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.154	absolute value	16 03 04	inorganic wastes other than those mentioned in 16 03 03	No
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	10.65	absolute value	06 02 05	other bases	Yes
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	1	absolute value	06 02 05	other bases	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.25	absolute value	06 02 05	other bases	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	110.61	absolute value	07 01 01	aqueous washing liquids and mother liquors	Yes
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	6.2	absolute value	07 01 01	aqueous washing liquids and mother liquors	Yes
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	0.71	absolute value	07 01 01	aqueous washing liquids and mother liquors	Yes



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	1.9	absolute value	07 01 03	organic halogenated solvents, washing liquids and mother liquors	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	1.3	absolute value	07 07 03	organic halogenated solvents, washing liquids and mother liquors	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	170.97	absolute value	07 07 04	other organic solvents, washing liquids and mother liquors	Yes
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	31.35	absolute value	07 07 04	other organic solvents, washing liquids and mother liquors	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	42.42	absolute value	07 07 04	other organic solvents, washing liquids and mother liquors	Yes
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	41.061	absolute value	07 07 04	other organic solvents, washing liquids and mother liquors	Yes



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	0.06	absolute value	07 07 10	other filter cakes and spent absorbents	Yes
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	1.9	absolute value	13 01 10	mineral based non-chlorinated hydraulic oils	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	11.53	absolute value	15 01 10	packaging containing residues of or contaminated by dangerous substances	Yes
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	0.023	absolute value	15 01 10	packaging containing residues of or contaminated by dangerous substances	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	1.49	absolute value	15 01 10	packaging containing residues of or contaminated by dangerous substances	Yes
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	5.82	absolute value	15 01 10	packaging containing residues of or contaminated by dangerous substances	Yes
D10	Incineration on Land	0.005	absolute value	15 01 10	packaging containing residues of or contaminated by dangerous substances	Yes



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	0.3	absolute value	15 02 02	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	5.69	absolute value	15 02 02	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	2.17	absolute value	16 03 03	inorganic wastes containing dangerous substances	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.005	absolute value	16 03 03	inorganic wastes containing dangerous substances	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	0.05	absolute value	16 05 06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	8.11	absolute value	07 07 01	aqueous washing liquids and mother liquors	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.08	absolute value	16 02 11	discarded equipment containing chlorofluorocarbons, HCFC, HFC	Yes



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.75	absolute value	16 05 07	discarded inorganic chemicals consisting of or containing dangerous substances	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.36	absolute value	16 05 08	discarded organic chemicals consisting of or containing dangerous substances	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.42	absolute value	07 07 07	halogenated still bottoms and reaction residues	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	11.2	absolute value	06 01 01	sulphuric acid and sulphurous acid	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	10.05	absolute value	06 01 02	hydrochloric acid	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbers D1 to D12 (eg evaporation, drying, calcination, etc.)	6.45	absolute value	06 01 05	nitric acid and nitrous acid	Yes



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (eg evaporation, drying, calcination, etc.)	4.7	absolute value	06 02 04	sodium and potassium hydroxide	Yes
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	0.154	absolute value	07 05 04	other organic solvents, washing liquids and mother liquors	Yes
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	0.00015	absolute value	16 05 06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	Yes

ID: G, Location: 366m NE, Permit: BL9623IK
 Operator: Evonik Chemicals Limited
 Activity: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES
 Address: Clayton Lane Clayton Greater Manchester M11 4SR
 Sector: Chemicals, Sub-sector: Chemicals
 Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	33	absolute value	15 01 01	paper and cardboard packaging	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	23	absolute value	20 03 01	mixed municipal waste	No
R4	Recycling/reclamation of metals and metal compounds	199	absolute value	20 01 40	metals	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	222	absolute value	15 01 02	plastic packaging	No



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
R1	Use principally as a fuel or other means to generate energy	25	absolute value	20 03 01	mixed municipal waste	No
R1	Use principally as a fuel or other means to generate energy	240	absolute value	07 01 08	other still bottoms and reaction residues	Yes

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

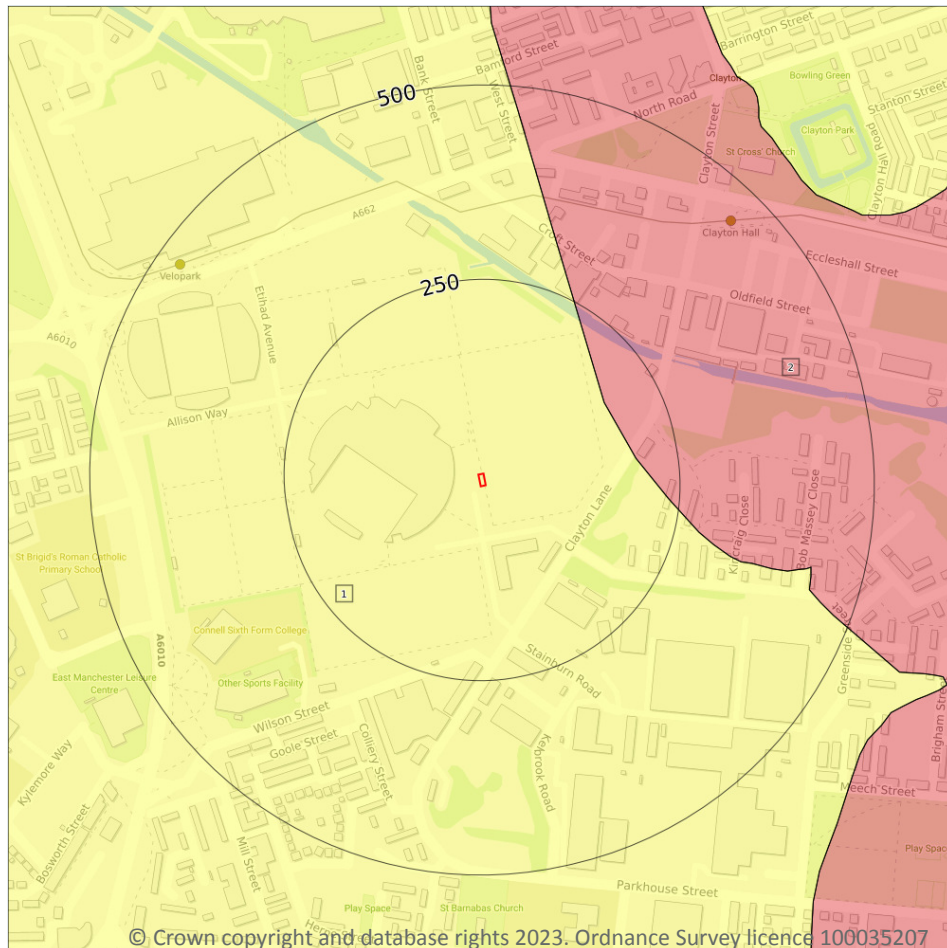
4.21 Pollution inventory radioactive waste

Records within 500m	0
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The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



- Site Outline**
- Search buffers in metres (m)**
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 118](#) >

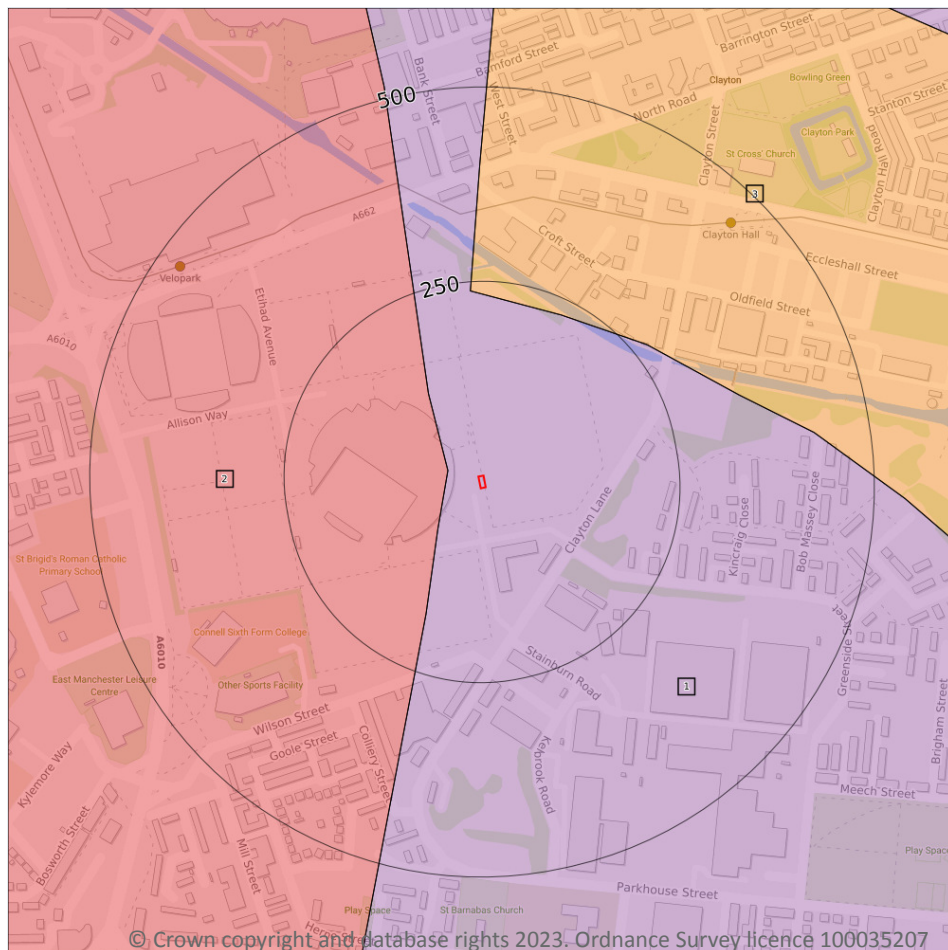
ID	Location	Designation	Description
1	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	180m NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers



This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

3

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 120 >](#)

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	40m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

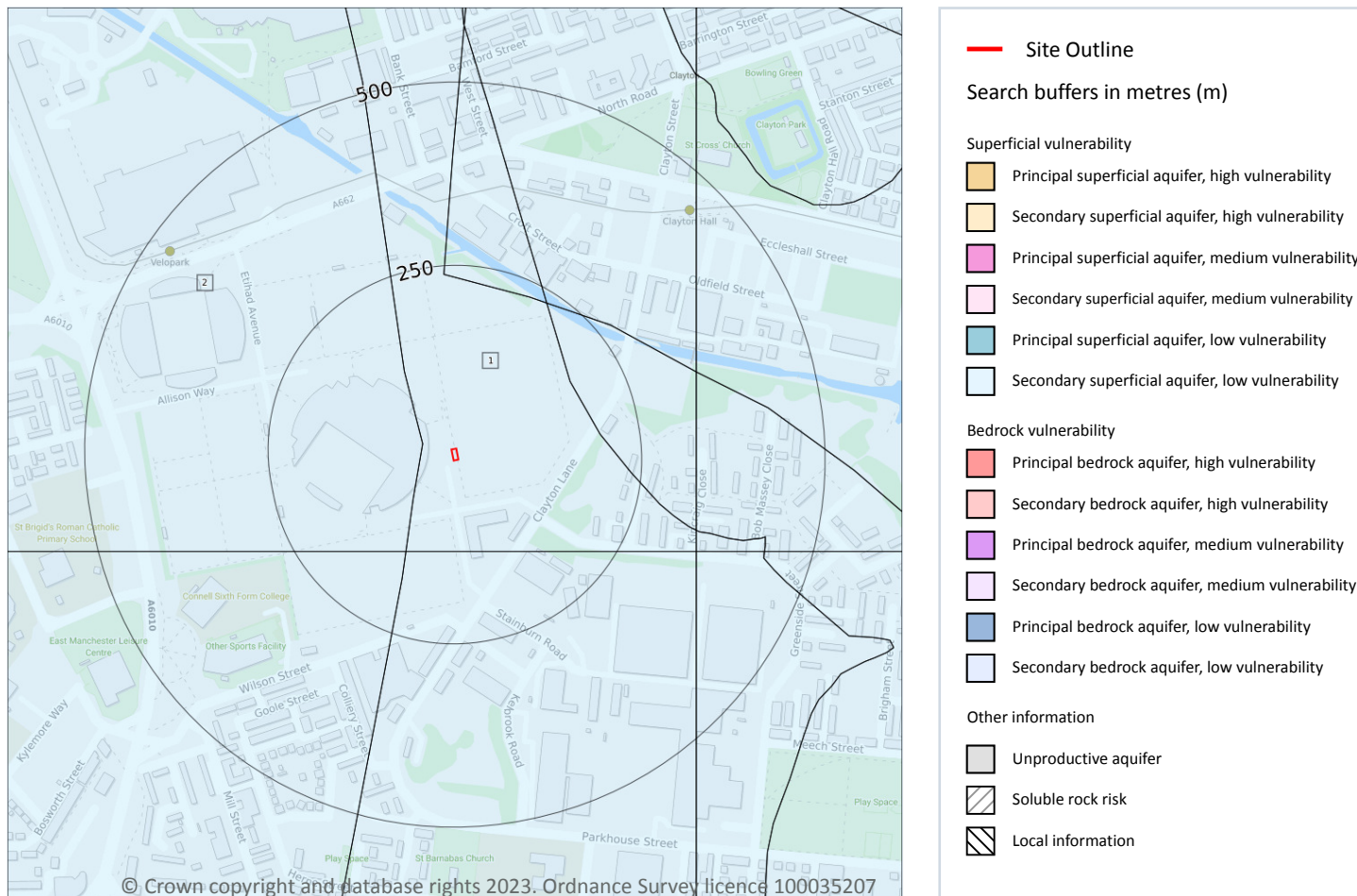


ID	Location	Designation	Description
3	225m N	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 122](#) >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
2	40m W	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0
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This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

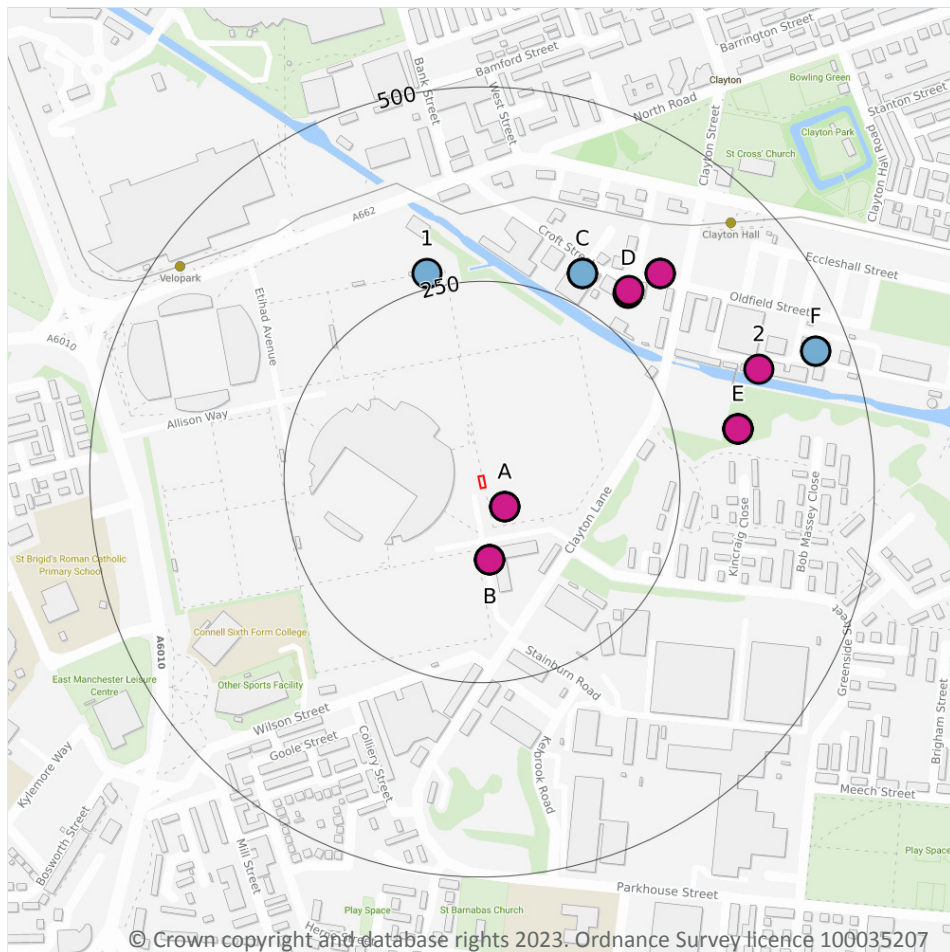
5.5 Groundwater vulnerability- local information

Records on site	0
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This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

26

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 124 >](#)

ID	Location	Details	
A	35m SE	Status: Historical Licence No: 2569006026 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, CLAYTON, MANCHESTER" Data Type: Point Name: CIBA SPECIALTY CHEMICALS PLC Easting: 387700 Northing: 398100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 25/07/2000 Version End Date: -
A	35m SE	Status: Historical Licence No: 2569006026 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, CLAYTON, MANCHESTER" Data Type: Point Name: CIBA SPECIALTY CHEMICALS PLC Easting: 387700 Northing: 398100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 25/07/2000 Version End Date: -
A	35m SE	Status: Historical Licence No: 2569006026 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, CLAYTON, MANCHESTER Data Type: Point Name: CIBA SPECIALTY CHEMICALS PLC Easting: 387700 Northing: 398100	Annual Volume (m ³): 633962 Max Daily Volume (m ³): 2837 Original Application No: - Original Start Date: 24/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 25/07/2000 Version End Date: -
A	35m SE	Status: Historical Licence No: 2569006026 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, CLAYTON, MANCHESTER Data Type: Point Name: CIBA SPECIALTY CHEMICALS PLC Easting: 387700 Northing: 398100	Annual Volume (m ³): 633962 Max Daily Volume (m ³): 2837 Original Application No: - Original Start Date: 24/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 25/07/2000 Version End Date: -

ID	Location	Details	
B	92m S	Status: Historical Licence No: NW/069/0006/005 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 266113 Max Daily Volume (m ³): 1000 Original Application No: - Original Start Date: 14/11/2012 Expiry Date: 31/03/2018 Issue No: 1 Version Start Date: 14/11/2012 Version End Date: -
B	92m S	Status: Historical Licence No: NW/069/0006/005 Details: Horticultural Watering Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 266113 Max Daily Volume (m ³): 1000 Original Application No: - Original Start Date: 14/11/2012 Expiry Date: 31/03/2018 Issue No: 1 Version Start Date: 14/11/2012 Version End Date: -
B	92m S	Status: Historical Licence No: NW/069/0006/005 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 266113 Max Daily Volume (m ³): 1000 Original Application No: - Original Start Date: 14/11/2012 Expiry Date: 31/03/2018 Issue No: 1 Version Start Date: 14/11/2012 Version End Date: -
B	92m S	Status: Active Licence No: NW/069/0006/005/R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 221650 Max Daily Volume (m ³): 1000 Original Application No: NPS/WR/024168 Original Start Date: 01/04/2018 Expiry Date: 31/03/2024 Issue No: 1 Version Start Date: 01/04/2018 Version End Date: -
B	92m S	Status: Active Licence No: NW/069/0006/005/R01 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT OPENSHAW, WEST ASHTON Data Type: Point Name: MANCHESTER CITY FOOTBALL CLUB LIMITED Easting: 387681 Northing: 398032	Annual Volume (m ³): 221650 Max Daily Volume (m ³): 1000 Original Application No: NPS/WR/024168 Original Start Date: 01/04/2018 Expiry Date: 31/03/2024 Issue No: 1 Version Start Date: 01/04/2018 Version End Date: -



