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PHASE 1: DESK TOP STUDY AND COAL MINING RISK REPORT
PROPOSED RESIDENTIAL DEVELOPMENT
QUEENS DRIVE
KIRKHALT
ROCHDALE
OL11 2NP

Project No: 25-446

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28/07/2025

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The information and / or advice contained in this Phase 1: Desk Top Study and Coal Mining Risk Assessment Report is based solely on, and is limited to, the boundaries of the site, the immediate area around the site, and the historical use(s) unless otherwise stated. This 'Report' has been prepared to collate information relating to the physical, environmental and industrial setting of the site, and to highlight, where possible, the likely problems that might be encountered when considering the future development of this site for the proposed end use. All comments, opinions, diagrams, cross sections and / or sketches contained within the report, and / or any configuration of the findings is conjectural and given for guidance only and confirmation of the anticipated ground conditions should be considered before development proceeds. Agreement for the use or copying of this report by any Third Party must be obtained in writing from Arc Environmental Limited (ARC). If a change in the proposed land use is envisaged, then a reassessment of the site should be carried out.

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1.0 Introduction

July 2025

Arc Environmental Limited were instructed by Adept Consulting Engineers, to undertake a Phase 1: Desk Top Study (DTS) Report, for a parcel of land adjacent to the Queens Drive, Kirkhale, Rochdale, OL11 2NP, where it is proposed to construct a new residential apartment complex with car parking and delineated soft landscaping areas.

The primary objectives of this report are to assess the geological, geotechnical and potential ground contamination conditions on and beneath the surface of this site. This Phase 1: DTS Report has been carried out generally in accordance with the EA (Environment Agency) guidance for Land Contamination Risk Management (LCRM: October 2020). Based on all the data reviewed, a preliminary Conceptual Site Model (CSM) has been developed to define the scope and extent of any further investigation works deemed necessary, prior to commencing with any future development works.

A site reconnaissance (walkover) survey was completed as part of this study with site photographs included within Appendix I, and all relevant observations noted in Section 2.1 below.

2.0 Physical Setting

2.1 Site Details: -

Table 2.1

Site Name & Address:	Land adjacent to Queens Drive, Kirkhale, Rochdale, OL11 2NP.
National Grid Reference:	389270, 411300 (representative of the central part of the site).
Description of Location:	The eastern portion of the site forms a car park and the western portion is occupied by a medical centre and allotments. It is located in the southwest of Rochdale. Site access is gained off a minor private carriageway to the north of Queens Drive.
Site Boundaries:	N = Queens Drive, E = residential dwellings, S = open undeveloped land, W = residential dwellings / Queens Drive.
Site Shape:	The site is irregular in layout, occupying a total area of c.0.51 Hectares (Ha).
General Topography:	The ground profile at the site is relatively level with a slight decline to the west (with the standard contour height recorded between c.143m to c.145mAOD). A recent detailed topographical / utility survey has not been undertaken.
Site surfacing:	Areas of dense cover of wild grasses, shrubbery and trees. Hardstanding (asphalt) cover within car parking and footpath, demolition rubble and fly-tipping / allotment waste (wood, concrete posts etc).
Above Ground Structures:	Electrical substation in the northeastern corner of the site.
Sub-surface Structures & Services:	Surface water drainage inspection covers were noted on site. Potential other services beneath the site associated with the historical on site and existing adjacent developments. Relic concrete in ground structures / foundations associated with historical development.
Summary of Site History:	From the historical records reviewed since c.1851, the site was encompassed by undeveloped land (agricultural). A minor carriageway and drain / small surface water course spanned over the western site boundary. By c.1956 several semi-detached buildings are recorded on site (which were demolished by c.2024). A new building is constructed in the central portion of the site by c.2024. Recently an electrical substation has been constructed in the northeastern portion of the site. Salient adjacent features have included Rochdale Canal, Crest Mill with tank and filter bed, two historical infilled ponds, schools, road infrastructure and residential and an increase in light commercial end use.

3.0 Environmental Setting

3.1 Site Geology: -

The geological assessment for this site has been based on geological maps and digital online data published by the British Geological Survey (BGS). The following documents have been reviewed as part of this study: -

- Online BGS GeoIndex.
- BGS Sheet 85, Manchester, Solid & Drift Edition, 1:50,000 scale, 2011.
- BGS Sheet SD81SE, 1:10,000 scale, 2007.
- Online CA Interactive Map Viewer.
- Coal (Mining Remediation) Authority (CA) Consultants Coal Mining Report Ref. 51003510158001.
- Envirocheck Report Ref. 380671801_1_1.