ID	Location	Details	
D	299m NE	Status: Active Licence No: 2569006037 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLE 2 ON PREMISES AT CROFT STREET, CLAYTON, MANCHESTER Data Type: Point Name: Evonik Chemicals Ltd Easting: 387859 Northing: 398375	Annual Volume (m ³): 111831.6 Max Daily Volume (m ³): 654.62 Original Application No: NPS/WR/035267 Original Start Date: 21/05/1985 Expiry Date: - Issue No: 104 Version Start Date: 19/04/2021 Version End Date: -
D	303m NE	Status: Active Licence No: 2569006037 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLE 1 ON PREMISES AT CROFT STREET, CLAYTON, MANCHESTER Data Type: Point Name: Evonik Chemicals Ltd Easting: 387860 Northing: 398379	Annual Volume (m ³): 111831.6 Max Daily Volume (m ³): 654.62 Original Application No: NPS/WR/035267 Original Start Date: 21/05/1985 Expiry Date: - Issue No: 104 Version Start Date: 19/04/2021 Version End Date: -
E	332m E	Status: Historical Licence No: 2569006036 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER" Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
E	332m E	Status: Historical Licence No: 2569006036 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER" Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -



ID	Location	Details	
E	332m E	Status: Historical Licence No: 2569006036 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
E	332m E	Status: Historical Licence No: 2569006036 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
E	332m E	Status: Historical Licence No: 2569006036 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): 372772 Max Daily Volume (m ³): 3600.5 Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
E	332m E	Status: Historical Licence No: 2569006036 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 388000 Northing: 398200	Annual Volume (m ³): 372772 Max Daily Volume (m ³): 3600.5 Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -

ID	Location	Details	
D	344m NE	Status: Historical Licence No: 2569006037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLES (2) ON PREMISES AT CROFT ST, CLAYTON, MANCHESTER" Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 387900 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
D	344m NE	Status: Historical Licence No: 2569006037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLES (2) ON PREMISES AT CROFT ST, CLAYTON, MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 387900 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
D	344m NE	Status: Historical Licence No: 2569006037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLES X 2 ON PREMISES AT CROFT STREET CLAYTON MANCHESTER Data Type: Point Name: AIR PRODUCTS CHEMICALS LTD Easting: 387900 Northing: 398400	Annual Volume (m ³): 111832 Max Daily Volume (m ³): 654.624 Original Application No: - Original Start Date: 21/05/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1996 Version End Date: -
2	379m E	Status: Active Licence No: 2569006036 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLE ON PREMISES AT CLAYTON, MANCHESTER Data Type: Point Name: Evonik Chemicals Ltd Easting: 388027 Northing: 398277	Annual Volume (m ³): 372772 Max Daily Volume (m ³): 3600.5 Original Application No: NPS/WR/035265 Original Start Date: 21/05/1985 Expiry Date: - Issue No: 104 Version Start Date: 19/04/2021 Version End Date: -



ID	Location	Details	
-	1294m S	Status: Historical Licence No: 2569006044 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PRESTON STREET, GORTON, MANCHESTER Data Type: Point Name: CEMEX UK MATERIALS LTD Easting: 388030 Northing: 396880	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 115 Original Application No: - Original Start Date: 23/10/2003 Expiry Date: 31/03/2014 Issue No: 3 Version Start Date: 15/10/2007 Version End Date: -
-	1294m S	Status: Active Licence No: NW/069/0004/012 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PRESTON STREET, MANCHESTER Data Type: Point Name: Cemex UK Materials Limited Easting: 388030 Northing: 396880	Annual Volume (m ³): 7500 Max Daily Volume (m ³): 72 Original Application No: NPS/WR/030760A Original Start Date: 19/06/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 21/12/2018 Version End Date: -
-	1971m NE	Status: Historical Licence No: 2569006021 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT CLAYTON MILL BRIDGE, MANCHESTER Data Type: Point Name: MANCHESTER ABATTOIR Easting: 389100 Northing: 399500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/05/1998 Version End Date: -
-	1992m NW	Status: Historical Licence No: 2569005061 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT NORTON STREET, MILES PLATTING, MANCHESTER" Data Type: Point Name: HANSON QUARRY PRODUCTS EUROPE LTD Easting: 386550 Northing: 399790	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 08/02/2000 Expiry Date: - Issue No: 2 Version Start Date: 01/07/2000 Version End Date: -

ID	Location	Details	
-	1992m NW	Status: Active Licence No: 2569005061 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT NORTON STREET, MILES PLATTING, MANCHESTER Data Type: Point Name: HANSON QUARRY PRODUCTS EUROPE LIMITED Easting: 386550 Northing: 399790	Annual Volume (m ³): 33000 Max Daily Volume (m ³): 125 Original Application No: NPS/WR/011609 Original Start Date: 08/02/2000 Expiry Date: - Issue No: 3 Version Start Date: 13/08/2012 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	6
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Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 124 >](#)

ID	Location	Details	
1	269m N	Status: Historical Licence No: 2569006996 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: ASHTON CANAL, MANCHESTER [VITACOM] Data Type: Point Name: BRITISH WATERWAYS Easting: 387600 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
C	289m NE	Status: Historical Licence No: 2569006997 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "ASHTON CANAL, MANCHESTER [CLAYTON ANALINE]" Data Type: Point Name: BRITISH WATERWAYS Easting: 387800 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -

ID	Location	Details	
C	289m NE	Status: Historical Licence No: 2569006997 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: ASHTON CANAL, MANCHESTER [CLAYTON ANALINE] Data Type: Point Name: BRITISH WATERWAYS BOARD Easting: 387800 Northing: 398400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
C	289m NE	Status: Historical Licence No: 2569006997 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: ASHTON CANAL MANCHESTER CLAYTON ANALINE Data Type: Point Name: Canal and River Trust Easting: 387800 Northing: 398400	Annual Volume (m ³): 3500420 Max Daily Volume (m ³): 3500420 Original Application No: 1470 Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
F	456m E	Status: Historical Licence No: 2569006995 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "ASHTON CANAL, MANCHESTER" Data Type: Point Name: BRITISH WATERWAYS Easting: 388100 Northing: 398300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -
F	456m E	Status: Historical Licence No: 2569006995 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: ASHTON CANAL, MANCHESTER Data Type: Point Name: Canal and River Trust Easting: 388100 Northing: 398300	Annual Volume (m ³): 68190 Max Daily Volume (m ³): 68190 Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1969 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.



5.8 Potable abstractions

Records within 2000m

0

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m

0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

1

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on [page 134 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
A	238m NE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ashton Canal

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m

1

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on [page 134 >](#)

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on [page 134 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Irwell / Manchester Ship Canal (Irk to confluence with Upper Mers	GB112069061452	Croal Irwell	Irwell

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified

2

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 134 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
4	238m NE	Canal	Ashton Canal and Peak Forest Canal, lower section	GB71210219 ↗	Moderate	Fail	Moderate	2019
-	3901m W	River	Irwell / Manchester Ship Canal (Irk to confluence with Upper Mers)	GB112069061452 ↗	Moderate	Fail	Moderate	2019

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1
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Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 134 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	Manchester and East Cheshire Permo-Triassic Sandstone Aquifers	GB41201G101100 ↗	Poor	Poor	Poor	2019

This data is sourced from the Environment Agency and Natural Resources Wales.



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m**0**

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m**0**

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m**0**

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

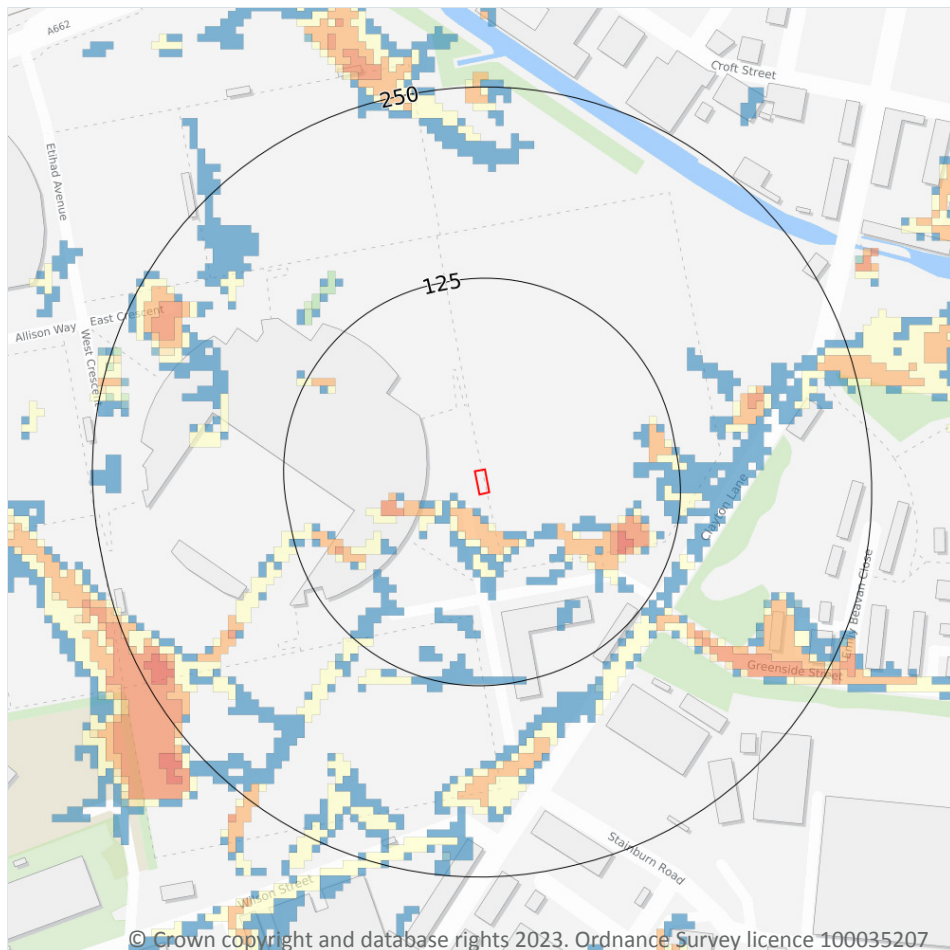
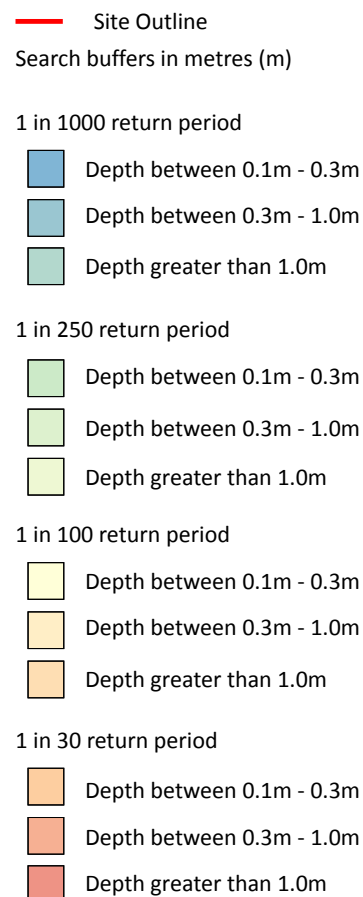
Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

1 in 30 year, 0.1m - 0.3m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 140 >](#)

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

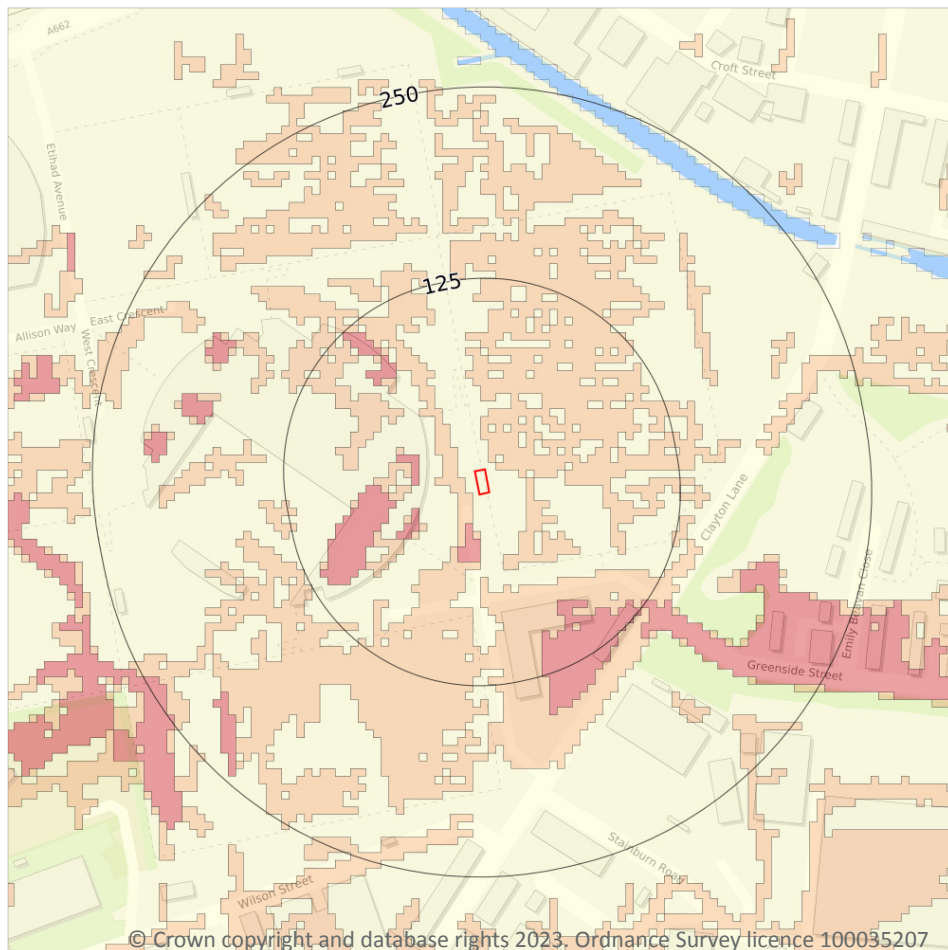
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

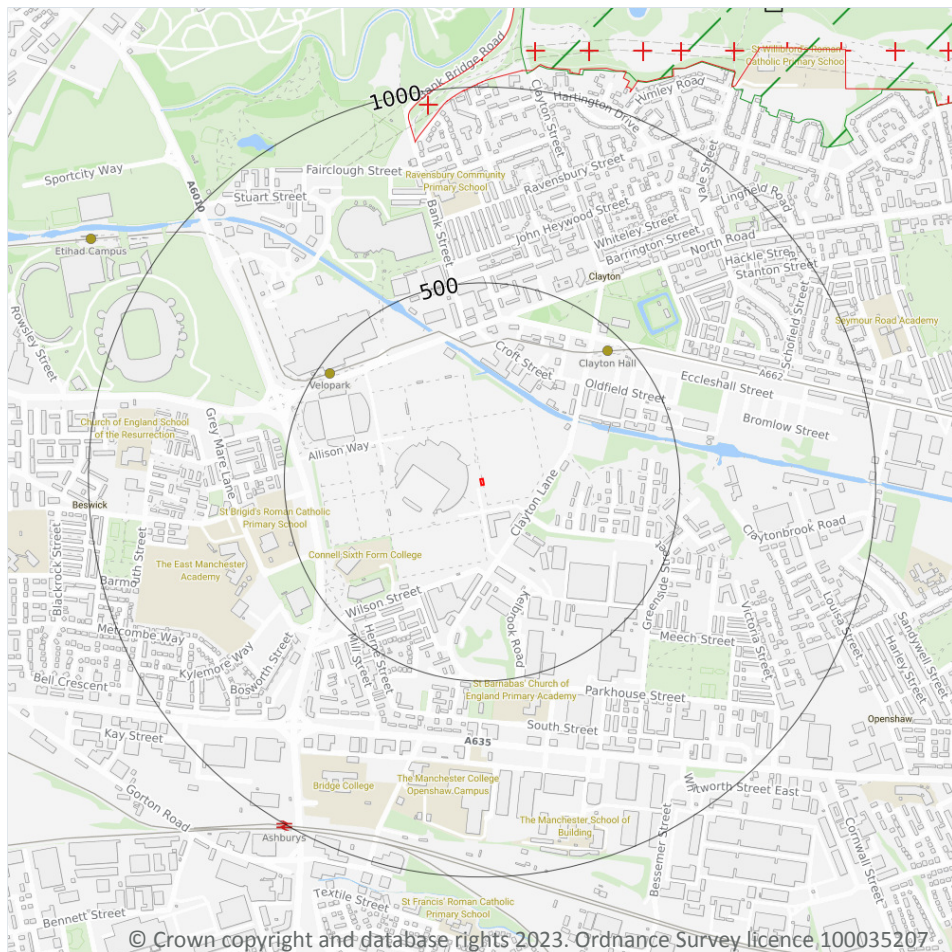
High

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 142 >](#)

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- + Local Nature Reserves (LNR)
- Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m**1**

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on [page 143 >](#)

ID	Location	Name	Data source
A	877m N	Clayton Vale	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m**0**

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m**0**

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m**0**

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.



10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

2

Areas designated to prevent urban sprawl by keeping land permanently open.

Features are displayed on the Environmental designations map on [page 143](#) >

ID	Location	Name	Local Authority name
A	1040m N	Merseyside and Greater Manchester	Manchester
-	1893m NE	Merseyside and Greater Manchester	Tameside

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

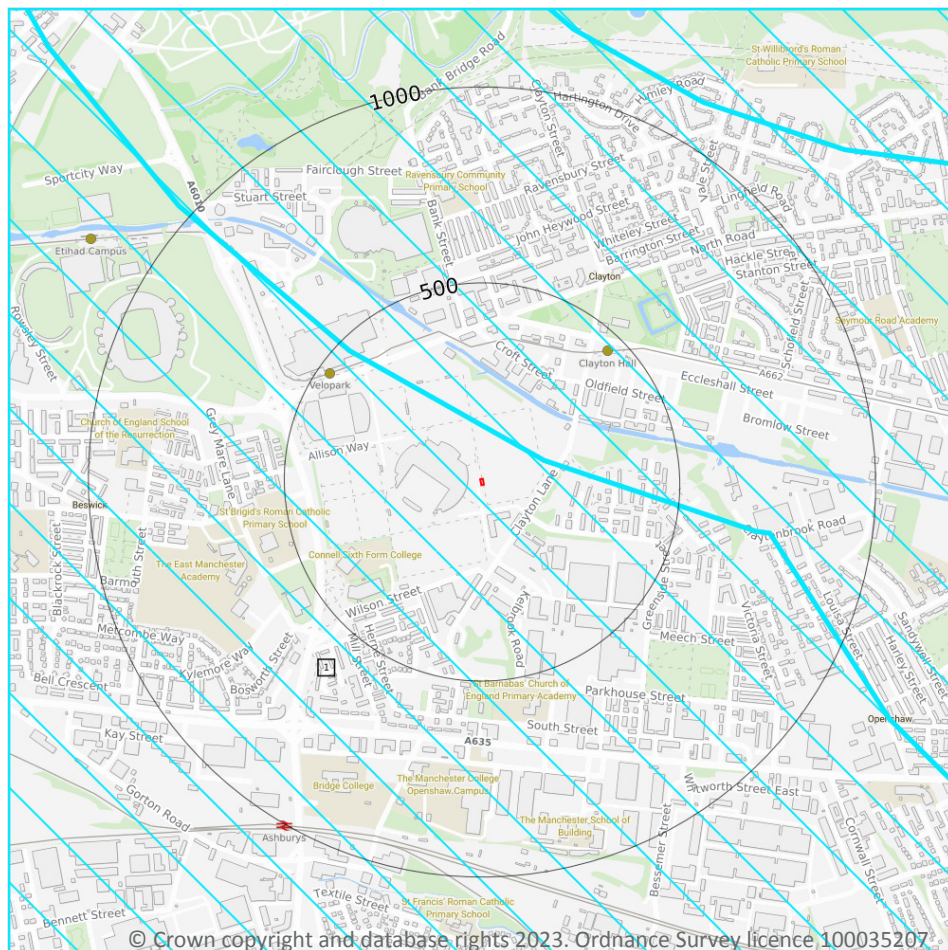
Records within 2000m

0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 148](#) >

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Airports, helipads and other aviation proposals.</p> <p>Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t).</p> <p>Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p>

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0
-----------------------------	----------

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

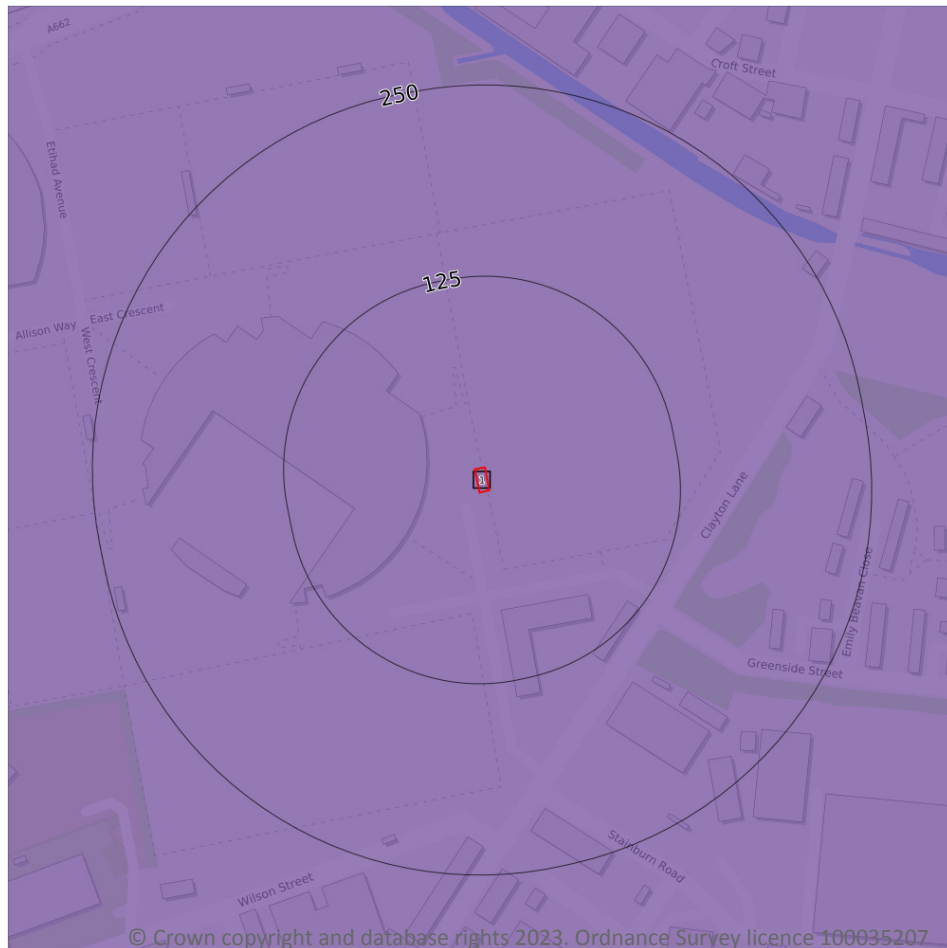
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 152](#) >

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.