3.1.1 Made Ground: -

In accordance with the published BGS maps, significant thicknesses of made ground are not shown to directly encroach the site.

However made ground deposits are expected to be present beneath the site, from the construction and demolition of the former buildings that occupied the site, comprising a mixture of disturbed natural strata (clays etc.) and anthropogenic debris (brick etc.). In addition there may be associated relic foundations and also an area of disturbed ground from the construction of the recent electrical substation. The western portion of the site is comprised by allotment gardens likely to contain ‘ashy’ waste.

3.1.2 Superficial Deposits: -

The published BGS plans and data indicate the western portion of the site is underlain by Glacial Till (undifferentiated) deposited during the Pleistocene Epoch (Devensian). The Glacial Till is anticipated to comprise firm to stiff slightly sandy slightly gravelly clay, with cobbles and sand lenses. The eastern portion of the site is comprised of Glaciofluvial Deposits of sands and gravel with silt and clay lenses and occasional boulders.

3.1.3 Solid Geology: -

According to published BGS data, the site is underlain by the Pennine Lower Coal Measures Formation (PLCM) of Carboniferous Period. These undifferentiated deposits typically comprise interbedded cyclical alternations of mudstone, siltstone, sandstones and coal seams with seatearths and ironstone bands.

The published geological information indicates there is no faulting within the site boundary.

3.2 Coal Mining Risk Assessment: -

In accordance with the Mining Remediation Authority (MRA - previously the Coal Authority) Online Interactive Map Viewer, the site lies within a ‘Coal Mining Reporting Area’, with the site recorded to be situated out with a defined ‘Development High Risk area’ (DHRA), ‘Past Shallow Coal Workings’ and ‘Probable Shallow Workings’.

3.0 Environmental Setting (Cont'd)

3.2 Coal Mining Risk Assessment (Cont'd): -

In order to further assist with this site-specific coal mining risk assessment (CMRA) a Consultants Coal Mining Report (Ref. 51003510158001) has been obtained from the MRA for this site and a copy of which is attached in Appendix II. The information provided in the report concurs with the BGS and online MRA data and confirms that the site is not situated within an area of probable recorded or unrecorded shallow workings.

There are no mine entries located within an influencing distance of the site.

There are no spine roadways recorded at shallow depth, no recorded opencast workings, managed tips within c.500m and no coal mining subsidence claims within c.50m of the site. The site is not within the boundary of an opencast site from which coal has been removed by opencast methods.

There are no recorded gas incidents, that required investigation and remediation by the Coal Authority to mitigate the effects of the mine gas emission. In accordance with the new CL:AIRE guidance 'Good practice for Risk Assessment for Coal Gas Emissions (October 2021), Figure 13.1: Decision support tool for mine gas risk assessment (copy attached in Appendix II), there is a potential negligible risk from hazardous ground gas, and therefore no further assessment is required.

Subsequently, from the information obtained and reviewed, this site is not at risk from historical coal mining activities and no further intrusive or remedial works are deemed necessary.

3.3 Surface Mineral Extraction:

There are no other extraction features on or within an influencing distance to the site, which may impact on the proposed development. There are brickfields labelled c.195m to the southwest depicted on historical OS map dated c.1853. The site does not lie within the Cheshire Brine Subsidence Compensation District, therefore the risk to subsidence due to brine extraction is considered negligible.

3.4 Potential Geological Hazards: -

Table 3.1

Potential Hazard	Hazard Potential/Rating
Landslide:	Very low
Shrinkable Soils:	No hazard / very low
Collapsible Soils:	Very low
Compressible Soils:	No hazard
Running Sand:	Very low
Dissolution:	No hazard

Table 3.1 above provides a summary of the property site specific information on the potential hazards related to natural ground subsidence.

3.5 Site Hydrogeology: -

Table 3.2

STRATA	Aquifer / Soil Leachability EA Classification	Comments
Groundwater Vulnerability:	Secondary Superficial Aquifer - High Vulnerability (combined).	Productive bedrock aquifer / productive superficial aquifer. High pollutant speed (>550mm / year).

3.0 Environmental Setting (Cont'd)

3.5 Site Hydrogeology (Cont'd): -

Table 3.2 (Cont'd)

STRATA	Aquifer / Soil Leachability EA Classification	Comments
Superficial Deposits: (Glacial Till)	Secondary Aquifer – Undifferentiated.	These aquifers are where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the strata type.
Superficial Deposits: (Glaciofluvial Deposits)	Secondary Aquifer – 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.
Solid Geology: (PLCM Formation)	Secondary Aquifer – 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.