13 Habitat designations



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.



13.3 Open Mosaic Habitat

Records within 250m

1

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

Features are displayed on the Habitat designations map on [page 154 >](#)

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
1	On site	NLUD Ref: 421501629; BRITPITS ref: 29591	Low	National Land Use Database - Previously Developed Land	British Geological Survey BRITPITS database	UK Perspectives Aerial Photography

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

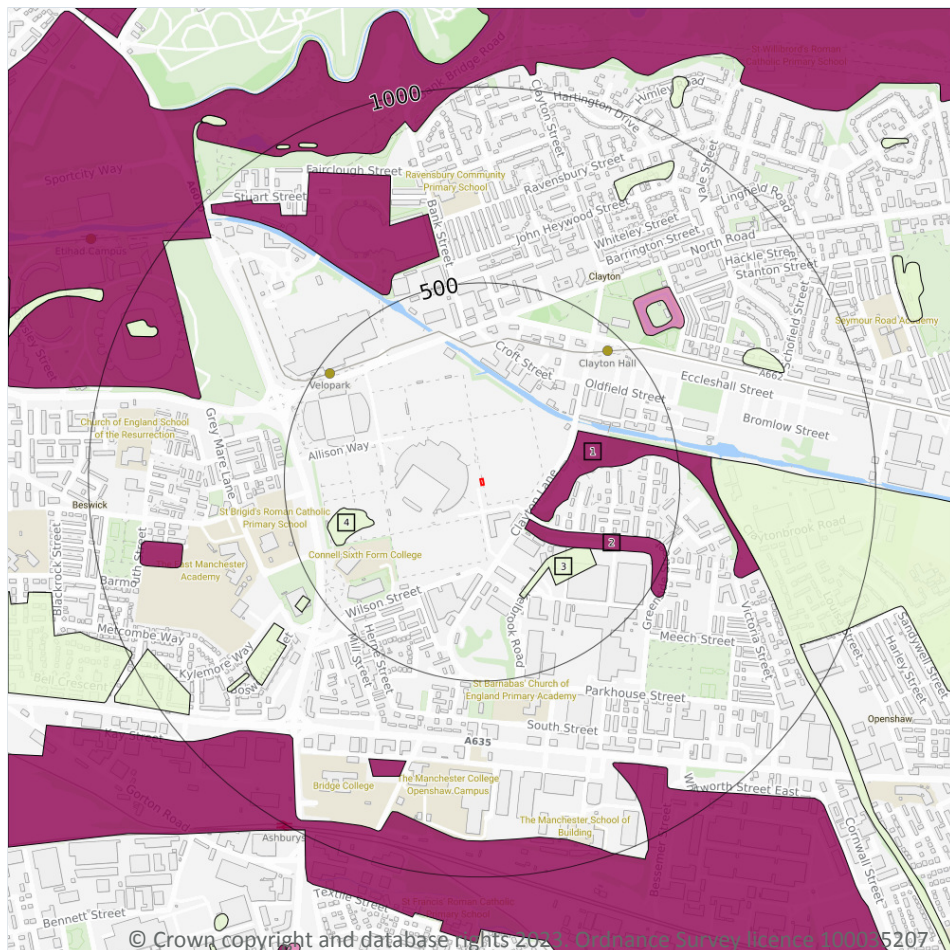
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 156](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SJ89NE

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground



- Site Outline
- Search buffers in metres (m)
- Reclaimed ground
 - Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

4

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 157](#) >

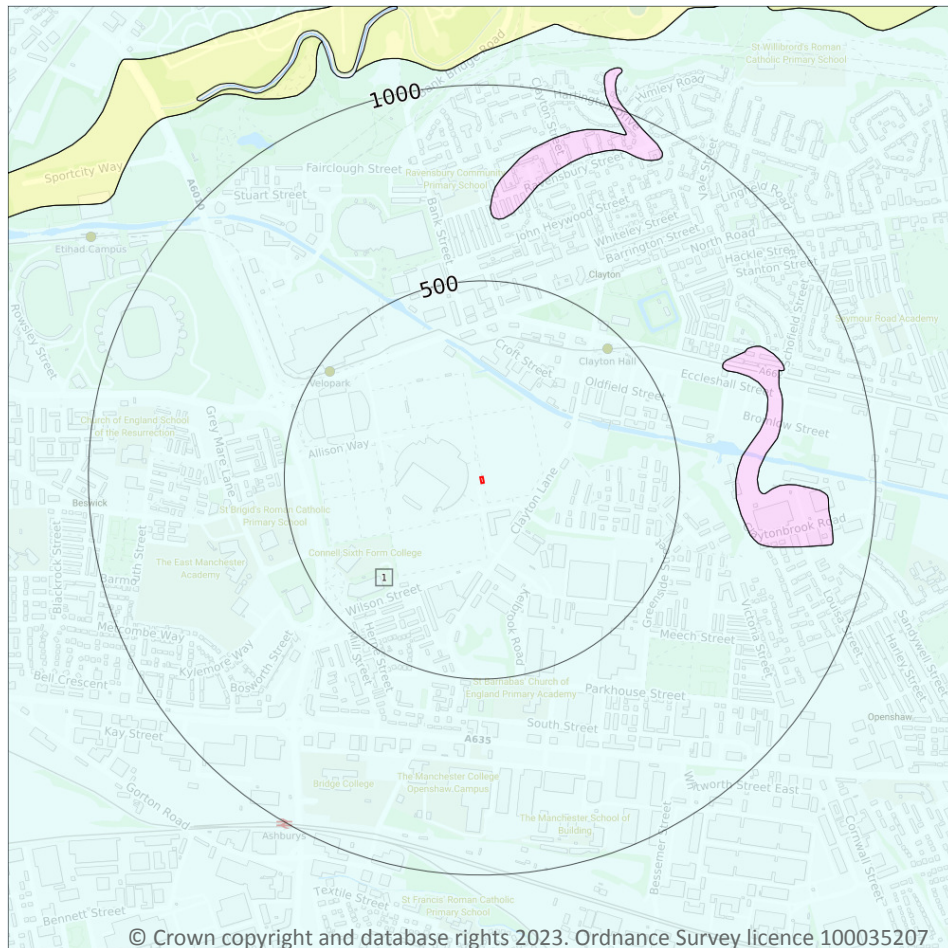
ID	Location	LEX Code	Description	Rock description
1	137m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	146m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	249m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	290m W	WMGR-ARTDP	Infilled Ground	Artificial Deposit



This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

1

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 159](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

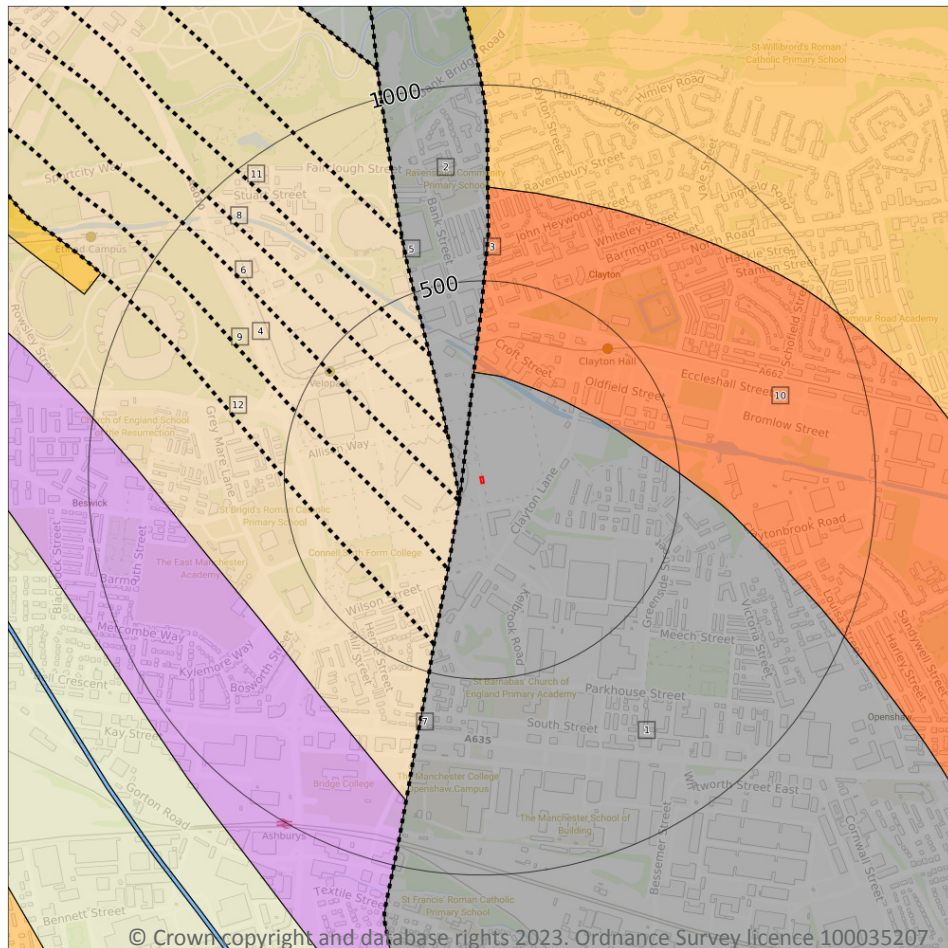
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

4

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 161](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
2	45m W	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
4	62m W	PUCM-MDSS	Pennine Upper Coal Measures Formation - Mudstone, Siltstone And Sandstone	Westphalian D Sub-age - Bolsovian Sub-age



ID	Location	LEX Code	Description	Rock age
10	257m N	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	8
----------------------------	----------

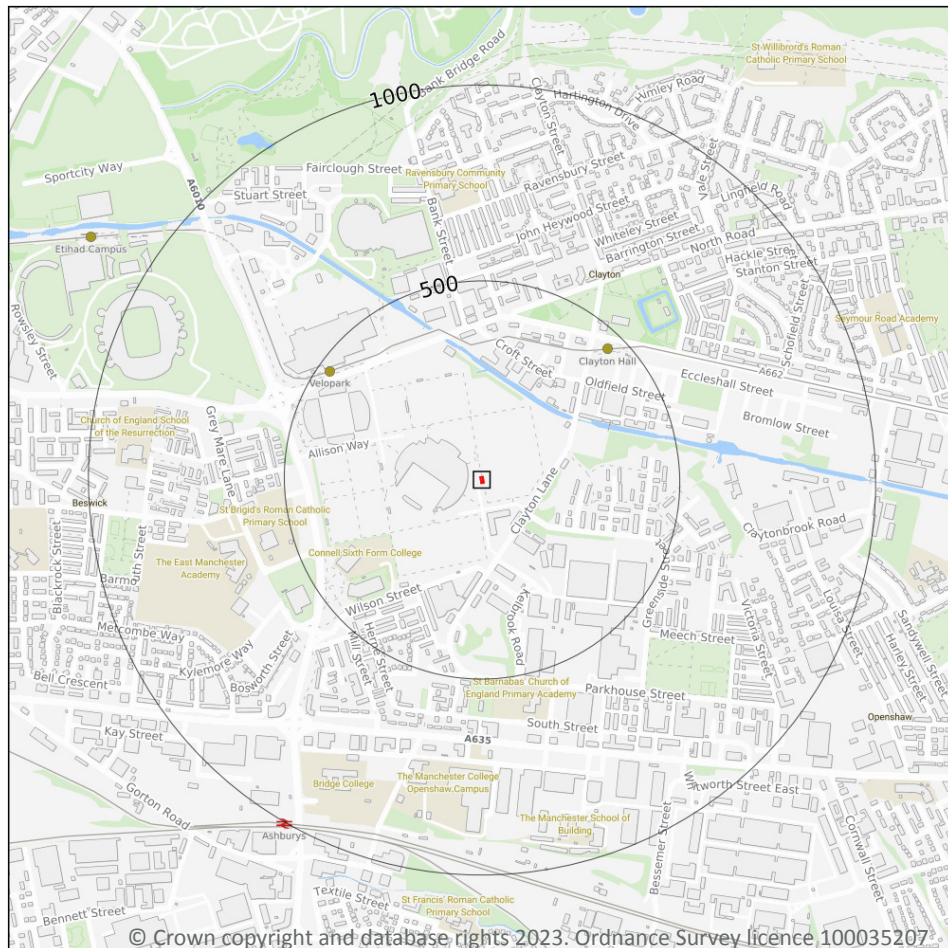
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 161](#) >

ID	Location	Category	Description
3	45m W	FAULT	Normal fault, inferred; crossmarks on downthrow side
5	62m W	FAULT	Normal fault, inferred; crossmarks on downthrow side
6	73m SW	ROCK	Coal seam, inferred
7	73m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
8	140m NW	ROCK	Coal seam, inferred
9	207m SW	ROCK	Coal seam, inferred
11	337m NW	ROCK	Coal seam, inferred
12	365m SW	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

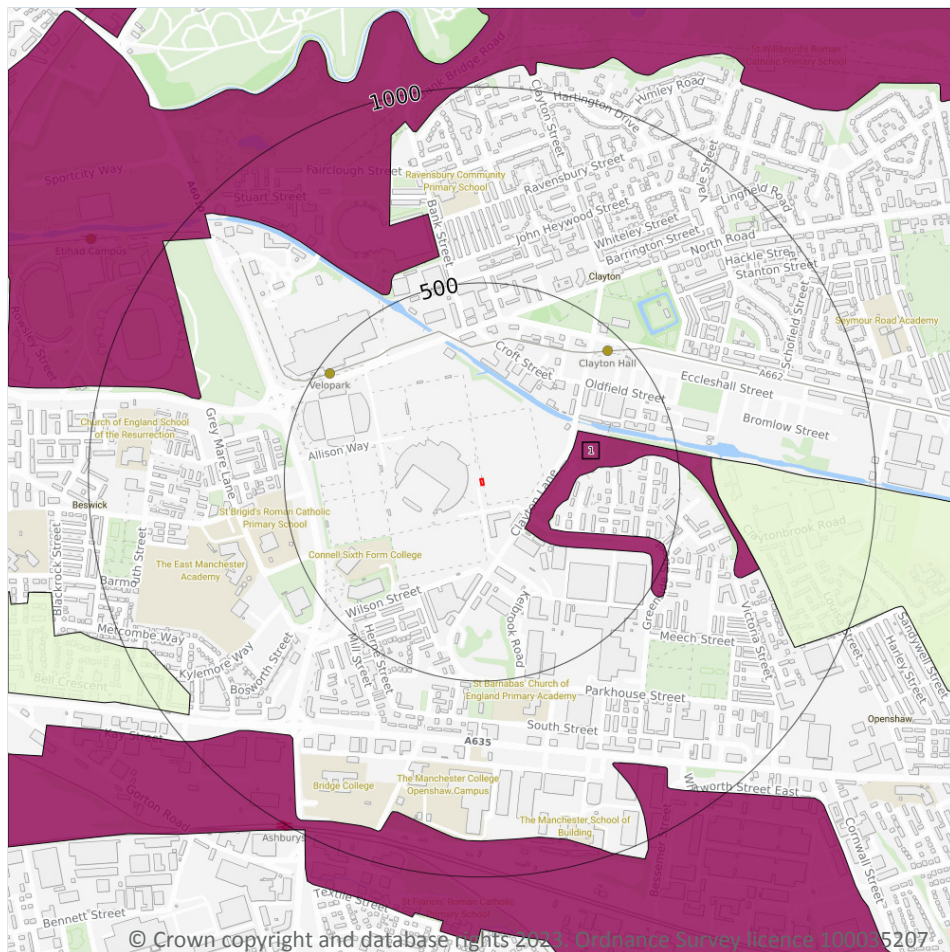
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 163](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW085_manchester_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground



- Site Outline
- Search buffers in metres (m)
- Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m

1

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 164](#) >

ID	Location	LEX Code	Description	Rock description
1	136m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

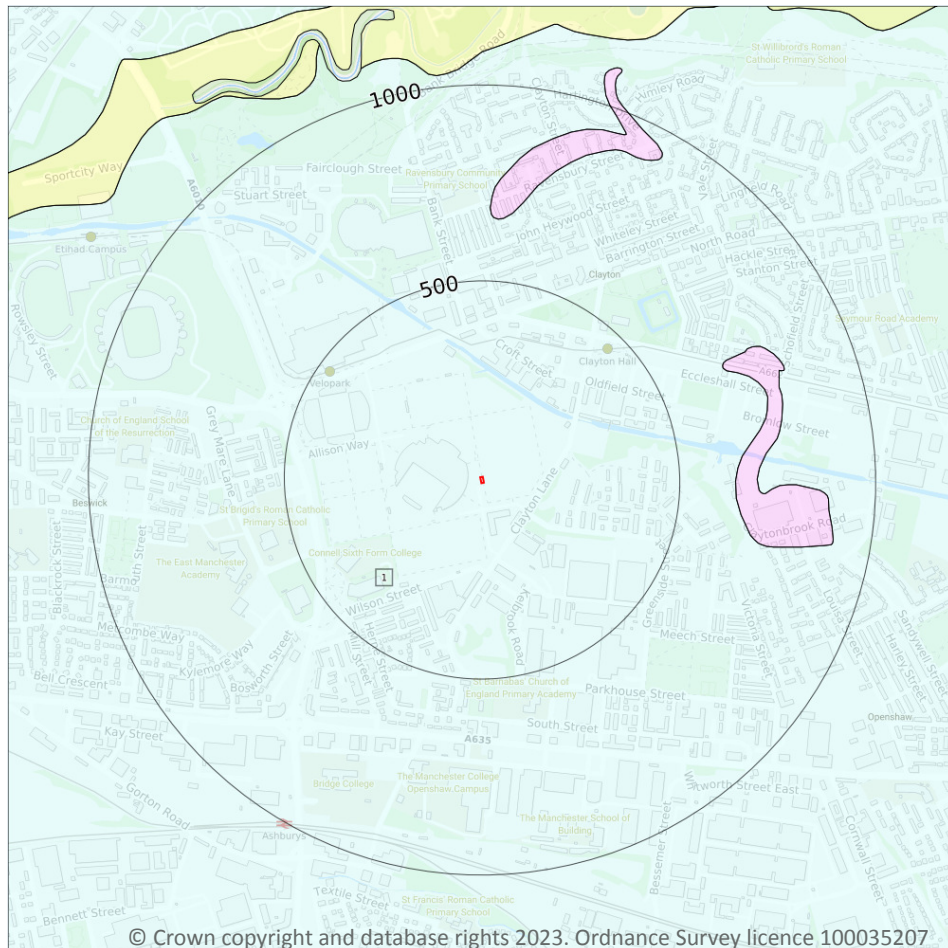
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

1

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 166](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m**0**

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

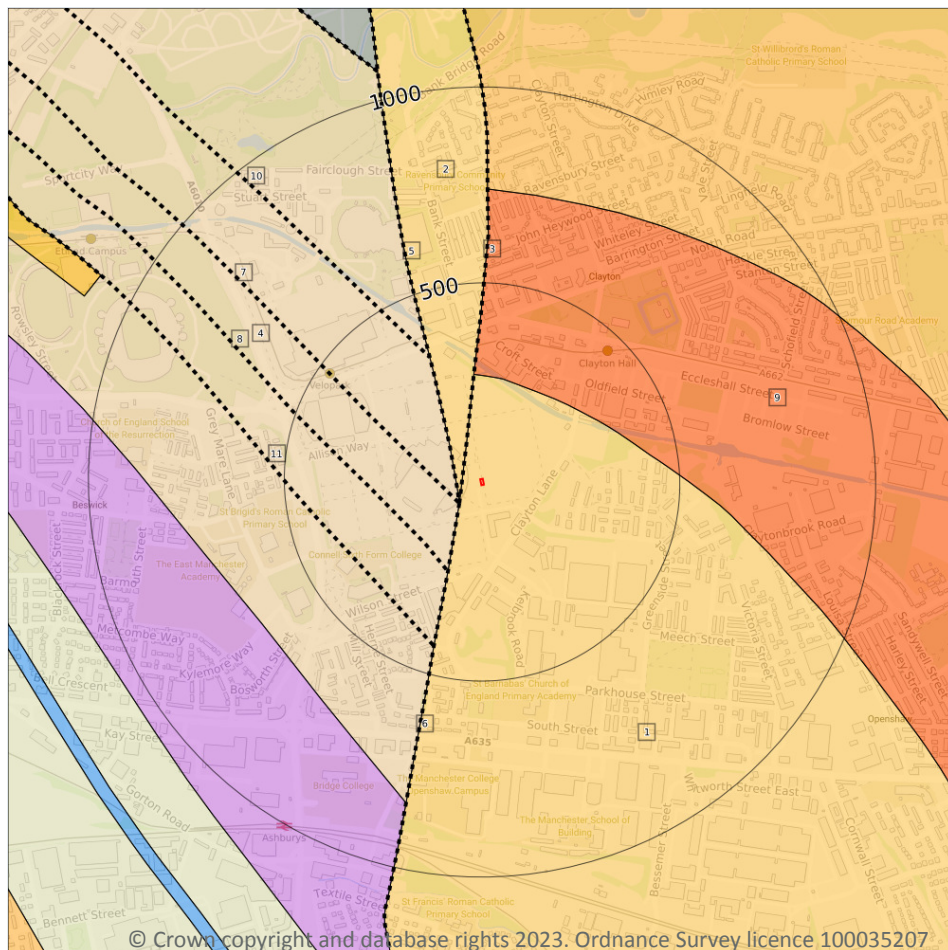
Records within 50m**0**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

4

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 168 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
2	46m W	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
4	62m W	PUCM-MDSS	PENNINE UPPER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
9	257m N	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1
---------------------------	----------

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	7
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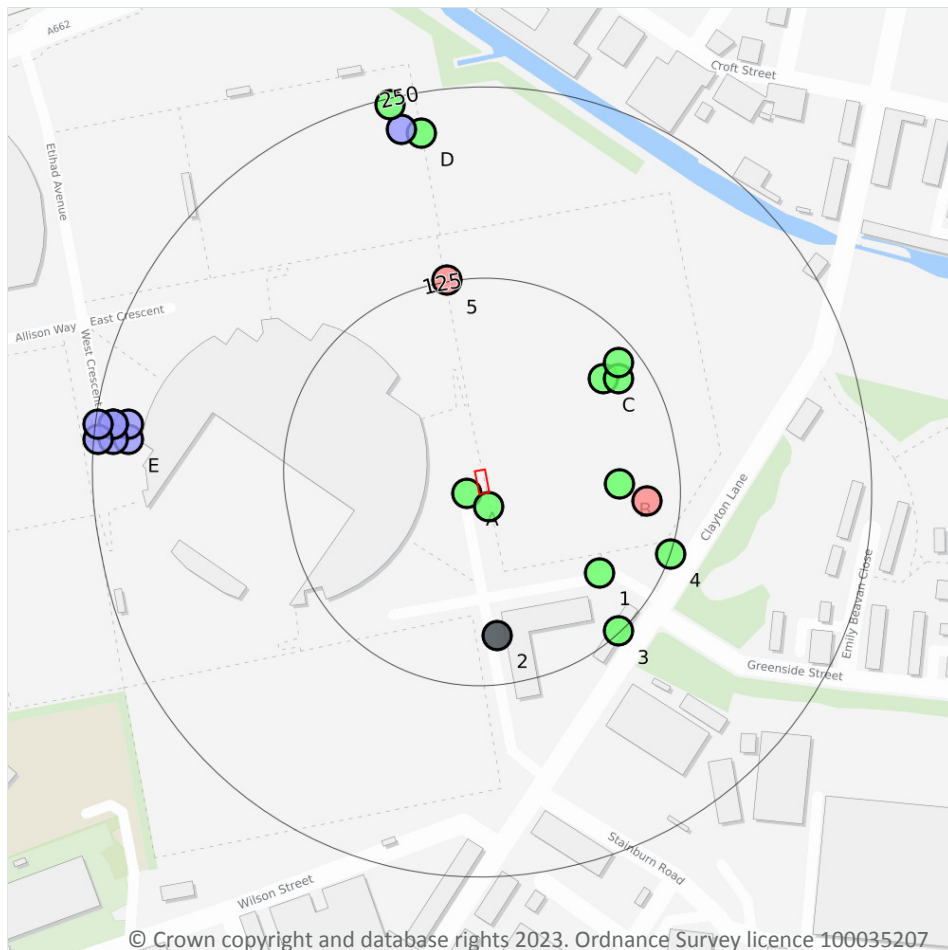
Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 168 >](#)

ID	Location	Category	Description
3	46m W	FAULT	Fault, inferred
5	62m W	FAULT	Fault, inferred
6	73m SW	FAULT	Fault, inferred
7	73m SW	ROCK	Coal seam, inferred
8	207m SW	ROCK	Coal seam, inferred
10	338m NW	ROCK	Coal seam, inferred
11	366m SW	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

22

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 170](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	8m SW	387661 398125	CLAYTON ANILINE WORKS C14	13.56	N	936605 ↗
A	9m S	387675 398116	CLAYTON ANILINE WORKS C15	13.72	N	936606 ↗
B	86m E	387761 398131	CLAYTON ANILINE WORKS, BORE AT CHIMNEY	22.86	N	936604 ↗

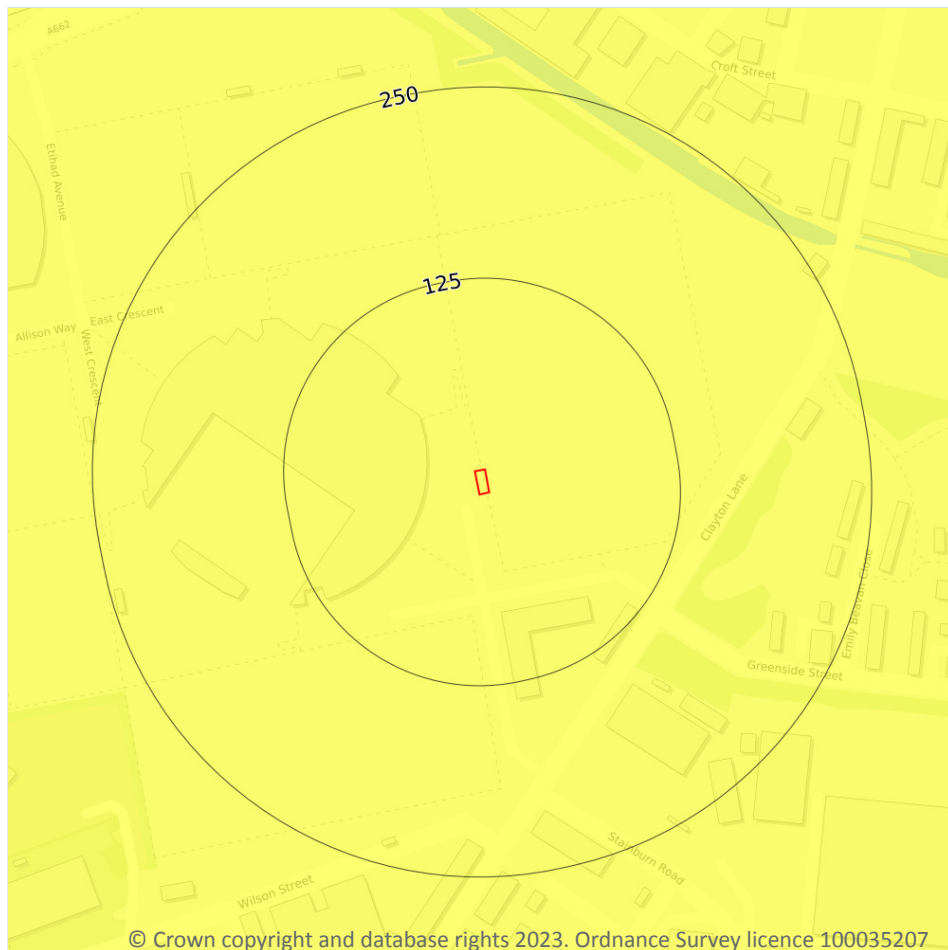


ID	Location	Grid reference	Name	Length	Confidential	Web link
1	89m SE	387748 398073	CLAYTON ANILINE WORKS C5	15.24	N	936602 ↗
2	93m S	387681 398032	MANCHESTER CITY FOOTBALL ACADEMY	-	Y	N/A
C	97m NE	387750 398200	CIBA CLAYTON MANCHESTER 3	30.0	N	937269 ↗
B	104m E	387779 398120	CLAYTON ANILINE CO.	173.13	N	936500 ↗
C	106m NE	387760 398200	CIBA CLAYTON MANCHESTER 1	15.4	N	937267 ↗
C	112m NE	387760 398210	CIBA CLAYTON MANCHESTER 2	15.0	N	937268 ↗
3	124m SE	387760 398035	CLAYTON ANILINE WORKS C3	12.34	N	936601 ↗
4	125m E	387794 398085	CLAYTON ANILINE WORKS C10	13.41	N	936603 ↗
5	126m N	387648 398264	CLAYTON ANILINE CO.	60.96	N	936499 ↗
D	224m N	387631 398360	CLAYTON ANILINE WORKS T1	10.06	N	936607 ↗
E	227m W	387440 398160	CLAYTON WORKS MANCHESTER 1	7.01	N	937006 ↗
E	228m W	387440 398170	CLAYTON WORKS MANCHESTER 5	8.08	N	937010 ↗
D	229m N	387618 398363	CLAYTON ANILINE WORKS T3	5.49	N	936609 ↗
E	237m W	387430 398160	CLAYTON WORKS MANCHESTER 2	7.01	N	937007 ↗
E	238m W	387430 398170	CLAYTON WORKS MANCHESTER 6	6.55	N	937011 ↗
E	238m W	387430 398170	CLAYTON WORKS MANCHESTER 4	5.72	N	937009 ↗
D	246m N	387611 398379	CLAYTON ANILINE WORKS T2	13.72	N	936608 ↗
E	247m W	387420 398160	CLAYTON WORKS MANCHESTER 3	7.01	N	937008 ↗
E	248m W	387420 398170	CLAYTON WORKS MANCHESTER 7	6.1	N	937012 ↗

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

1

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

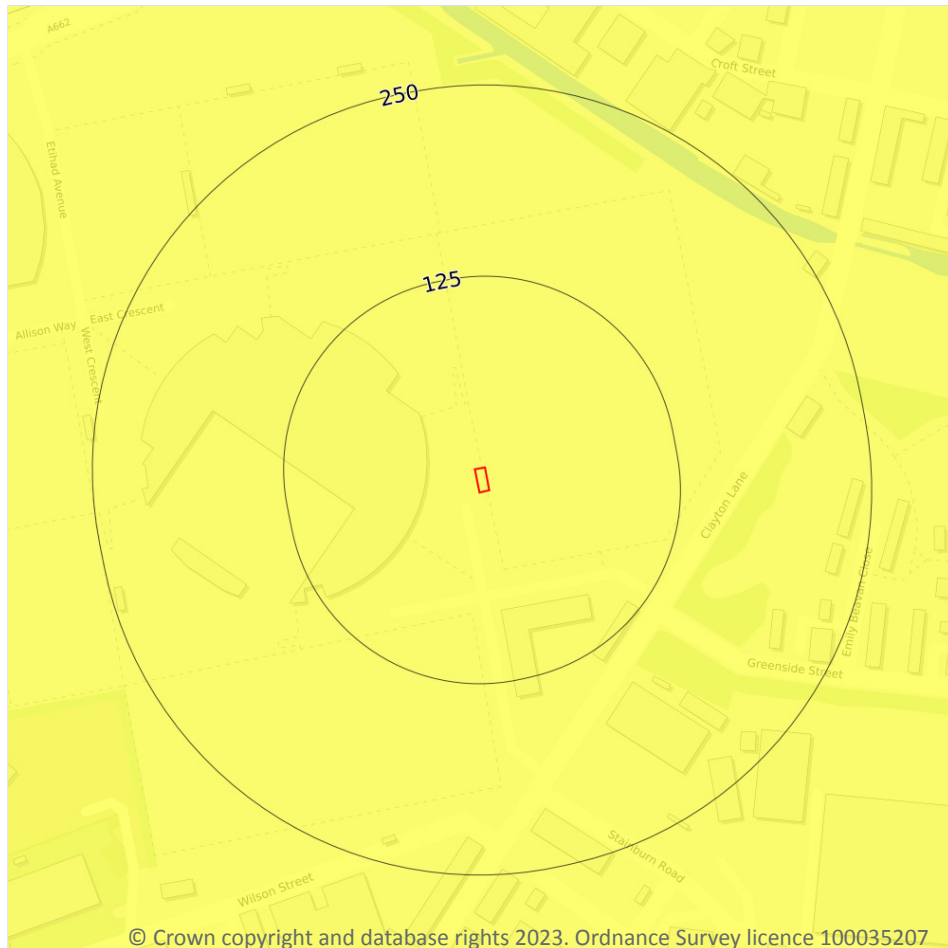
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 172 >](#)

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

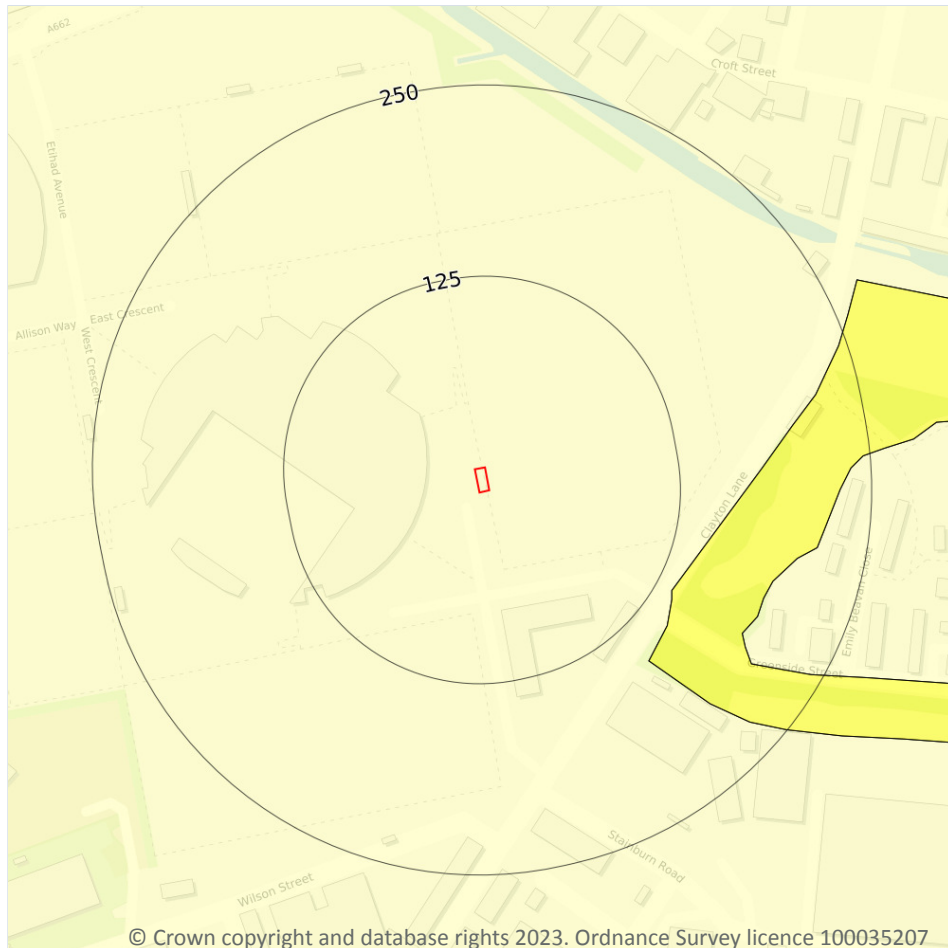
Features are displayed on the Natural ground subsidence - Running sands map on [page 173 >](#)

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

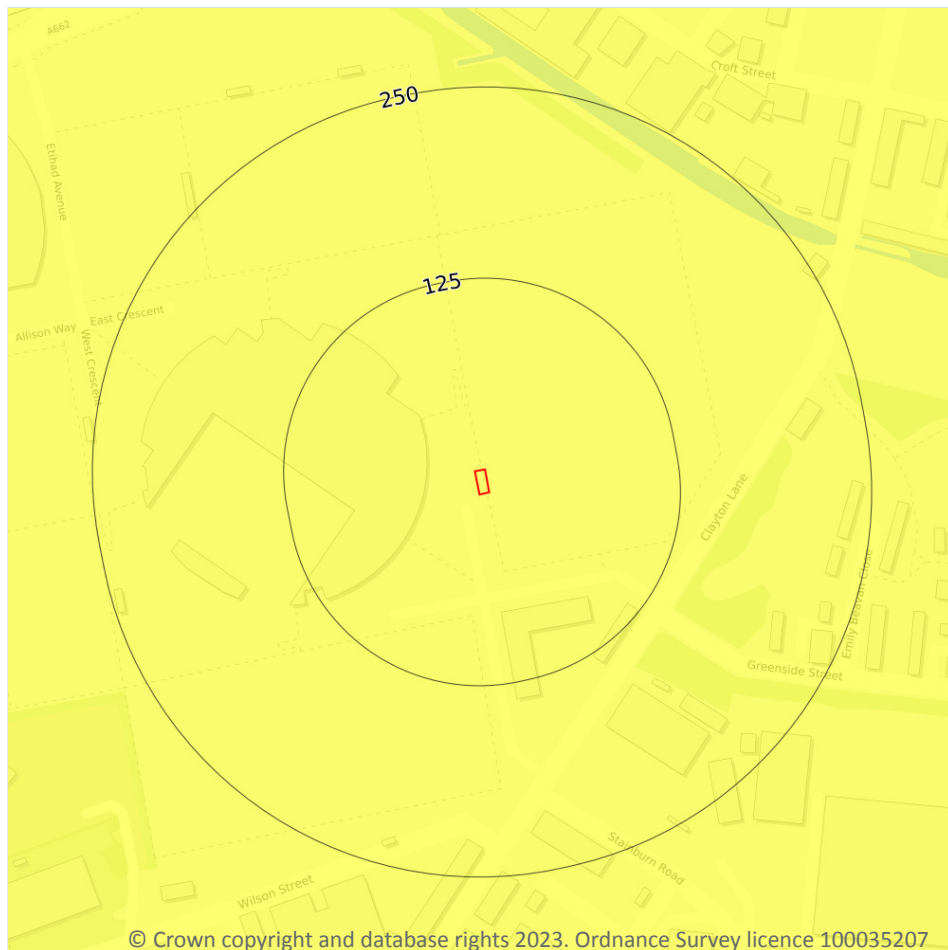
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 174 >](#)