- There are no Source Protection Zones (SPZ) on or within c.1km of the site.
- There are two water abstractions recorded within c.250m of the site. EC Ref. 23 and 24 located c.197m and c.220m to the west. License No. 2569002026 and 2569002074 M S Gadhi & A Raazaq : Source from borehole – groundwater and canal, respectively.

3.6 Site Hydrology: -

Table 3.3

SURFACE WATER FEATURE	Location	Comments
OS Water Network & GQA Classified River:	Six recorded within c.250m.	EC Ref. 64 to 203 located between c.63m and c.203m offsite related to Rochdale Canal and tributaries / field drains.
Unclassified Watercourse(s), Canals, Ponds, Lakes & Other Bodies of Water:	None recorded within c.250m off-site.	~
Flooding from River or Sea: (Fluvial & Tidal)	The site doesn't fall within a designated flood zone II or III for fluvial flooding.	The EA records the site in an area with a very low risk of fluvial flooding (<0.1% annual chance). The site is categorised as a Flood Zone I (with low probability of flooding). Very low chance of flooding to 20cm.
Surface Water Flooding: (Pluvial)	The published EA data shows that the central portion of the site is at a medium risk of pluvial flooding. In addition the northern margin of the site is categorised as high risk, whilst the remaining area is not at significant risk.	The EA considers parts of the site in the north to be at high risk from surface water (pluvial) flooding (with 3.3% annual chance), medium risk in the central portion (of between 1% and 3.3% chance of a flood each year) (with the remainder of the site shown as very low to risk (with <0.1% to 0.1 to 1% annual chance). Appropriate surface water management should be adopted to deal with the future management of positively drained surface water.
Groundwater Flooding at Surface (BGS):	There are potential areas for groundwater flooding to occur at the site.	Information obtained from Landmark, including published maps indicating the potential for groundwater flooding at surface and below ground level, proposed by the British Geological Survey (BGS). This information is based on areas which may be potentially influenced by geological factors.
RAINFALL	Measurements (mm)	Comments
Annual:	1197.22	Based on 'station average' records from Rochdale, dated from 1991-2020.
Rainfall: Min (May)	65.67	
Rainfall: Max (Dec)	138.88	

3.0 Environmental Setting (Cont'd)

3.7 Radon Assessment: -

The site is recorded to lie within a lower probability radon area, with <1% homes estimated to be at or above the action level, in accordance with the BGS, National Geoscience Information Service, and their assessment suggests that no radon protective measures are necessary in the construction of new dwellings or extensions. This BRE Digest, BR211 (2015) Radon: Guidance on protective measures for new buildings, infers the site is situated within a clear grid square (1km), and therefore no radon protective measures are required for the site.

With reference to BGS / UK Radon mapping (dated December 2022), the site falls in a 1km grid square where all parts are in bands of lowest radon potential of <1%. No further assessment is therefore required.

3.8 Site Ecology: -

Table 3.4

<u>FEATURES</u>	<u>Location</u>	<u>Comments</u>
Local Nature Reserves:	None recorded within c.250m.	~
Areas of Adopted Green Belt:	None recorded within c.250m.	~
Sites of Special Scientific Interest / Special Areas of Conservation:	One recorded within c.250m.	EC Ref. 252 and 253 located c.180m to the north – Rochdale Canal.
Nitrate Vulnerable Zone:	None recorded within c.250m.	~
Other sensitive land uses:	None recorded within c.250m.	~

There was no visual evidence to suggest that the site is affected by the presence of invasive weed species such as Japanese Knotweed, Giant Hogweed or Himalayan Balsam, at the time of the recent site survey, however a site-specific survey has not been carried out. Therefore, site awareness during future investigation works and during the construction phase for any potential invasive weed species would be considered prudent.

3.9 Estimated Soil Chemistry: -

Data provided by the BGS in relation to estimated soil chemistry for a number of key metals and metalloid elements is summarised in Table 3.5 below.

Table 3.5

<u>Element</u>	<u>Soil Sample Type</u>	<u>Estimated Soil Concentrations (mg/kg)</u>
Arsenic	Sediment	15 – 25
Cadmium	Sediment	1.8 – 2.2
Chromium (total)	Sediment	60 – 90
Lead	Sediment	100 – 200
Nickel	Sediment	15 – 30

Note; the references to the anticipated background concentrations of contaminants, sourced from the BGS, should not be relied upon. They are not site-specific and do not represent the condition of the ground at the proposed development site.

4.0 Industrial Setting

4.1 Site History:

Copies of historical OS maps covering the site area & adjacent land are included in Appendix III and a summary of the site history based on these plans, is provided in Table 4.1 below.

Table 4.1

Significant features / potential contamination sources highlighted in **bold**.