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

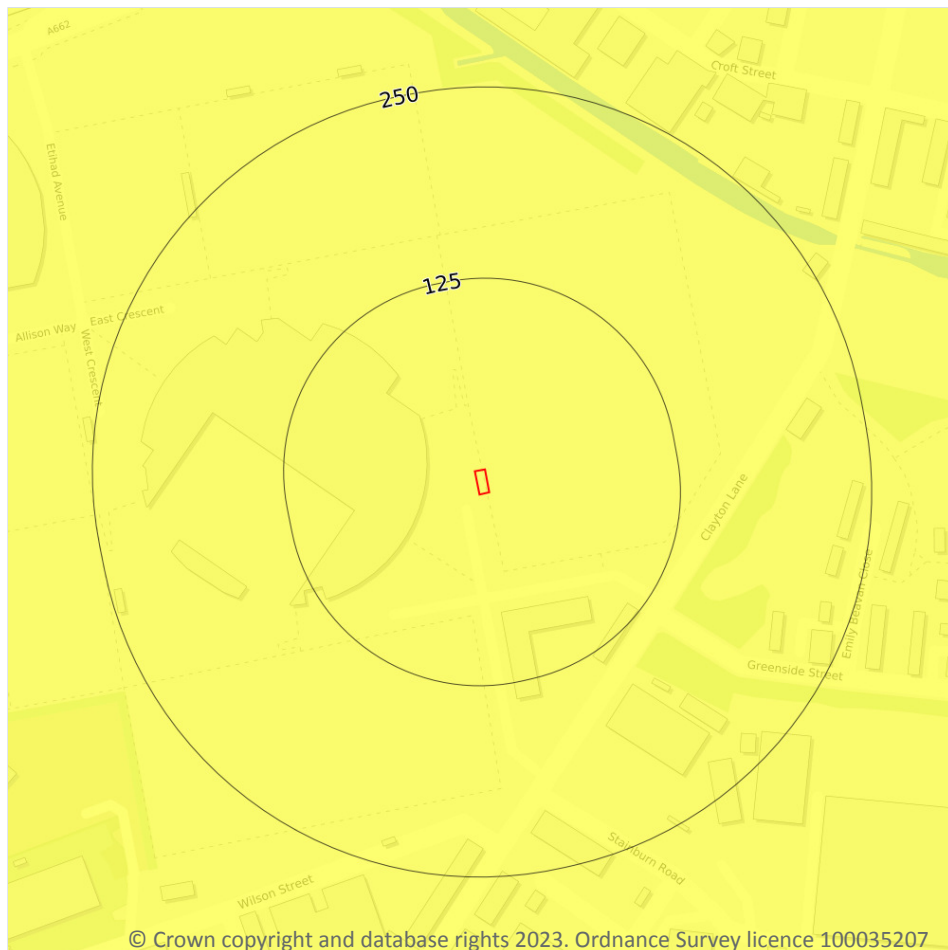
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 175 >](#)

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

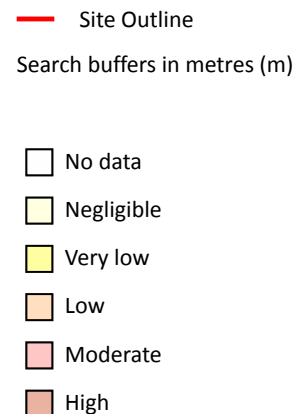
Features are displayed on the Natural ground subsidence - Landslides map on [page 176 >](#)

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 177 >](#)

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
 - Sporadic underground mining of restricted extent possible
 - Localised small scale underground mining possible
 - Small scale mining possible
 - Underground mining known or likely within or in close proximity
 - Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

4

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 179](#) >

ID	Location	Details	Description
C	216m W	Name: Clayton Colliery Address: Gorton, MANCHESTER, Lancashire Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
H	455m E	Name: Stockport Junction Sand Pit Address: Openshaw, MANCHESTER, Lancashire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
L	483m S	Name: North Street Brick Works Address: Openshaw, MANCHESTER, Lancashire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
M	497m N	Name: West End Brick Field Address: Clayton, MANCHESTER, Lancashire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	40
----------------------------	-----------

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 179 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
1	6m W	Pond	1890	1:10560
A	91m NW	Pond	1851	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
A	121m NW	Refuse Heap	1890	1:10560
2	122m SW	Unspecified Heap	1938	1:10560
A	122m NW	Refuse Heap	1915	1:10560
A	124m NW	Refuse Heap	1905	1:10560
A	126m NW	Unspecified Heap	1956	1:10560
A	127m NW	Unspecified Heap	1934	1:10560
A	128m NW	Refuse Heap	1923	1:10560
A	128m NW	Unspecified Heap	1938	1:10560
A	140m NW	Refuse Heap	1891	1:10560
A	142m NW	Refuse Heap	1906	1:10560
A	144m NW	Refuse Heap	1921	1:10560
A	150m W	Refuse	1956	1:10560
A	153m W	Refuse Heap	1968	1:10560
B	154m SE	Unspecified Heap	1985	1:10000
B	154m SE	Unspecified Heap	1991	1:10000
A	159m W	Refuse Heap	1934	1:10560
A	161m W	Refuse Heap	1938	1:10560
A	182m NW	Pond	1891	1:10560
3	198m NW	Pond	1851	1:10560
4	206m NE	Pond	1851	1:10560
5	206m SE	Unspecified Pit	1890	1:10560
C	209m SW	Unspecified Ground Workings	1934	1:10560
C	210m SW	Unspecified Heap	1938	1:10560
C	214m W	Colliery	1851	1:10560
D	222m NE	Canal	1923	1:10560
E	228m NE	Canal	1938	1:10560
E	228m NE	Canal	1933	1:10560
E	228m NE	Canal	1921	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
E	228m NE	Canal	1906	1:10560
E	228m NE	Canal	1891	1:10560
D	235m NE	Canal	1968	1:10560
D	235m NE	Canal	1956	1:10560
6	235m NE	Canal	1991	1:10000
D	238m NE	Canal	1985	1:10000
D	238m NE	Canal	1978	1:10000
F	248m SE	Reservoirs	1851	1:10560
F	248m SE	Reservoirs	1905	1:10560
F	248m SE	Reservoirs	1890	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

7

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining and ground workings map on [page 179 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
R	624m NW	Colliery	1921	1:10560
R	624m NW	Colliery	1906	1:10560
R	624m NW	Colliery	1923	1:10560
R	655m NW	Unspecified Disused Shafts	1985	1:10000
R	665m NW	Unspecified Shafts	1978	1:10000
R	669m NW	Unspecified Disused Shafts	1985	1:10000
R	679m NW	Unspecified Shafts	1978	1:10000

This data is sourced from Ordnance Survey/Groundsure.



18.4 Underground mining extents

Records within 500m

1

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

Features are displayed on the Mining and ground workings map on [page 179 >](#)

ID	Location	Mineral	Mineral type
7	306m W		Fireclay

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

1

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on [page 179 >](#)

ID	Location	Name	Commodity	Class	Likelihood
16	653m SW	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.



18.7 JPB mining areas

Records on site

1

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

Location	Details
On site	In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Please note, the plans held by JPB may also relate to non-mining records. Further details and a quote for services (if appropriate) can be obtained by emailing this report to enquiries.gs@jpb.co.uk ↗.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

2

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

Location	Mineral type
286m NW	Unspecified
379m NW	Unspecified

This data is sourced from Groundsure.



18.10 Mining record office plans

Records within 500m**1**

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

Location	Mineral
235m W	

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m**0**

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site**1**

Areas which could be affected by past, current or future coal mining.

Location	Details
On site	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site**0**

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site**0**

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

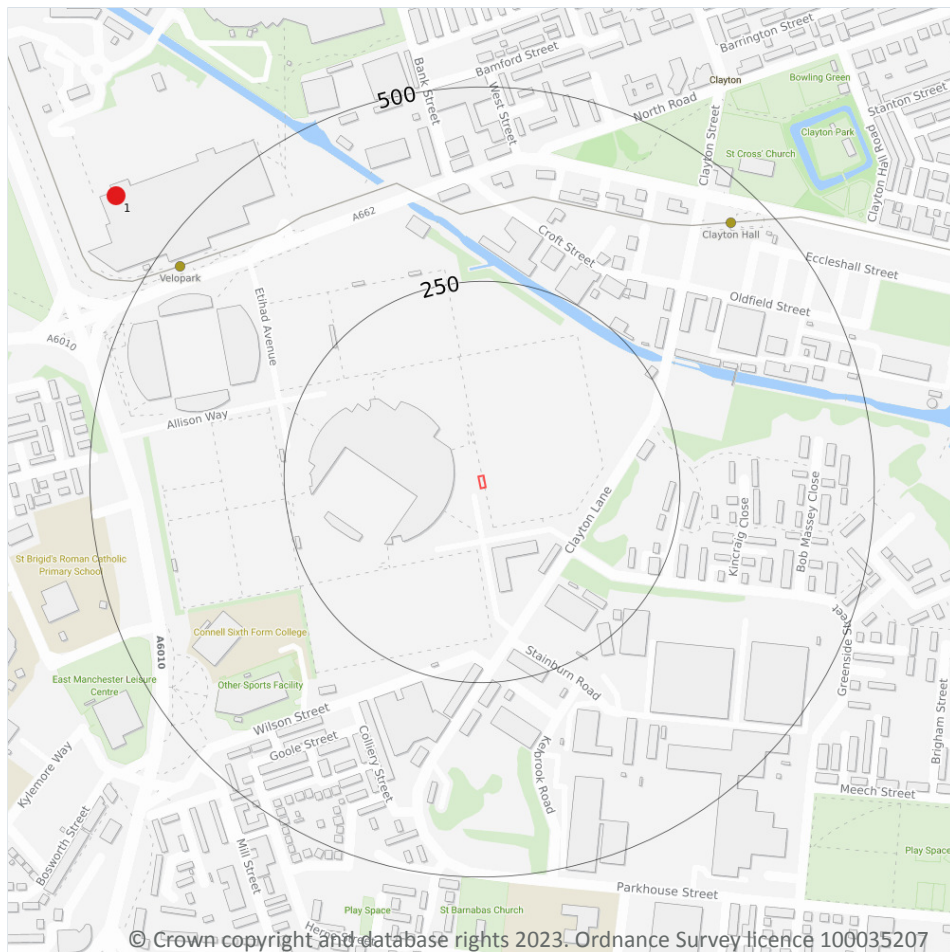
18.16 Clay mining

Records on site**0**

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Ground cavities and sinkholes



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- Mining cavities
- Reported recent incidents
- Historical incidents
- BGS karst database (Point)
- BGS karst database (Line)
- BGS karst database (Area)

19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

2

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

Features are displayed on the Ground cavities and sinkholes map on [page 187](#) >

ID	Location	Mine Address	Mineral	Data source	Publisher
1	590m NW	Manchester, Greater Manchester	Fireclay	'Underground Manchester - Secrets of the city revealed'	Willow Publishing
-	681m W	Ardwick, Greater Manchester	Bath Stone, Cornstone, Limestone	CATALOGUE OF PLANS OF ABANDONED MINES (NON COAL)	-

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.



19.5 National karst database

Records within 500m

0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

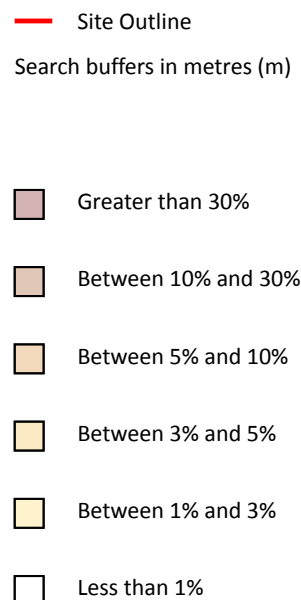
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.



20 Radon



20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 190 >](#)

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None



This data is sourced from the British Geological Survey and UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

3

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
40m W	15 - 25 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
40m W	15 - 25 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

4

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	17	3	60	41	0.3	67	31	27	5
24m S	15	2.6	52	36	0.3	69	28	30	5
24m E	15	2.6	34	23	0.3	63	20	23	3
35m SE	15	2.6	35	24	0.3	66	20	26	3



This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

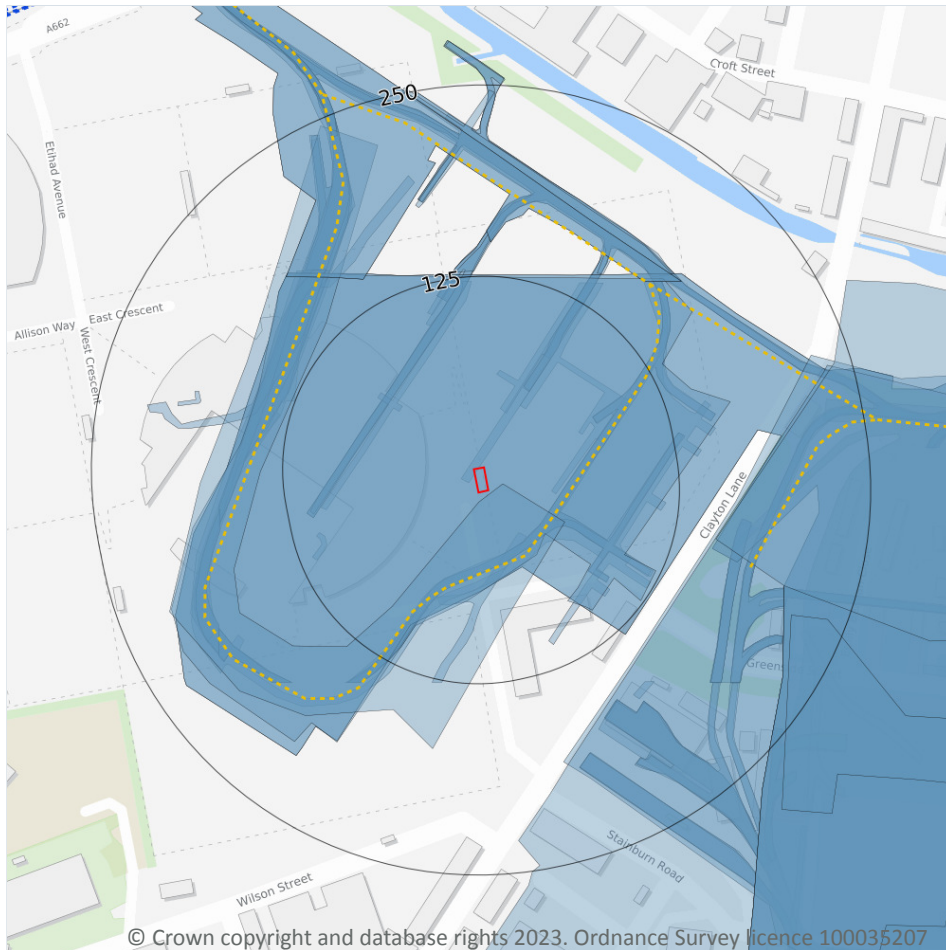
0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

22.1 Underground railways (London)

Records within 250m

0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

46

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on [page 194 >](#)

Location	Land Use	Year of mapping	Mapping scale
On site	Mineral Railway Sidings	1956	1250
On site	Railway Sidings	1938	10560
On site	Railway Sidings	1934	10560
2m SE	Railway Sidings	1978	10000
34m SE	Railway Sidings	1970	1250
38m N	Railway Sidings	1933	2500
40m SE	Mineral Railway Sidings	1949	1250
40m SE	Railway Sidings	1949	2500
62m NW	Railway Sidings	1933	2500
81m SW	Railway Sidings	1970	1250
104m W	Railway Sidings	1933	2500
128m N	Railway Sidings	1932	2500
135m W	Railway	1932	-
140m SE	Railway Sidings	1968	10560
140m NW	Mineral Railway Sidings	1970	1250
142m SE	Railway Sidings	1956	10560
143m NW	Railway Sidings	1893	2500



Location	Land Use	Year of mapping	Mapping scale
144m NW	Railway Sidings	1938	10560
144m NW	Railway Sidings	1933	10560
152m NW	Railway Sidings	1893	2500
152m E	Railway Sidings	1934	10560
161m SE	Railway Sidings	1948	1250
161m SE	Railway Sidings	1956	1250
161m SE	Railway Sidings	1974	-
161m SE	Railway Sidings	1963	2500
162m SE	Railway Sidings	1948	1250
163m E	Tramway Sidings	1933	2500
164m E	Railway Sidings	1970	1250
164m E	Railway Sidings	1949	1250
164m E	Railway Sidings	1956	1250
168m W	Mineral Railway Sidings	1949	1250
168m W	Mineral Railway Sidings	1953	1250
174m SW	Railway Sidings	1970	1250
174m SW	Railway Sidings	1949	1250
174m SW	Railway Sidings	1956	1250
176m E	Railway Sidings	1970	1250
184m W	Railway Sidings	1933	2500
184m S	Railway Sidings	1956	1250
203m E	Railway Sidings	1915	10560
214m SE	Railway Sidings	1923	10560
225m SE	Railway Sidings	1922	2500
236m NW	Railway Sidings	1987	1250
236m NW	Railway Sidings	1991	1250
243m SE	Railway Sidings	1948	1250
243m SE	Railway Sidings	1956	1250



Location	Land Use	Year of mapping	Mapping scale
249m N	Mineral Railway Sidings	1980	1250

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

3

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

Features are displayed on the Railway infrastructure and projects map on [page 194 >](#)

Location	Description
45m SE	Dismantled
162m NE	Dismantled
179m E	Dismantled

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.



22.8 Crossrail 1

Records within 500m**0**

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m**0**

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m**0**

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: <https://www.groundsure.com/terms-and-conditions-april-2023/> ↗.



APPENDIX 3

COAL AUTHORITY REPORT



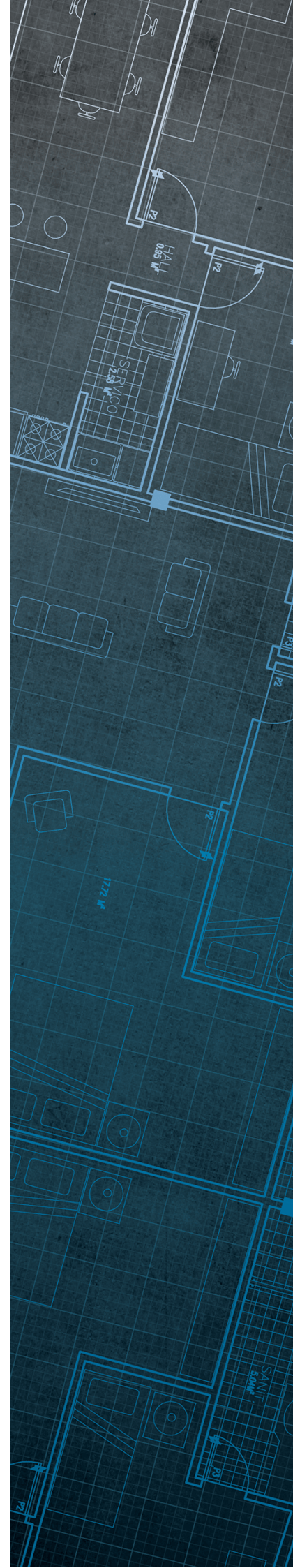
The Coal
Authority

Consultants Coal Mining Report

First Team Training Pitches
Manchester City Academy
Manchester
Manchester
M11 4TS

Date of enquiry:	26 June 2023
Date enquiry received:	26 June 2023
Issue date:	26 June 2023

Our reference:	51003363147001
Your reference:	G23254



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GEOINVESTIGATE

Enquiry address

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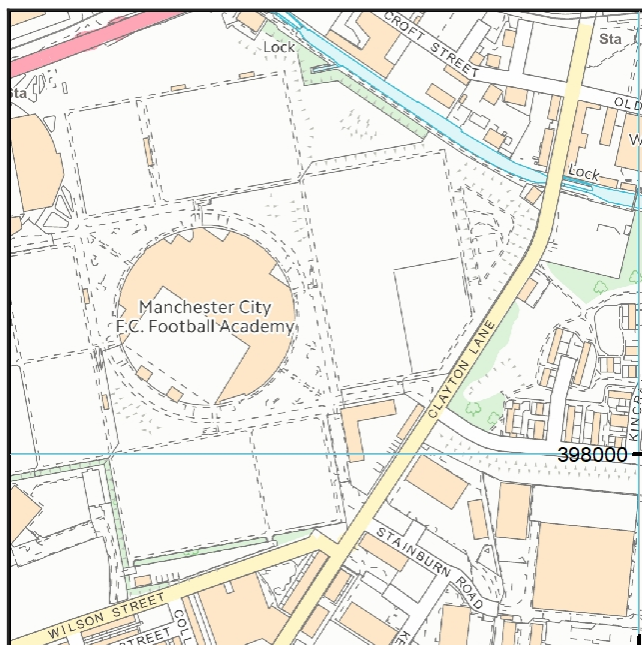
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Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	PARKER	Coal	35BS	427	North	18.0	South-West	80	1935
unnamed	PARKER	Coal	35BX	460	Beneath Property	18.0	South-West	80	1935
unnamed	CROMBOUK E	Coal	359G	811	North	13.5	South-West	120	1914
unnamed	ROGER	Coal	35AW	818	North-West	19.6	South-West	170	1945
unnamed	CROMBOUK E	Coal	359P	819	North-West	16.5	South-West	120	1929
unnamed	CROMBOUK E	Coal	359Q	832	West	16.6	South-West	120	1929
unnamed	CROMBOUK E	Coal	359H	834	North-West	17.4	South-West	120	1913
unnamed	ROGER	Coal	35B7	839	North-West	17.2	South-West	180	1948
unnamed	CROMBOUK E	Coal	359N	845	East	17.9	South-West	120	1915
unnamed	CROMBOUK E	Coal	359O	846	Beneath Property	14.3	South	120	1915
unnamed	ROGER	Coal	35AX	850	North-West	19.5	South-West	170	1945
unnamed	CROMBOUK E	Coal	359M	864	South-East	25.3	South-West	120	1940
unnamed	ROGER	Coal	35B5	872	South-West	17.3	South-West	180	1957

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

11471	NW1170	NW645
NW644		

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

Distance to site investigation (m)	Direction
Within	N/A

See Section 4 for further information.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

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

Withdrawal of support notices

The property is in an area where a notice to withdraw support was given in 1955.

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

Payments to owners of former copyhold land

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

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

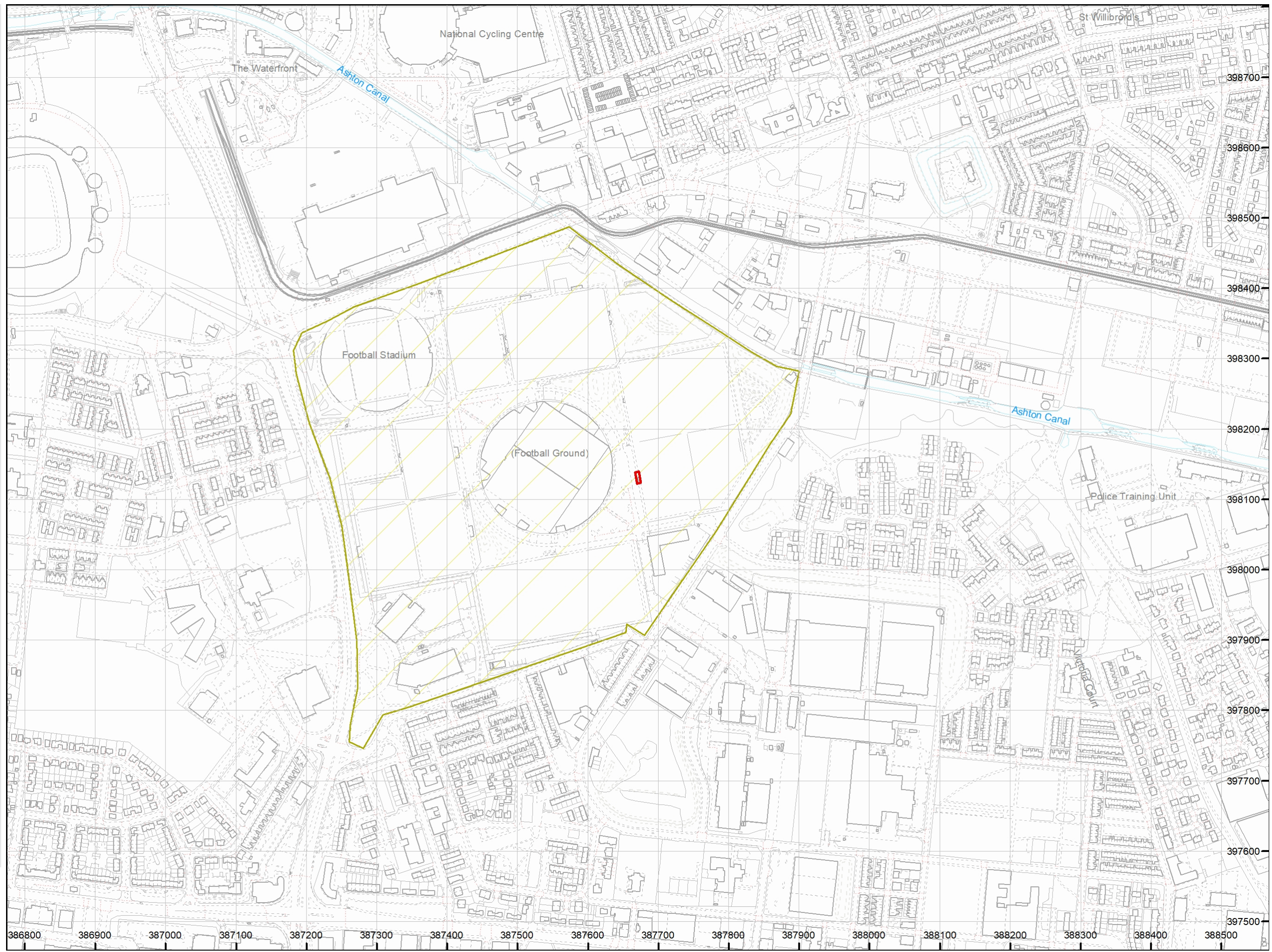
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

Approximate position of the enquiry boundary shown 

Site investigations 

How to contact us
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com



APPENDIX 4

RECENT SITE INVESTIGATION REPORT G23195



Site Investigation Report

LOCATION	City Football Academy, Clayton Lane, Manchester, M11 4TS
ISSUE DATE	28 th June 2023
FOR	Manchester City Football Club Ltd.
CLIENT REF.	PO: MCFC1111546
OUR REF.	G23195

Prepared by



Jack Harper BSc(Hons) MSc CSci MEnvSc
Contaminated Land Division Manager

Checked by



Stuart Howe BSc(Hons) FGS
Senior Geo-environmental Engineer

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1. Introduction

In accordance with your instruction Geoinvestigate Ltd. has carried out a limited site investigation at the City Football Academy site located off Clayton Lane, Manchester.

It was requested that five (5) locations be investigated where it is proposed to construct either new dugouts or toilet blocks alongside the existing sports pitches. Information regarding the geotechnical properties of the various locations was requested with a view to informing foundation design, together with waste acceptance criteria (WAC) testing to assist in classification and disposal of waste soils.

Investigation of only four of the five locations was possible due to the large number of buried services at the first attempted location in the northeast of the academy site. It was not safe to excavate in this area despite all attempts being made (using ground penetrating radar etc.) to find a safe location where damage to buried services could be avoided.

Prior to the investigation, the history of the site was not known but Geoinvestigate Ltd. were made aware of some of the site history during the day of the site works. It is understood that the site previously comprised a chemical works and that remedial works were undertaken when the site was redeveloped for the football club including, but perhaps not limited to, installation of a clean capping layer of uncontaminated soils across most or all of the site.

Geology:

- BGS records show the west of the academy site to be underlain by mudstone, siltstone and sandstone of the Pennine Upper Coal Measures, with the east underlain by the Chester Formation (sandstone).
- Superficial deposits are recorded as Devensian Till.
- BGS borehole records within the academy site generally show between 1m and 4m of made ground followed by boulder clay with occasional sand horizons. The made ground is often not described but in other records it is described as brick/concrete rubble, clayey ash fill, or a mix of the two.
- <https://www.ukradon.org/information/ukmaps> suggests that the site is not within a radon affected area.
- The Coal Authority shows the west of the site (where coal measures geology is recorded) to be in a development high risk area (DHRA) with recorded and probable mine workings present together with a number of mine entries and outcrops.

Historical land uses (identified from published historical mapping):

- The site appears to have been an aniline works with numerous tanks etc., and other features within or very close to the site including an engineering works (which included a tar still), an alkali works and a motor works, together with other chemical works.
- Numerous groundworks and rail links also appear to be present.

General contamination investigation and investigation of the coal mine risk (ground stability and gas risks) are beyond the scope of this exercise but it is assumed that these risks were fully investigated at the time of the redevelopment of the whole site, and that any risks were appropriately mitigated at that time.

Earlier site investigation and remediation reports have subsequently been provided to Geoinvestigate for review for another investigation running concurrently with this exercise. These have not yet been reviewed in detail but it appears as though the majority of remedial works comprised the capping of the site with a 'clean' (uncontaminated) cover layer and the burying/confining/encapsulation of large amounts of excavated material in certain areas, primarily in the areas which are now raised and planted in the east and northeast of the site.

This investigation is limited only to investigating four (4) specific locations and determining ground conditions at those sites, together with soil sampling for WAC testing.

2. Scope of Investigation

2.1 Scope of Works

Given the above, the following investigation was carried out:

- The investigation of ground conditions at the four (4) identified locations via the sinking of one (1) windowless sampling borehole at each (ref. BH1-BH4) to depths of 2.50m or 4.00m using a Dando Terrier mini drilling rig with logging, sampling and supervision of the works by a qualified and experienced geo-environmental engineer. Standard penetration tests (SPTs) and hand-vane shear strength tests were undertaken to determine ground strength.
- Waste acceptance criteria (WAC) testing on four (4) representative samples of soil from the boreholes to assist in waste classification of waste materials to be removed from the site during the proposed development works.
- Geotechnical testing on samples recovered from the site including three (3) moisture contents and three (3) Atterberg limits tests where natural cohesive soils were present, and a number of water soluble sulphate concentrations and pH tests to allow suitable foundations and concrete design advice.
- Provision of a factual and interpretative report including site plan, borehole logs, geotechnical test results, WAC analysis results, and advice on the foundation situation at the site. Final decisions regarding waste classification are left to the waste carrier receiver but some comment on the WAC results is included.

The borehole positions are shown on the plan provided in Appendix 1. The excavations were sampled and logged at site by a geo-environmental engineer and the ground conditions encountered are described on the boreholes logs also provided in Appendix 1.

Some photographs of the site and the recovered borehole cores are presented in Appendix 2, together with geotechnical test results.

The results of the WAC testing and water soluble sulphate and pH analyses are presented in Chemtech Environmental Report ref. 123338 which is included in Appendix 3.

2.2 Sampling Rationale

The borehole positions were chosen by the client to best represent the ground conditions at the four (4) locations of the proposed small structures. As noted earlier, no investigation was possible at one of the five original proposed positions.

3. Investigation Findings

3.1 Encountered Ground Conditions

Surface materials

The upper soils at boreholes BH1 to BH3 are inferred to belong to the capping layer installed during the redevelopment of the site as the academy. It is assumed these were sampled and proven uncontaminated at that time before installation at the site.

These comprised turf underlain by topsoil to 0.20m below ground level (bgl) followed by a red-brown fine sand horizon (often clayey) to between 0.30m and 0.45m bgl, possibly installed to assist in drainage. This was underlain by grey-brown or brown sandy gravelly clay horizons to depths of 0.75m (BH1), 1.20m (BH2) and 0.90m (BH3). This clay fill contained gravel constituents of sandstone, brick and coal with mudstone also noted at BH2.

A fairly similar clay fill was found below 0.30m of turf/topsoil at BH4, extending to 1.60m bgl. It was unclear whether this might comprise the capping material because it extended considerably deeper than would normally be expected for a cover system. This comprised gravelly borderline sand/clay fill.

Made Ground

Below the strata inferred to comprise more recently placed fill materials, older made ground was encountered to the full depths of boreholes BH1-BH3. This comprised a stiff brown-grey or grey-brown sandy very gravelly clay fill containing gravel constituents of sandstone, brick, coal and concrete, with occasional glass, slag and limestone noted in places.

Occasional sandy gravel or dark grey clay inclusions were noted, and the clay was noted to soften (to a 'firm' condition) below 3.30m in BH2. This fill was also initially weaker at BH2 (see figure 1 on following page), suggesting there are likely to be local variations in strength.

Additionally, different materials were found at the base of BH3. A firm blue-grey clay horizon extended from 3.40m to 3.95m followed by black gravelly sand from 3.95m to 4.00m (containing gravel of coal), though this may have been a small inclusion as opposed to a significant deposit (unclear).

A faint "creosote-like" odour was noted at the base of BH1 (2.50m bgl) and at around 3.00m bgl in BH2. This can sometimes be indicative of PAH (polycyclic aromatic hydrocarbon) contamination.

White or occasionally blue-grey chalky inclusions were noted at BH2 and BH3 below 3.00m and 3.40m respectively. Following a brief review of the earlier site investigation / remediation reports, it is considered possible that this substance may have comprised "galligu", a (mostly) calcium sulphide solid waste product of the Leblanc Process used historically in alkali works. The earlier investigation and remediation reports discuss occurrences of what was believed to be galligu, and this would not be unusual given the presence of an alkali works within or adjacent to the west of the site.

Natural subsoils

Natural subsoil was only encountered in BH4 in the south of the site. This comprised dark brown mottled grey sandy gravelly clay from 1.60m to 2.00m bgl followed by very stiff brown slightly silty clay with occasional gravel from 2.00m to termination at 4.00m bgl.

General Information

All of the boreholes remained open and dry on completion of drilling.

Standard penetration test (SPT) results for the fill materials were highly variable with N values ranging from N=4 to N=49. The results are presented in Figure 1 below, colour coded to the type of material they represent.

Hand vane shear tests were carried out where the gravel content of the clay soils allowed. These returned values of between 27 kPa and 68 kPa in the upper capping materials, increasing to 100 kPa at BH4 (though this may not have been the capping material at BH4). The grey brown fill generally had too great a gravel content for hand vane tests to be carried out. Tests in the natural subsoils at BH4 yielded 73 kPa at 2.00m and >130 kPa in the stiff slightly silty clay below that.

Figure 1: SPT Results

BH1		BH2		BH3		BH4	
Test Commencing from (mBGL)	N Value	Test Commencing from (mBGL)	N Value	Test Commencing from (mBGL)	N Value	Test Commencing from (mBGL)	N Value
1.00	26	1.00	4	1.00	49	1.00	13
2.00	47	2.00	11	2.00	24	2.00	18
		3.00	19	3.00	15		
		4.00	8	4.00	13		

Grey-brown very gravelly clay fill
Brown to black gravelly sand fill
Brown clay fill (capping?)
Natural Subsoils

3.2 Soil Plasticity and Vegetation Influence

While made ground at the site is predominantly cohesive/clay in nature, its high gravel content might be expected to result in a lower shrinkage potential regardless. However, given the history of contamination and artificial nature of the deposits, no geotechnical testing was undertaken. It is Geoinvestigate's policy to not carry out geotechnical testing on potentially contaminated materials for health and safety reasons.

Regardless, no significant vegetation or roots were noted at the locations of boreholes BH1 to BH3, and at the location in the northeast of the academy site which could not be drilled. As such, soil shrinkage/swelling due to vegetation influence is not expected to be a concern for these four locations.

Where natural clay soils were encountered at BH4 in the southeast of the academy site, trees and hedges were also present, and roots were noted in the borehole core to a depth of 1.00m. Three (3) Plasticity Tests were undertaken on samples from depths of 2.00m, 3.00m and 4.00m from BH4. These returned quite consistent plasticity indices of between 23.8% and 25.9% classifying the soils as Clay of Intermediate Plasticity according to BS 5930, or medium shrinkage potential according to NHBC (building near trees guidance).

As such, precautions will be required with regard to potential vegetation influence in the foundation design of any new structure(s) at the location of BH4. No such precautions are expected to be necessary at any of the other four proposed building locations.

4. Contamination Testing

Representative samples of most of the various 'types' of fill material were selected for analysis to provide the best possible overview of the soils at the site within the limits of the investigation.

Samples were submitted for either waste acceptance criteria (WAC) testing to assist in waste classification, or for pH and water soluble sulphate testing to assist in concrete design.

1. Capping materials.

- Brown sandy gravelly clay fill was submitted for WAC analysis from a depth of 1.00m in BH2.
- Additional samples of this material from 0.50m in BH1 and BH3 were also submitted for pH and water soluble sulphate testing.

2. Grey-brown clay fill.

- This was the most common material encountered in the boreholes. A sample from 1.50m bgl in BH1 was submitted for WAC analysis. This sample also showed some dark staining.
- Additional samples of this material from 2.00m in BH2 and 1.50m in BH3 were also submitted for pH and water soluble sulphate testing.

3. Blue-grey clay fill.

- This material was found at BH3 and was roughly comparable to the common grey-brown fill discussed above, though with a slightly different colour. A sample of this fill was submitted for WAC analysis from a depth of 3.50m in BH3. This stratum also included the white chalky inclusions which may have comprised galligu.

4. Possible clay capping material.

- Brown gravelly borderline clay/sand fill from BH4 (where this extended to 1.60m bgl) was submitted for WAC analysis from a depth of 1.00m. It was not clear whether this comprised part of the capping layer or perhaps older fill material.
- This sample was also submitted for pH and water soluble sulphate testing.

All four samples submitted for WAC testing were also inspected for asbestos. No asbestos was detected in any of the four samples.

As discussed in section 1, this exercise was not intended to comprise a general contamination assessment (including human-health risk assessment for example) but was undertaken for waste classification and geotechnical guidance for the proposed development works. The above was considered sufficient to classify the soils encountered in the boreholes for those purposes.

The full results of the analyses are included in Appendix 3 of this report (Chemtech Environmental Ltd. report 123338).

5. Conclusions

5.1 WAC Testing

WAC test results sheets for the four samples are presented in Appendix 3.

Final decisions regarding classification of waste are left to the waste carrier/receiver but a brief summary of the results is as follows:

1. **Capping materials.**

The sample of new (clay) capping materials from a depth of 1.00m in BH2 returned results within the limits for **inert waste**.

2. **Grey-brown clay fill.**

The sample from 1.50m bgl in BH1 returned arsenic and total organic carbon (TOC) levels which exceed the limits for both the inert and non-reactive hazardous waste categories. This material might therefore comprise **hazardous waste**. Exceedances of inert limits were also noted for antimony, selenium, sulphate, total dissolved solids (TDS), and mineral oils.

3. **Blue-grey clay fill.**

The sample from a depth of 3.50m in BH3 returned TOC and sulphate levels in excess of the limits for inert landfill, and a loss on ignition in excess of the limit for hazardous waste (at 21.7%).

Further advice should be sought regarding the consequence of the higher loss on ignition result. Some prior treatment may be required to safely dispose of this material. However, given the depth of this fill, there may be no requirement to remove any of it from the site, assuming none is found at shallower depth during groundworks.