Date	Site	Adjacent Areas
c.1851 – c.1938	The site is encompassed by a parcel of open undeveloped land (possibly agricultural). A minor carriageway (Cown Top Lane) and possible drain / small surface watercourse spans the western site boundary and a track encroaches the southern margin.	The immediate adjoining land-use comprises undeveloped agricultural land. A minor carriageway (Cown Top Lane) extends from the site to the northeast and southwest. A minor carriageway (Hartley Lane) is recorded c.64m to the west. Hartley Farm is shown c.54m to the east. Gorrels farm is shown c.111m to the northwest. Rochdale Canal is recorded c.174m to the north. By c.1910 Crest Mill is shown c.188m to the southwest and a tank and filter bed are depicted c.139m and c.151m to the southwest, respectively. Two ponds are shown associated with Hartley Farm to the east. By c.1929 a new carriageway (Queens Way) is depicted c.10m to the north. A brick works with clay pit beyond is recorded c.195m to the southwest.
c.1956 – c.2006	Several semi-detached buildings (possibly residential) are recorded on site.	Queens Drive is shown to bound the site to the north. New residential dwellings are shown c.4m to the west, c.10m to the east, c.10m to the northeast and c.64m to the southeast and c.84m to the south. Kirkholt Primary School is depicted c.97m to the east. The ponds are no longer evident (infilled) to the east. A tank is recorded c.138m to the northeast associated with Gorrels Farm . Allotment gardens are recorded c.208m to the southwest and c.90m to the south. By c.1975 a new roundabout / carriageway upgrade is recorded to the north of Queens Drive . The canal is labelled as disused . A garage is shown c.75m to the west (which has expanded by c.1990). By c.1990 a new depot is depicted c.60m and a works c.105m to the northwest. There has been a general increase in residential development in the vicinity.
c.2024	The former buildings have been demolished and a new building is constructed in the central portion of the site.	The school to the east has been redeveloped. The remainder of the immediate adjoining land-use is relatively consistent with the earlier survey.
Present Day c.2025	A new electrical substation is recorded on the eastern portion of the site. The site remains consistent with the previous layout.	The immediate adjacent area remains relatively consistent in layout with the previous survey.

4.2 UXO Risk: -

According to the Unexploded Bomb Risk Map produced by ZeticaUXO, the site lies within a low risk area in terms of unexploded ordnance (areas indicated as having 15 bombs per 1000 acre or less). A copy of the ZeticaUXO Unexploded Bomb Risk Map can be seen attached in Appendix IV.

4.3 Landfill & Waste: -

The following information relating to landfill and waste has been obtained from the Envirocheck Report (attached in Appendix III) site walkover and published data;

- There are no Local Authority Recorded Landfill Sites or Coal Authority Managed Tips, areas of Potentially Infilled Land (Non-Water), Registered Landfill Sites, Historical Landfill Sites or within c.250m of the site.

4.0 Industrial Setting (Cont'd)

4.3 Landfill & Waste (Cont'd): -

- There is one Licensed Waste Management Facility located c.205m to the north. EC Ref. 51 Ashfield Valley Inert Landfill Site. License No. 53728 Wimpey Construction (UK) Limited. Site Category - Landfills Taking Non-biodegradable Wastes (Not Construction).
- There are two areas of Potentially Infilled Land (Non-Water) located c.126m to the southeast and c.187m to the southwest (last date of mapping c.1993) related to unknown filled ground (pit, quarry etc) possibly related to infilling of a former clay pit associated with a brick works.
- There are two areas of Potentially Infilled Land (Water) located between c.220m and c.242m to the east (last date of mapping c.1931 and c.1956) related to historical ponds.

Therefore, when considering the above, it is considered that the site is at risk from potential hazardous ground gas production / migration. In order to confirm the level of risk, it is recommended that a programme of ground gas monitoring is undertaken, as part of the recommended intrusive investigation works for the proposed development at the site, in accordance with CIRIA 665 and BS8485:2015+A1:2019.

4.4 Statutory Requirements / Authorisations: -

Table 4.2

TYPE	Location	Comments
Enforcement and Prohibition Notices:	None recorded within c.250m.	~
Integrated Pollution Prevention and Controls:	None recorded within c.250m.	~
Local Authority Pollution Prevention and Controls:	None recorded within c.250m.	~
Prosecutions Relating to Authorised Processes:	None recorded within c.250m.	~
Registered Radioactive Substances:	None recorded within c.250m.	~
COMAH/Explosive/NI HHS Sites:	None recorded within c.250m.	~
Planning Hazardous Substances Consents / Enforcements:	None recorded within c.250m.	~
Contemporary Trade Entries:	Ten recorded within c.250m.	EC Ref. 112 – 117 located c.89m and c.225m offsite. Two active entries related to car dealers.
Fuel Station Entries:	None recorded within c.250m.	~
Relevant Points of Interest:	Six recorded within c.250m.	Commercial Services: EC Ref. 189 to 191 located between c.94m and c.143m offsite related to recycling services, vehicle repair, testing and servicing and distribution and haulage. Manufacturing and Production: EC Ref. 217 located between c.140 and c.164m offsite related to unspecified works or factories and Tanks (Generic).