This stratum also included the white chalky inclusions which may have comprised galligu. A presence of galligu might account for the higher sulphate levels and generally alkaline pH of this sample and other soils at the site*.

*Weathering of galligu can result in production of calcium sulphate (among other chemicals) and a change from lower to higher pH. Ref.: <https://www.envchemgroup.com/galligu-an-environmental-legacy-of-the-leblanc-alkali-industry-1814-1920.html>

4. **Possible clay capping material.**

The sample from a depth of 1.00m in BH4 returned an antimony level marginally in excess of the limit for inert landfill. While this material will not be suitable for inert landfill, it may qualify as general non-hazardous waste – further advice should be sought from the waste carrier/receiver.

All four samples submitted for WAC testing were also inspected for asbestos. No asbestos was detected in any of the four samples.

5.2 Foundations

Made ground has been confirmed to be up to and in excess of 4.00m deep at the site with natural subsoils only being encountered at BH4.

The fill materials were fairly variable in nature but mostly fairly competent in terms of strength, with some exceptions.

The capping materials are unlikely to have been compacted on installation and have been noted to be quite soft in places (such as at BH3). These materials will not provide suitable bearing strata.

The underlying grey-brown fill materials found at boreholes BH1 to BH3 inclusive was generally competent though was notably weaker in places, such as at 1.00m in BH2. Figure 1 is reproduced below to present the SPT results for reference.

Figure 1: SPT Results

BH1		BH2		BH3		BH4	
Test Commencing from (mBGL)	N Value	Test Commencing from (mBGL)	N Value	Test Commencing from (mBGL)	N Value	Test Commencing from (mBGL)	N Value
1.00	26	1.00	4	1.00	49	1.00	13
2.00	47	2.00	11	2.00	24	2.00	18
		3.00	19	3.00	15		
		4.00	8	4.00	13		

Grey-brown very gravelly clay fill
Brown to black gravelly sand fill
Brown clay fill (capping?)
Natural Subsoils

Given the potential localised variability of the fill material, a raft foundation is considered to be the most feasible solution for most of the proposed building locations. The relatively small/light nature of the proposed structures should allow for this and this method should minimise excavation into the underlying contaminated soils, thus hopefully reducing waste disposal costs.

A fully reinforced edge-stiffened raft foundation may be designed to a net bearing pressure of 40kPa, seated below the base of the brown clay capping materials (present to depths of 0.75m, 1.20m and 0.90m at BH1 to BH3 respectively).

It is considered fairly likely that similar ground conditions will be found at the location in the northeast of the site which could not be drilled. However, it would be prudent to have a geotechnical engineer attend site to assess the ground conditions in that area on commencement of groundworks, particularly if differing ground conditions are discovered.

BH4

Ground conditions at BH4 differed somewhat, with 1.6m of borderline clay/sand fill being underlain by very stiff natural silty clay, with roots also confirmed to at least 1.00m.

As such, given the competent clay at depth and potential for vegetation induced soil shrinkage/swelling, a traditional reinforced strip foundation with suspended beam and block floor is recommended for this location in the southeast of the site. Seated at a depth of at least 1.60m or 600mm below the deepest roots (whichever is greater), a bearing capacity of 150kPa can be expected in the initial natural clay or at least 200kPa in the deeper very stiff clay below 2.00m.

5.3 Concrete Design

The results of chemical analyses of the fill (including the results included in the WAC testing) returned 2:1 water soluble sulphate levels of between 113mg l^{-1} and 3178mg l^{-1} and pH levels of between 8.6 and 10.0.

A higher sulphate level of 4236mg l^{-1} was returned for the deeper sample at 3.50m in BH3 though this soil might not be in contact with foundations.

On this basis, and assuming no mobile groundwater (at the depth of the foundations), concrete in contact with the ground may be designed to ACEC Class DS-3 AC-3s (DC3) of "BRE Special Digest 1 – Concrete in aggressive ground".

BH4

The sample of fill material from BH4 returned a water soluble sulphate level of 98mg l^{-1} and a pH of 10.7.

Ground conditions at this location are considered sufficiently different to allow less resistant concrete to be used. Again, assuming no mobile groundwater (at the depth of the foundations), concrete in contact with the ground in this location may be designed to ACEC Class DS-1 AC-1s of "BRE Special Digest 1 – Concrete in aggressive ground".

END OF REPORT

The findings and contents of this (intrusive) Site Investigation Report pertain solely to the study area(s) outlined herein and are based solely on the findings of the excavations undertaken as part of the current exercise unless otherwise stated. The findings and/or recommendations of this report do not take into account any ground conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

This report considers various environmental and/or geological risks posed to the site and/or proposed development and offers advice accordingly as guidance only. The findings of this report will remain valid provided no change of ground or groundwater conditions, either natural or anthropogenic, take place and no warrantee is offered or implied.

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APPENDIX 1
Site Plan
and
Borehole Logs

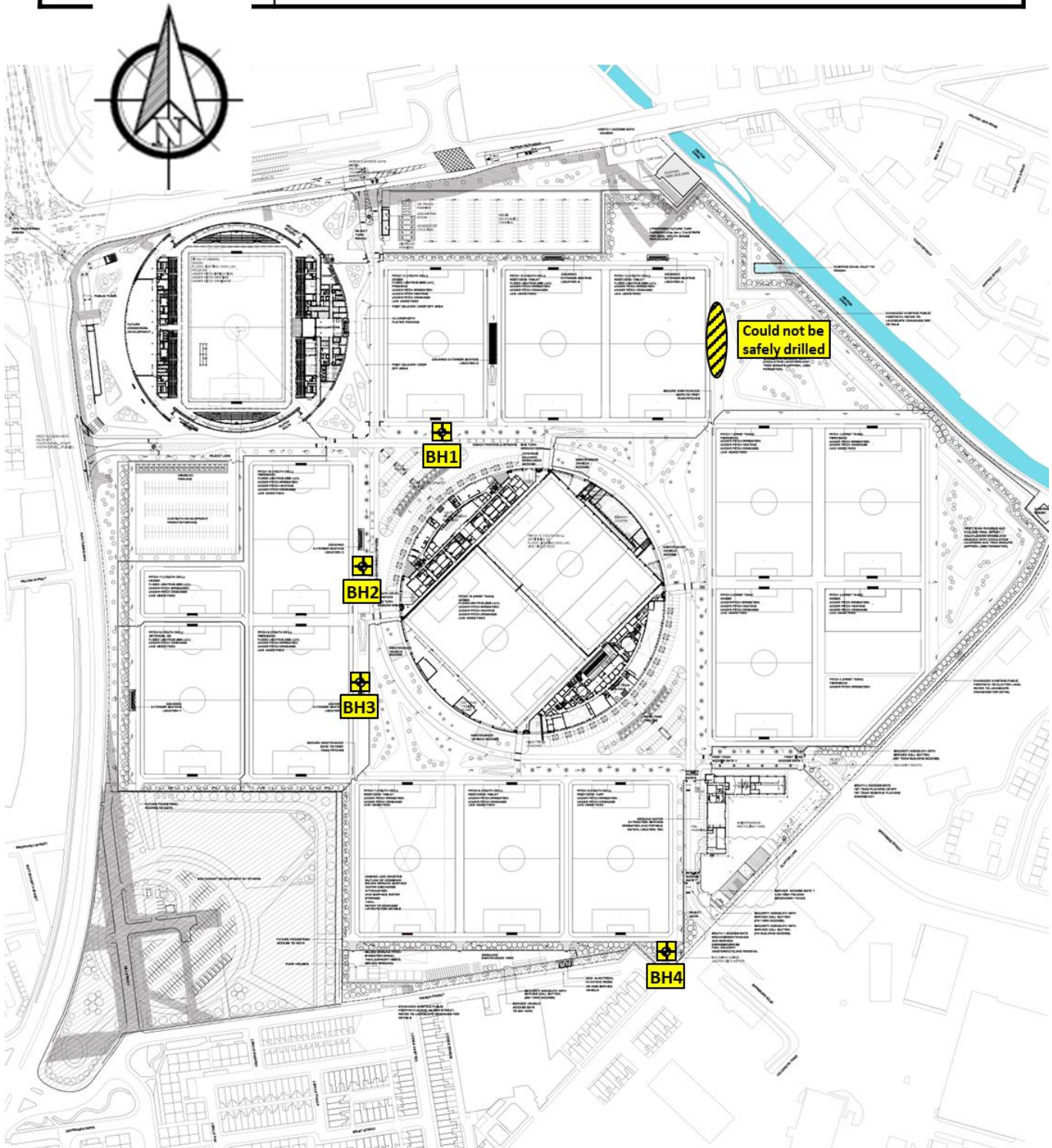
GEOINVESTIGATE Ltd.

OUR REF: G23195

SITE PLAN (NOT TO SCALE)

DATE: 20/05/22

City Football Academy, Clayton Lane, Manchester, M11 4TS

**Key**

Windowless Sampling
Borehole location
(approximate)

GEOINVESTIGATE Ltd.

Your Ref. PO MCFC1111546

Our Ref. G23195

BH No.1 Sheet No. 1 of 1

Location: City Football Academy, Clayton Lane, Manchester, M11 4TS

DATE: 30/05/23

Depth (m)	Description of Strata	Thickness	Legend	Gas Well	Sample	Test Type Result	SPT N Value (Depth)	Depth to Water	Depth (m)
0.20	TURF and TOPSOIL. Soft dark brown silty gravelly sand. Gravel is fine to coarse of sandstone, brick and coal.	200				Cv kN/m ²			0.25
0.40	MADE GROUND. Medium dense brown-red fine sand.	200			O				0.50
0.75	MADE GROUND. Very stiff grey-brown sandy gravelly clay. Gravel is fine to coarse of sandstone, brick and coal.	350			O		1.00m-1.45m 8,6,5,7,7,7 N = 26		0.75
1.10	MADE GROUND. Dense brown-grey slightly silty slightly clayey gravelly sand. Gravel is fine to coarse of sandstone, brick and coal.	350			O				1.00
	MADE GROUND. Stiff dark grey-brown sandy very gravelly clay. Gravel is fine to coarse of sandstone, brick, coal, concrete and occasional glass. Silty dark grey inclusion 1.50m to 1.60m.	1400					2.00m-2.45m 3,5,4,16,18,9 N = 47		1.25
	Clayey gravelly sand inclusion 1.90m to 2.00m								1.50
	Very slight odour at base of borehole akin to creosote.				O				1.75
2.50	Borehole terminated at 2.50m due to refusal								2.00
									2.25
									2.50

Remarks:

Casing to 1.00m

Dynamic windowless sampling by Terrier Rig to 2.50m

Borehole remained open and dry on completion

Key:

- Slotted Pipe
- Plain Pipe
- Bentonite
- Gravel Filter

O Disturbed sample

Cv Shear vane

W Water sample

S Standard Penetration Test using solid cone

BH1

GEOINVESTIGATE Ltd.**Your Ref.** PO MCFC1111546**Our Ref.** G23195**BH No.2 Sheet No. 1 of 1****Location:** City Football Academy, Clayton Lane, Manchester, M11 4TS**DATE:** 30/05/23

Depth (m)	Description of Strata	Thickness	Legend	Gas Well	Sample	Test Type Result	SPT N Value (Depth)	Depth to Water	Depth (m)
0.20	TURF and TOPSOIL. Compact brown silty gravelly sand. Gravel is fine to medium of sandstone and occasional brick & concrete.	200				Cv kN/m ²			0.25
0.30	MADE GROUND. Compact red-brown clayey gravelly sand. Gravel is fine to medium of sandstone.	100							0.50
0.50	MADE GROUND. Very stiff grey-brown sandy gravelly clay. Gravel is fine to coarse of sandstone, brick and coal.	200			O	68	1.00m-1.45m 0,0,1,1,1,1 N = 4		0.75
1.20	MADE GROUND. Firm to stiff brown sandy gravelly clay. Gravel is fine to coarse sandstone and mudstone with occasional brick and coal.	700			O	68			1.00
	MADE GROUND. Stiff dark grey-brown sandy very gravelly clay. Gravel is fine to coarse of sandstone, brick, coal, concrete and occasional glass.								1.25
									1.50
									1.75
					O		2.00m-2.45m 2,2,2,3,3,3 N = 11		2.00
									2.25
									2.50
									2.75
	Sandstone and brick cobbles at 2.80m	2800					3.00m-3.45m 5,5,7,6,6,6 N = 19		3.00
	Some white chalky inclusions below 3.00m, occasionally slightly blue-grey.								3.25
	Very slight odour around 3.00m akin to creosote.								3.50
	Becoming firm with brown inclusions below 3.30m				O				3.75
4.00					O		4.00m-4.45m 2,2,2,2,2,2 N = 8		4.00
	Borehole terminated at 4.00m								

Remarks:

Casing to 1.00m

Dynamic windowless sampling by Terrier Rig to 4.00m

Borehole remained open and dry on completion

Key:
 Slotted Pipe
 Plain Pipe
 Bentonite
 Gravel Filter
O Disturbed sample**Cv** Shear vane**W** Water sample**S** Standard Penetration Test using solid cone**BH2**

GEOINVESTIGATE Ltd.**Your Ref.** PO MCFC1111546**Our Ref.** G23195**BH No.3 Sheet No. 1 of 1****Location:** City Football Academy, Clayton Lane, Manchester, M11 4TS**DATE:** 30/05/23

Depth (m)	Description of Strata	Thickness	Legend	Gas Well	Sample	Test Type Result	SPT N Value (Depth)	Depth to Water	Depth (m)
0.20	TURF and TOPSOIL. Compact brown silty gravelly sand. Gravel is fine to medium of sandstone and occasional brick & concrete.	200				Cv kN/m ²			0.25
0.45	MADE GROUND. Compact red-brown clayey gravelly sand. Gravel is fine to medium of sandstone.	250			O	27			0.50
0.90	MADE GROUND. Soft to firm brown sandy gravelly clay. Gravel is fine to coarse of sandstone, brick and coal.	450					1.00m-1.45m 5,9,8,12,14,15 N = 49		0.75
1.10	MADE GROUND. Loose grey sandy gravel. Gravel is fine to coarse of sandstone and brick.	200							1.00
1.10	MADE GROUND. Stiff grey-brown sandy very gravelly CLAY. Gravel is fine to coarse of sandstone, limestone, brick and coal.	900			O				1.25
2.00	Dark grey inclusion with a cobble of slag from 1.50m to 1.70m						2.00m-2.45m 2,3,9,6,5,4 N = 24		1.50
2.00	MADE GROUND. Stiff dark grey-brown sandy very gravelly clay. Gravel is fine to coarse of sandstone, brick, coal, concrete and occasional glass.	1400			O				1.75
3.40							3.00m-3.45m 3,4,4,3,4,4 N = 15		2.00
3.40					O				2.25
3.40									2.50
3.40									2.75
3.40									3.00
3.40									3.25
3.95	MADE GROUND. Firm blue-grey sandy very gravelly clay. Gravel is fine to medium of sandstone and mudstone. Some white chalky inclusions.	550			O				3.50
4.00	MADE GROUND. Loose dark brown to black gravelly sand. Gravel is fine to coarse of coal.	50					4.00m-4.45m 3,4,3,3,4,3 N = 13		3.75
4.00	Borehole terminated at 4.00m								4.00

Remarks:

Casing to 1.00m

Dynamic windowless sampling by Terrier Rig to 4.00m

Borehole remained open and dry on completion

Key:
 Slotted Pipe
 Plain Pipe
 Bentonite
 Gravel Filter
O Disturbed sample**Cv** Shear vane**W** Water sample**S** Standard Penetration Test using solid cone**BH3**

GEOINVESTIGATE Ltd.**Your Ref.** PO MCFC1111546**Our Ref.** G23195**BH No.4 Sheet No. 1 of 1****Location:** City Football Academy, Clayton Lane, Manchester, M11 4TS**DATE:** 30/05/23

Depth (m)	Description of Strata	Thickness	Legend	Gas Well	Sample	Test Type Result	SPT N Value (Depth)	Depth to Water	Depth (m)
0.30	TURF and TOPSOIL. Loose brown silty slightly clayey gravelly sand. Gravel is fine to coarse of sandstone, limestone, brick and coal.	300				Cv kN/m ²			0.25
	MADE GROUND. Stiff / medium dense brown very sandy gravelly clay / very clayey gravelly sand. Gravel is fine to coarse of sandstone, brick and coal.	1300			O		1.00m-1.45m 4,4,3,3,3,4 N = 13		0.50 0.75 1.00
	Becoming sandy gravelly clay below 1.10m								1.25
1.60	Small dark grey gravelly sand inclusion at 1.60m					100			1.50
2.00	Firm dark brown mottled grey sandy gravelly CLAY. Gravel is fine to medium of sandstone and coal. Dark grey silty sandy inclusions noted.	400			O	73	2.00m-2.45m 2,2,3,4,5,6 N = 18		1.75 2.00
	Possibly made ground - unclear.								2.25
	Very stiff brown mottled grey slightly silty CLAY. Occasional fine to medium gravel of sandstone and coal.					>130			2.50 2.75
					O	>130			3.00 3.25
						>130			3.50 3.75
4.00					O	>130			4.00
	Borehole terminated at 4.00m								

Remarks:

Casing to 1.00m

Dynamic windowless sampling by Terrier Rig to 4.00m

Borehole remained open and dry on completion

Key:
 Slotted Pipe
 Plain Pipe
 Bentonite
 Gravel Filter
O Disturbed sample**Cv** Shear vane**W** Water sample**S** Standard Penetration Test using solid cone**BH4**

APPENDIX 2
Geotechnical Test Results
and
Site Photographs

GEOINVESTIGATE Ltd.