4.0 Industrial Setting (Cont'd)

4.5 Pollution Incidents and Discharge Consents: -

Table 4.3

TYPE	Location	Comments
Discharge Consents:	Three recorded within c.250m.	EC Ref. 1 located c.242m and c.250m to the northeast – United Utilities. Discharge Type - Public Sewage: Storm Sewage Overflow. Ref. 01ROC0066 / Eprsb3396re
Prosecutions Relating to Controlled Waters:	None recorded within c.250m.	~
Substantiated Pollution Incident Register:	None recorded within c.250m.	~
Water Industry Act Referrals:	None recorded within c.250m.	~
Pollution Incidents to Controlled Waters:	Four recorded within c.250m.	EC Ref. 12 to 13 located between c.73 to c.202 offsite related to two Category 2 Significant Incidents – Oils - Gas Oil / Oils - Diesel (Including Agricultural). Incident Ref. 95620485 / 94622311. Cause of incident leaking tank / other incident – unknown. Two category 3 Minor Incidents located c.73m to the north. EC Ref. 12 Pollutant – Oils – Unknown. Incident Ref. 95621350 Accidental spillage / Leakage. Dated 7th June 1995 and c.197m to the west. EC Ref. 13 Pollutant – Miscellaneous – Unknown. Incident Ref. 97621034. Cause - Unknown. Dated 9th June 1997.

5.0 Conceptual Site Model (CSM)

The Conceptual Site Model (CSM) is one of the primary planning tools that can be used to support the decision-making process of managing contaminated land and groundwater on any given site and allows a better understanding of what needs to be done to achieve risk management, and from this appropriate remediation techniques, if required for those risk management goals can be chosen.

This can be done by undertaking a *source-pathway-receptor* analysis of the site. The anticipated *sources*, *pathways* and *receptors* for this site are summarised in Table 5.1 on the following page. A graphical representation of the CSM has been produced for the site and can be seen attached in Appendix V, which also sets out the critical pollutant linkages of concern for this site.

5.0 Conceptual Site Model (CSM) (Cont'd)

Table 5.1

*= Not included in the Human Health & Controlled Waters Risk Assessment.

	<i>Sources (S)</i>		<i>Pathways (P)</i>		<i>Receptors (R)</i>
S1	Made ground associated historical use including any construction / demolition debris (from historical buildings on site) and fly tipping and 'ashy' allotment waste.	P1	Ingestion & Dermal Contact	R1	Human Health - End users – residential (and construction workforce)
		P2	Air – Inhalation of vapours (indoor & outdoors) and contact with dust generated through the construction works		
		P3	Plant Uptake and attached soil	R2	Controlled Waters: Groundwater – anticipated within the underlying bedrock (PLCM) and Glaciofluvial deposits (Secondary Aquifer - A) and superficial strata (Glacial Till) (Secondary Aquifer – undifferentiated). There are several surface water features within a plausible migration distance to the site related to Rochdale Canal and also tributaries and field drains.
S2	Potential hazardous ground gas associated with off site sources (i.e. infilled land).	P4	Migration through existing service corridors	R3	Adjacent sites
		P5	Direct contact with building materials	R4*	Building materials & protection of water supply pipes
		P6	Surface runoff & Infiltration	R5*	Flora and fauna

5.1 Geotechnical Considerations: -

The following potential geotechnical issues and hazards have been identified for this site. These issues should be considered if future development of the site is to take place;

- Thickness, type, variability and condition of made ground.
- Geotechnical parameters of the natural deposits and depth to suitable load bearing founding strata across the site, particularly with respect foundations and to the design of potential piling / ground improvement (if required).
- Relic foundations from previous structures on site.
- Stability of excavations.
- Permeability of the strata for suitability of soakaways.
- The presence of possible underground services (i.e., gas, water, electricity, etc.).
- Chemical attack of buried concrete.

To determine the geotechnical considerations above with more certainty, if any new foundations are envisaged it is recommended that intrusive geotechnical investigation works are undertaken with associated geotechnical testing to aid in assessing detailed foundation proposals.

The information reviewed indicates that the site can be considered as being located within a **LOW to MODERATE** geotechnical risk setting.

5.0 Conceptual Site Model (CSM) (Cont'd)

5.2 Sources of Contamination and Probable Contaminants: -

Soils - Human Health:

Considering the recorded site history, in accordance with published OS maps within the Landmark Envirocheck Report, and taking into consideration the proposed development, the following primary potential on site contamination issues have been identified for this site;

- Made ground associated with former onsite historical development including any construction / demolition debris and possible ashy allotment waste.
- Potential hazardous ground gas associated adjacent infilled land.

No olfactory or visual evidence (i.e. surface staining) of ground contamination was apparent during the site reconnaissance survey. It is considered the level of risk posed to human health and the local environ overall in connection with the proposed development is as below.

The information reviewed indicates that the site can be considered as being located within a **LOW to MODERATE** ground contamination risk setting for Human Health.

To assess the associated risks to human health and environmental impact the following outline geo-environmental testing is recommended:

- Generic contamination suite, typically comprising; Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Zinc, Total Organic Carbon (TOC) and pH.
- Asbestos screening (and quantification if encountered).
- Speciated Polyaromatic Hydrocarbons (PAHs) and Total Petroleum Hydrocarbons (TPHs) should be undertaken, where ashy type deposits are encountered and if there is any visual or olfactory evidence of fuels/oils or other wastes present in the ground.

Waste Acceptance Criteria (WAC) testing may be required to aid with off-site disposal of waste soils.

Consideration should also be given to the protection of any new service pipes for the proposed development, and a suite of contamination testing (UKWIR suite) may be required in order to meet the requirements of the local utilities service provider for their 'pipe selection risk assessment' (PSRA), once the location and depth of future services have been determined.

Controlled Waters:

The following issues have been taken into consideration when assessing the risks towards controlled waters;

- There are no Source Protection Zones (SPZ) on site or within c.1km of the site.
- There are two water abstractions recorded within c.250m of the site.
- Significant sources of leachable contaminants are not considered be present on site.
- There are several surface water features recorded within a plausible distance of the site, including Rochdale Canal, tributaries and field drains.
- The solid geology beneath the site is a Secondary Aquifer – A (PLCM).
- The superficial deposits are a Secondary Aquifer – A (Glaciofluvial deposits) and Secondary Aquifer – undifferentiated (Glacial Till).

5.0 Conceptual Site Model (CSM) (Cont'd)

5.2 Sources of Contamination and Probable Contaminants: -

Controlled Waters (Cont'd):

The information reviewed indicates that the site can be considered as being located within a **LOW** ground contamination risk setting for Controlled Waters.

6.0 Recommendations for Phase 2: Ground Investigation Works

The conclusions contained within this report have been based on a review of geological plans, historical plans and available environmental data relating to the site and nearby adjacent land and forms the basis of a preliminary risk assessment. The primary benefits of undertaking this report are as follows:

- (i) Identify the geotechnical and / or geoenvironmental characteristics of the ground in sufficient detail to quantify the contamination risk at the site and for the economic design of any future site / proposed development, construction or associated remedial works.
- (ii) Minimise the risk of unforeseen ground conditions which might cause increased costs and / or programme (construction) delays later.

Therefore, it is recommended that a programme of Phase 2: Ground Investigation (intrusive investigation) works are completed for this site to provide an assessment of the geo-environmental characteristics of the site.

These intrusive investigation works should be completed prior to commencing with any future development works and should include for the following or a similar scope of investigation works:

- A series of windowless sampling boreholes (including insitu geotechnical testing (SPT testing, etc.) to aid with future foundation design for the proposed development and to collect samples for subsequent laboratory testing.
- A series of manually excavated trial pits to complete insitu DCPs to inform CBRs for hardstanding areas, ground flooring slabs etc.
- Provision of mechanically excavated trial pits to determine potential presence of relic foundations.
- Provision and installation of combined groundwater and ground gas monitoring standpipes followed by a programme of monitoring visits.
- Completion of variable head (falling) permeability tests to determine suitability of soakaways.
- Laboratory geotechnical testing (i.e. PSD, liquid & plastic limit, pH & soluble sulphate testing etc).
- Laboratory contamination screening on selected samples recovered from the investigation positions for typical contaminants as detailed in Section 5.2 to assess the risks to Human Health and Controlled Waters. Samples of soil collected will be forwarded to UKAS and MCERTS accredited laboratory to undertake the recommended testing.
- Waste Acceptance Criteria (WAC) to aid in off-site disposal classification (if required).
- Site supervision and production of RAMS and an interpretive Phase 2: Ground Investigation Report, including a Ground Contamination Risk Assessment and Waste Classification of soils.