Atterberg Limit Test Results

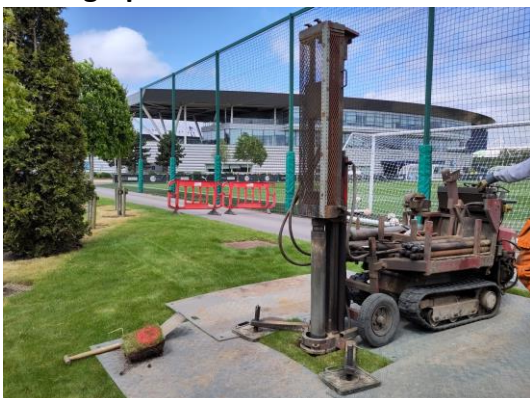
Our ref. G23195

Your ref. PO MCFC1111546

Table 1

Location: City Football Academy, Clayton Lane, Manchester, M11 4TS

TP / BH No.	Sample Depth (m)	Insitu Moisture Content (%)	% Passing BS 425 Micron Sieve	Corrected Moisture Content (%)	Plastic Limit (%)	Liquid Limit (%)	Plasticity Index (%)	Soil Classification
4	2.00	24.4	>95	24.4	21.7	47.6	25.9	CI
	3.00	18.2	>95	18.2	23.0	46.8	23.8	CI
	4.00	17.2	94.6	18.2	21.3	45.8	24.5	CI

Photograph 1: Cores recovered from BH1.**Photograph 2: Cores recovered from BH2.****Photograph 3: Cores recovered from BH3.****Photograph 4: Cores recovered from BH4.****Photograph 5: close up of blue-grey material with possible gillu inclusions below 3.00m at BH3.****Photograph 6: Vegetation at BH4 location.****Photograph 7: Borehole BH1 location.**

APPENDIX 3

Chemtech Analytical Test Report



ANALYTICAL TEST REPORT

Contract no: 123338

Contract name: Manchester City Academy, Manchester, M11 4TQ

Client reference: G23195

Clients name: Geo Investigate

Clients address: Units 3a & 4 Terry Dicken Industrial Estate
Ellerbeck Way, Stokesley
North Yorkshire
TS9 7AE

Samples received: 01 June 2023

Analysis started: 01 June 2023

Analysis completed: 21 June 2023

Report issued: 21 June 2023

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by:

Samantha Rogerson
Reporting Manager

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
123338-1	BH1	0.50	Sandy Loamy Clay with Gravel	-	-	13.3
123338-2	BH1	1.50	Sandy Loamy Clay with Gravel	-	-	20.5
123338-3	BH2	1.00	Sandy Loamy Clay with Gravel	-	-	15.5
123338-4	BH2	2.00	Sandy Loamy Clay with Gravel	-	-	16.8
123338-5	BH3	0.50	Sandy Loamy Clay with Gravel	-	-	15.7
123338-6	BH3	1.50	Sandy Loamy Clay with Gravel	-	-	19.8
123338-7	BH3	3.50	Sandy Clay with Gravel	-	-	16.7
123338-8	BH4	1.00	Sandy Loamy Clay with Gravel	-	-	18.9

Chemtech Environmental Limited

SOILS

Lab number			123338-1	123338-2	123338-3	123338-4	123338-5	123338-6
Sample id			BH1	BH1	BH2	BH2	BH3	BH3
Depth (m)			0.50	1.50	1.00	2.00	0.50	1.50
Date sampled			30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023
Test	Method	Units						
Antimony	\$	mg/kg	-	11.6	0.8	-	-	-
Arsenic	\$ ^M	mg/kg	-	464.0	15.2	-	-	-
Barium	\$ ^U	mg/kg	-	247	156	-	-	-
Cadmium	\$ ^M	mg/kg	-	0.4	< 0.2	-	-	-
Chromium	\$ ^M	mg/kg	-	40.0	34.1	-	-	-
Copper	\$ ^M	mg/kg	-	128.0	29.1	-	-	-
Lead	\$ ^M	mg/kg	-	426.0	21.0	-	-	-
Mercury	\$ ^M	mg/kg	-	1.6	< 0.1	-	-	-
Molybdenum	\$ ^M	mg/kg	-	3.5	< 1.0	-	-	-
Nickel	\$ ^M	mg/kg	-	30.5	35.7	-	-	-
Selenium	\$ ^M	mg/kg	-	3.3	< 1.0	-	-	-
Zinc	\$ ^M	mg/kg	-	148.0	68.9	-	-	-
pH	CE004 ^M	units	10.0	-	-	9.3	8.6	9.4
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	813	-	-	837	113	2409
Subcontracted analysis								
Asbestos (qualitative)	\$	-	-	NAD	NAD	-	-	-

Chemtech Environmental Limited

SOILS

Lab number			123338-7	123338-8
Sample id			BH3	BH4
Depth (m)			3.50	1.00
Date sampled			30/05/2023	30/05/2023
Test	Method	Units		
Antimony	\$	mg/kg	3.2	8.7
Arsenic	\$ ^M	mg/kg	41.9	34.7
Barium	\$ ^U	mg/kg	114	223
Cadmium	\$ ^M	mg/kg	0.3	0.4
Chromium	\$ ^M	mg/kg	22.3	36.0
Copper	\$ ^M	mg/kg	65.1	68.4
Lead	\$ ^M	mg/kg	113.0	112.0
Mercury	\$ ^M	mg/kg	0.3	0.5
Molybdenum	\$ ^M	mg/kg	1.8	1.4
Nickel	\$ ^M	mg/kg	22.0	34.4
Selenium	\$ ^M	mg/kg	< 1.0	< 1.0
Zinc	\$ ^M	mg/kg	75.7	122.0
pH	CE004 ^M	units	-	10.7
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	-	
Subcontracted analysis				
Asbestos (qualitative)	\$	-	NAD	NAD

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
\$	Antimony	Aqua regia digest, ICP-MS	Dry		0.5	mg/kg
\$ ^M	Arsenic	Aqua regia digest, ICP-MS	Dry	M	0.5	mg/kg
\$ ^U	Barium	Aqua regia digest, ICP-MS	Dry	U	1.0	mg/kg
\$ ^M	Cadmium	Aqua regia digest, ICP-MS	Dry	M	0.2	mg/kg
\$ ^M	Chromium	Aqua regia digest, ICP-MS	Dry	M	1.0	mg/kg
\$ ^M	Copper	Aqua regia digest, ICP-MS	Dry	M	4.0	mg/kg
\$ ^M	Lead	Aqua regia digest, ICP-MS	Dry	M	1.0	mg/kg
\$ ^M	Mercury	Aqua regia digest, ICP-MS	Dry	M	0.1	mg/kg
\$ ^M	Molybdenum	Aqua regia digest, ICP-MS	Dry	M	1.0	mg/kg
\$ ^M	Nickel	Aqua regia digest, ICP-MS	Dry	M	1.0	mg/kg
\$ ^M	Selenium	Aqua regia digest, ICP-MS	Dry	M	1.0	mg/kg
\$ ^M	Zinc	Aqua regia digest, ICP-MS	Dry	M	4.5	mg/kg
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO ₄
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
123338-1	BH1	0.50	N	
123338-2	BH1	1.50	N	
123338-3	BH2	1.00	N	
123338-4	BH2	2.00	N	
123338-5	BH3	0.50	N	
123338-6	BH3	1.50	N	
123338-7	BH3	3.50	N	
123338-8	BH4	1.00	N	

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

For soils and solids, analytical results are inclusive of stones, where applicable.

Waste Acceptance Criteria Testing BS EN 12457-Part 3, 2 Stage Process

Sample Details

Contract Name Manchester City Academy,
Manchester, M11 4TQ

Lab Number 123338-2

Sample ID BH1 1.50m

Date Sampled 30 May 2023

Date Received 1 June 2023

Particle Size (<4mm) -

Method of size reduction N/A

Non-crushable matter N/A

Test Values

Mass of Raw Test Portion (MW) kg 0.220

Mass of Dried Test Portion (MD) kg 0.175

Moisture Content Ratio (MC) % 25.73

Dry Matter Content Ratio (DR) % 79.53

Leachant Volume (1) (L2) Litre 0.305

Leachant Volume (2) (L8) Litre 1.400

Eluate Volume (1) (VE1) Litre 0.155

Eluate Volume (2) (VE2) Litre 1.280

Eluate Analysis	Conc in Eluate	
Liquid : Waste Ratio	2:1	8:1
pH (units)	7.1	6.5
Temperature (°C)	20	20
Conductivity (µS/cm)	2540	1003
Antimony (µg/l Sb)	44.9	31.2
Arsenic (µg/l As)	1380	817
Barium (µg/l Ba)	106	34
Cadmium (µg/l Cd)	< 0.5	< 0.5
Chromium (µg/l Cr)	1.7	2.3
Copper (µg/l Cu)	22.7	9.6
Lead (µg/l Pb)	0.6	< 0.5
Mercury (µg/l Hg)	< 0.05	< 0.05
Molybdenum (µg/l Mo)	95	16
Nickel (µg/l Ni)	9.9	1.8
Selenium (µg/l Se)	11	11
Zinc (µg/l Zn)	18.2	< 1.2
Chloride (mg/l Cl)	33	4.0
Fluoride (mg/l F)	<0.1	0.1
Sulphate (mg/l SO ₄)	1589	508
Total Dissolved Solids (mg/l TDS)	1930	762
Phenol Index (µg/l PhOH)	<10	<10
Dissolved Organic Carbon (mg/l C)	18	<5

Amount Leached		Council Decision 2003/33/EC Limit Values mg/kg at L:S 10:1		
2:1	10:1	Inert Waste	Non-reactive Hazardous Waste	Hazardous Waste
mg/kg	mg/kg			
0.090	0.324	0.06	0.7	5
2.760	8.669	0.5	2	25
0.212	0.404	20	100	300
<0.0005	<0.0050	0.04	1	5
0.003	0.022	0.5	10	70
0.045	0.108	2	50	100
0.001	<0.005	0.5	10	50
<0.00005	<0.00050	0.01	0.2	2
0.190	0.230	0.5	10	30
0.020	0.025	0.4	10	40
0.022	0.110	0.1	0.5	7
0.036	<0.027	4	50	200
65	65	800	15000	25000
<0.2	<1.4	10	150	500
3178	6036	1000	20000	50000
3861	8657	4000	60000	100000
<0.02	<0.1	1		
36	<61	500	800	1000

Waste Analysis	Units	Result			
Total Organic Carbon	% w/w	6.0	3%	5%	6%
Loss on Ignition	% w/w	8.0			10%
BTEX	mg/kg	<0.06	6		
PCBs (7 congeners)	mg/kg	0.048	1		
Mineral Oil (C10 - C40)	mg/kg	1016	500		
PAH (total)	mg/kg	70.0	100		
pH	pH units	9.9		>6	
Acid Neutralisation Capacity (pH4)	mol/kg	0.50		To be evaluated	
Acid Neutralisation Capacity (pH7)	mol/kg	0.10		To be evaluated	

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Comments

Authorised by:

Name: Samantha Rogerson

Report date:

21 June 2023

Position: Reporting Manager

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Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

Waste Acceptance Criteria Testing BS EN 12457-Part 3, 2 Stage Process

Sample Details

Contract Name Manchester City Academy,
Manchester, M11 4TQ

Lab Number 123338-3

Sample ID BH2 1.00m

Date Sampled 30 May 2023

Date Received 1 June 2023

Particle Size (<4mm) -

Method of size reduction N/A

Non-crushable matter N/A

Test Values

Mass of Raw Test Portion (MW) kg 0.207

Mass of Dried Test Portion (MD) kg 0.175

Moisture Content Ratio (MC) % 18.39

Dry Matter Content Ratio (DR) % 84.47

Leachant Volume (1) (L2) Litre 0.318

Leachant Volume (2) (L8) Litre 1.400

Eluate Volume (1) (VE1) Litre 0.115

Eluate Volume (2) (VE2) Litre 1.150

Eluate Analysis	Conc in Eluate	
Liquid : Waste Ratio	2:1	8:1
pH (units)	7.9	6.6
Temperature (°C)	20	20
Conductivity (µS/cm)	438	180
Antimony (µg/l Sb)	1.8	0.8
Arsenic (µg/l As)	11.9	0.6
Barium (µg/l Ba)	54	19
Cadmium (µg/l Cd)	< 0.5	< 0.5
Chromium (µg/l Cr)	< 0.5	< 0.5
Copper (µg/l Cu)	1.2	0.6
Lead (µg/l Pb)	< 0.5	< 0.5
Mercury (µg/l Hg)	< 0.05	< 0.05
Molybdenum (µg/l Mo)	4	3
Nickel (µg/l Ni)	< 0.5	< 0.5
Selenium (µg/l Se)	< 1	< 1
Zinc (µg/l Zn)	< 1.2	< 1.2
Chloride (mg/l Cl)	4.9	0.9
Fluoride (mg/l F)	0.5	0.3
Sulphate (mg/l SO ₄)	95	12
Total Dissolved Solids (mg/l TDS)	333	137
Phenol Index (µg/l PhOH)	<10	41
Dissolved Organic Carbon (mg/l C)	<5	<5

Amount Leached		Council Decision 2003/33/EC Limit Values mg/kg at L:S 10:1		
		Inert Waste	Non-reactive Hazardous Waste	Hazardous Waste
2:1 mg/kg	10:1 mg/kg			
0.004	0.009	0.06	0.7	5
0.024	0.013	0.5	2	25
0.108	0.213	20	100	300
<0.0005	<0.0050	0.04	1	5
<0.0005	<0.005	0.5	10	70
0.002	0.006	2	50	100
<0.0005	<0.005	0.5	10	50
<0.00005	<0.00050	0.01	0.2	2
0.008	0.031	0.5	10	30
<0.0005	<0.005	0.4	10	40
<0.001	<0.0100	0.1	0.5	7
<0.0012	<0.012	4	50	200
9.8	11	800	15000	25000
1.0	3.4	10	150	500
190	178	1000	20000	50000
666	1497	4000	60000	100000
<0.02	<0.39	1		
<10	<50	500	800	1000

Waste Analysis	Units	Result			
Total Organic Carbon	% w/w	1.7	3%	5%	6%
Loss on Ignition	% w/w	2.8			10%
BTEX	mg/kg	<0.06	6		
PCBs (7 congeners)	mg/kg	<0.045	1		
Mineral Oil (C10 - C40)	mg/kg	44	500		
PAH (total)	mg/kg	0.80	100		
pH	pH units	8.7		>6	
Acid Neutralisation Capacity (pH4)	mol/kg	0.30		To be evaluated	
Acid Neutralisation Capacity (pH7)	mol/kg	0.06		To be evaluated	

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Comments

Authorised by:

Name: Samantha Rogerson

Report date:

21 June 2023

Position: Reporting Manager

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Waste Acceptance Criteria Testing BS EN 12457-Part 3, 2 Stage Process

Sample Details

Contract Name Manchester City Academy,
Manchester, M11 4TQ

Lab Number 123338-7

Sample ID BH3 3.50m

Date Sampled 30 May 2023

Date Received 1 June 2023

Particle Size (<4mm) -

Method of size reduction N/A

Non-crushable matter N/A

Test Values

Mass of Raw Test Portion (MW) kg 0.210

Mass of Dried Test Portion (MD) kg 0.175

Moisture Content Ratio (MC) % 20.11

Dry Matter Content Ratio (DR) % 83.26

Leachant Volume (1) (L2) Litre 0.315

Leachant Volume (2) (L8) Litre 1.400

Eluate Volume (1) (VE1) Litre 0.110

Eluate Volume (2) (VE2) Litre 1.260

Eluate Analysis	Conc in Eluate	
Liquid : Waste Ratio	2:1	8:1
pH (units)	6.9	6.1
Temperature (°C)	20	20
Conductivity (µS/cm)	434	250
Antimony (µg/l Sb)	2.2	1.4
Arsenic (µg/l As)	4.8	1.6
Barium (µg/l Ba)	92	75
Cadmium (µg/l Cd)	0.6	< 0.5
Chromium (µg/l Cr)	< 0.5	< 0.5
Copper (µg/l Cu)	5.1	1.8
Lead (µg/l Pb)	0.6	< 0.5
Mercury (µg/l Hg)	< 0.05	< 0.05
Molybdenum (µg/l Mo)	144	34
Nickel (µg/l Ni)	3.9	1.3
Selenium (µg/l Se)	4	2
Zinc (µg/l Zn)	12.4	< 1.2
Chloride (mg/l Cl)	88	15
Fluoride (mg/l F)	0.6	<0.1
Sulphate (mg/l SO ₄)	2118	1554
Total Dissolved Solids (mg/l TDS)	330	190
Phenol Index (µg/l PhOH)	11	15
Dissolved Organic Carbon (mg/l C)	<5	<5

Amount Leached		Council Decision 2003/33/EC Limit Values mg/kg at L:S 10:1		
		Inert Waste	Non-reactive Hazardous Waste	Hazardous Waste
2:1 mg/kg	10:1 mg/kg			
0.004	0.015	0.06	0.7	5
0.010	0.018	0.5	2	25
0.184	0.761	20	100	300
0.0012	<0.0051	0.04	1	5
<0.0005	<0.005	0.5	10	70
0.010	0.020	2	50	100
0.001	<0.005	0.5	10	50
<0.00005	<0.00050	0.01	0.2	2
0.288	0.409	0.5	10	30
0.008	0.015	0.4	10	40
0.008	0.021	0.1	0.5	7
0.025	<0.019	4	50	200
176	195	800	15000	25000
1.3	<1.3	10	150	500
4236	15892	1000	20000	50000
660	1988	4000	60000	100000
0.02	0.15	1		
<10	<50	500	800	1000

Waste Analysis	Units	Result			
Total Organic Carbon	% w/w	3.9	3%	5%	6%
Loss on Ignition	% w/w	21.7			10%
BTEX	mg/kg	<0.06	6		
PCBs (7 congeners)	mg/kg	<0.045	1		
Mineral Oil (C10 - C40)	mg/kg	32	500		
PAH (total)	mg/kg	0.98	100		
pH	pH units	9.1		>6	
Acid Neutralisation Capacity (pH4)	mol/kg	2.88		To be evaluated	
Acid Neutralisation Capacity (pH7)	mol/kg	0.44		To be evaluated	

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Comments

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Report date:

21 June 2023

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Waste Acceptance Criteria Testing BS EN 12457-Part 3, 2 Stage Process

Sample Details

Contract Name Manchester City Academy,
Manchester, M11 4TQ

Lab Number 123338-8

Sample ID BH4 1.00m

Date Sampled 30 May 2023

Date Received 1 June 2023

Particle Size (<4mm) -

Method of size reduction N/A

Non-crushable matter N/A

Test Values

Mass of Raw Test Portion (MW) kg 0.216

Mass of Dried Test Portion (MD) kg 0.175

Moisture Content Ratio (MC) % 23.35

Dry Matter Content Ratio (DR) % 81.07

Leachant Volume (1) (L2) Litre 0.309

Leachant Volume (2) (L8) Litre 1.400

Eluate Volume (1) (VE1) Litre 0.170

Eluate Volume (2) (VE2) Litre 1.280

Eluate Analysis	Conc in Eluate	
Liquid : Waste Ratio	2:1	8:1
pH (units)	8.6	7.2
Temperature (°C)	20	20
Conductivity (µS/cm)	591	319
Antimony (µg/l Sb)	8.4	9.9
Arsenic (µg/l As)	11.1	3.8
Barium (µg/l Ba)	27	53
Cadmium (µg/l Cd)	< 0.5	< 0.5
Chromium (µg/l Cr)	3.8	1.8
Copper (µg/l Cu)	133	34.4
Lead (µg/l Pb)	< 0.5	< 0.5
Mercury (µg/l Hg)	< 0.05	< 0.05
Molybdenum (µg/l Mo)	49	9
Nickel (µg/l Ni)	30.0	7.2
Selenium (µg/l Se)	17	4
Zinc (µg/l Zn)	< 1.2	< 1.2
Chloride (mg/l Cl)	41	5.7
Fluoride (mg/l F)	0.5	0.3
Sulphate (mg/l SO ₄)	49	46
Total Dissolved Solids (mg/l TDS)	449	242
Phenol Index (µg/l PhOH)	18	<10
Dissolved Organic Carbon (mg/l C)	19	<5

Amount Leached		Council Decision 2003/33/EC Limit Values mg/kg at L:S 10:1		
		Inert Waste	Non-reactive Hazardous Waste	Hazardous Waste
2:1 mg/kg	10:1 mg/kg			
0.017	0.098	0.06	0.7	5
0.022	0.045	0.5	2	25
0.054	0.505	20	100	300
<0.0005	<0.0050	0.04	1	5
0.008	0.020	0.5	10	70
0.266	0.440	2	50	100
<0.0005	<0.005	0.5	10	50
<0.00005	<0.00050	0.01	0.2	2
0.098	0.129	0.5	10	30
0.060	0.094	0.4	10	40
0.034	0.053	0.1	0.5	7
<0.0012	<0.012	4	50	200
82	91	800	15000	25000
1.1	3.5	10	150	500
98	464	1000	20000	50000
898	2625	4000	60000	100000
0.04	<0.11	1		
37	<63	500	800	1000

Waste Analysis	Units	Result			
Total Organic Carbon	% w/w	2.0	3%	5%	6%
Loss on Ignition	% w/w	4.4			10%
BTEX	mg/kg	<0.06	6		
PCBs (7 congeners)	mg/kg	<0.045	1		
Mineral Oil (C10 - C40)	mg/kg	99	500		
PAH (total)	mg/kg	60.0	100		
pH	pH units	10.7		>6	
Acid Neutralisation Capacity (pH4)	mol/kg	1.50		To be evaluated	
Acid Neutralisation Capacity (pH7)	mol/kg	0.40		To be evaluated	

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Authorised by:



Name: Samantha Rogerson

Report date:

21 June 2023

Position: Reporting Manager

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Statement of Conformity

Where Chemtech reports a statement of conformity to a specification, the decision rules applied are derived from the Ilac document ILAC G8:09/2019.

Acceptance limits (AL), applied are derived from the tolerance limits (TL) by you the client or applicable standard (e.g. 2003.33.EC Council Decision, BS3882, BS8601)

Agreed and reported Decision Rule:

"PASS" if the result < TL, and the bias / precision values for the process meet the targets defined within the methodology and/or applied accreditation.

Reported Decisions:

Result < TL for determinands: PASS

Result > TL for determinands: FAIL

Definitions Used:

Acceptance limit (AL) Specified upper or lower bounds of permissible measured quantity values.

Tolerance limit (TL) Specified upper or lower bound of permissible values of a property.