Prior to site investigation works commencing on site, all existing utilities / services should be identified and recorded, such that any potential damage to services crossing the site can be prevented, as well as ensuring the health and safety of future site workers.

END OF REPORT

APPENDIX I

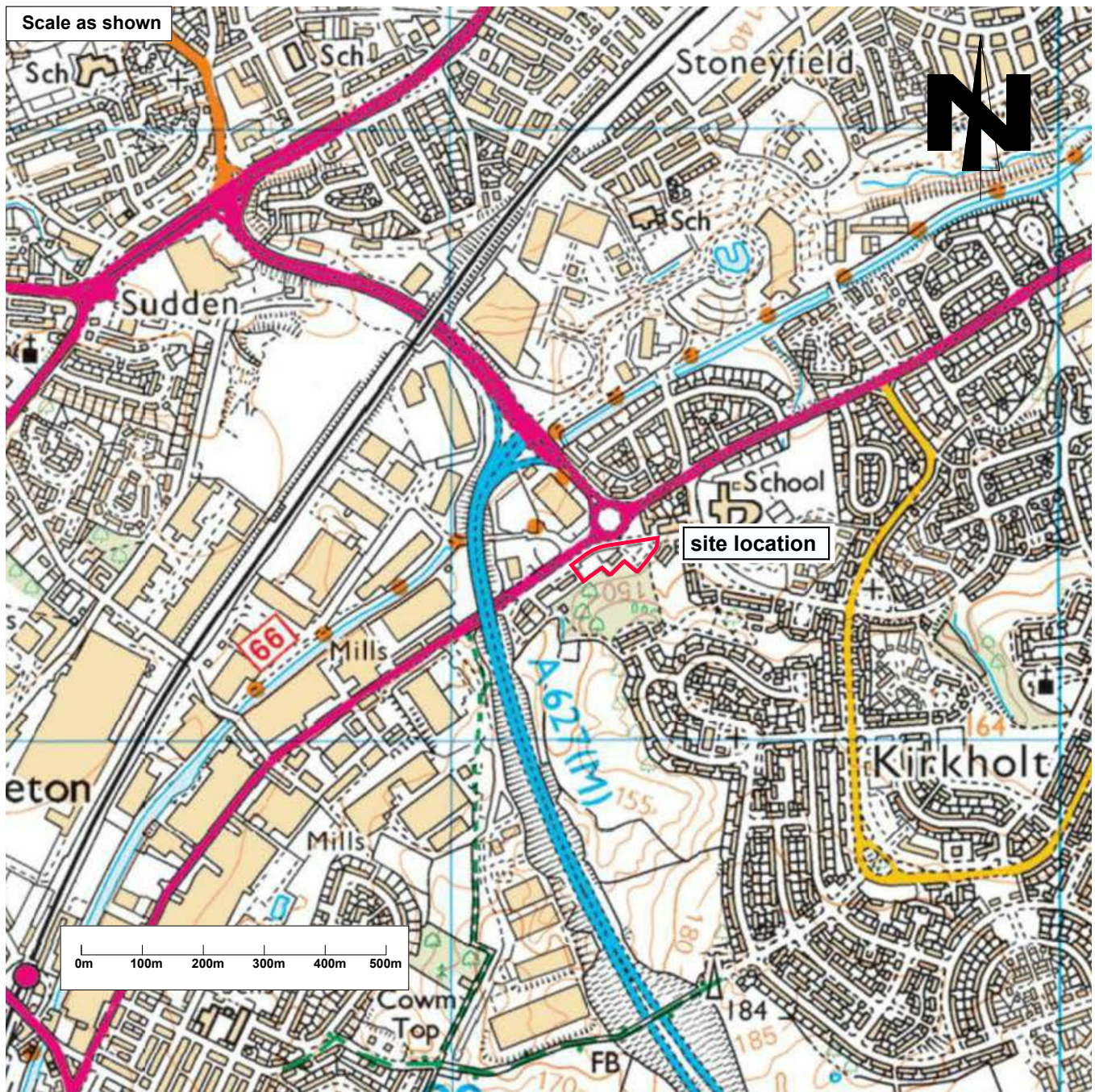
Location Plan

Aerial Photograph

Existing Layout Plan

Proposed Development Plan

Site Photographic Record Sheets



Client:

ADEPT CONSULTING ENGINEERS

Project Title:

Proposed Residential Development

Queens Drive

Kirkholt, Rochdale, OL11 2NP

Drawing Title:

Location Plan

Job Reference:

28.07.25

Drawing Number:

—

Revision:

—

Drawn by:

P.D

Date:

28.07.25

Scale at A4:

As shown

Checked by:

G.W

Approved by:

G.W

The contractor shall check all dimensions on site before commencement of any works. No dimensions to be scaled off this drawing.

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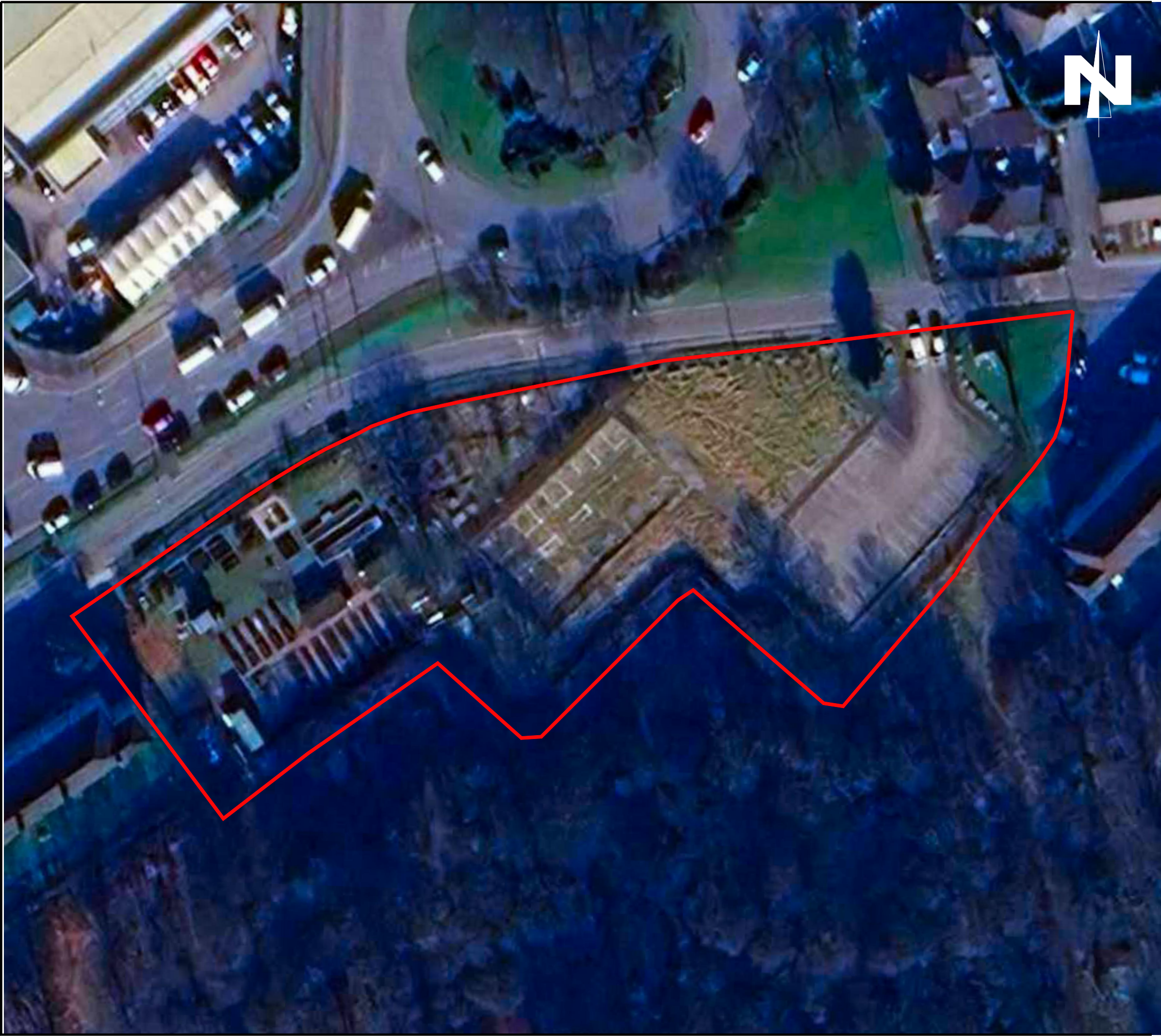
Solum House
Unit 1 Elliott Court
St. John's Road
Meadowfield
Durham
DH7 8PN

Tel: (0191) 378 6380

e-mail: admin@arc-environmental.com

web: www.arc-environmental.com





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Meadowfield
Durham, DH7 8PN
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e-mail: admin@arc-environmental.com
web: www.arc-environmental.com

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LEGEND	
	APPROXIMATE SITE BOUNDARY

rev.	date	amendments	drawn	chckd

Client:
ADEPT CONSULTING ENGINEERS

Project Title:
Proposed Residential Development

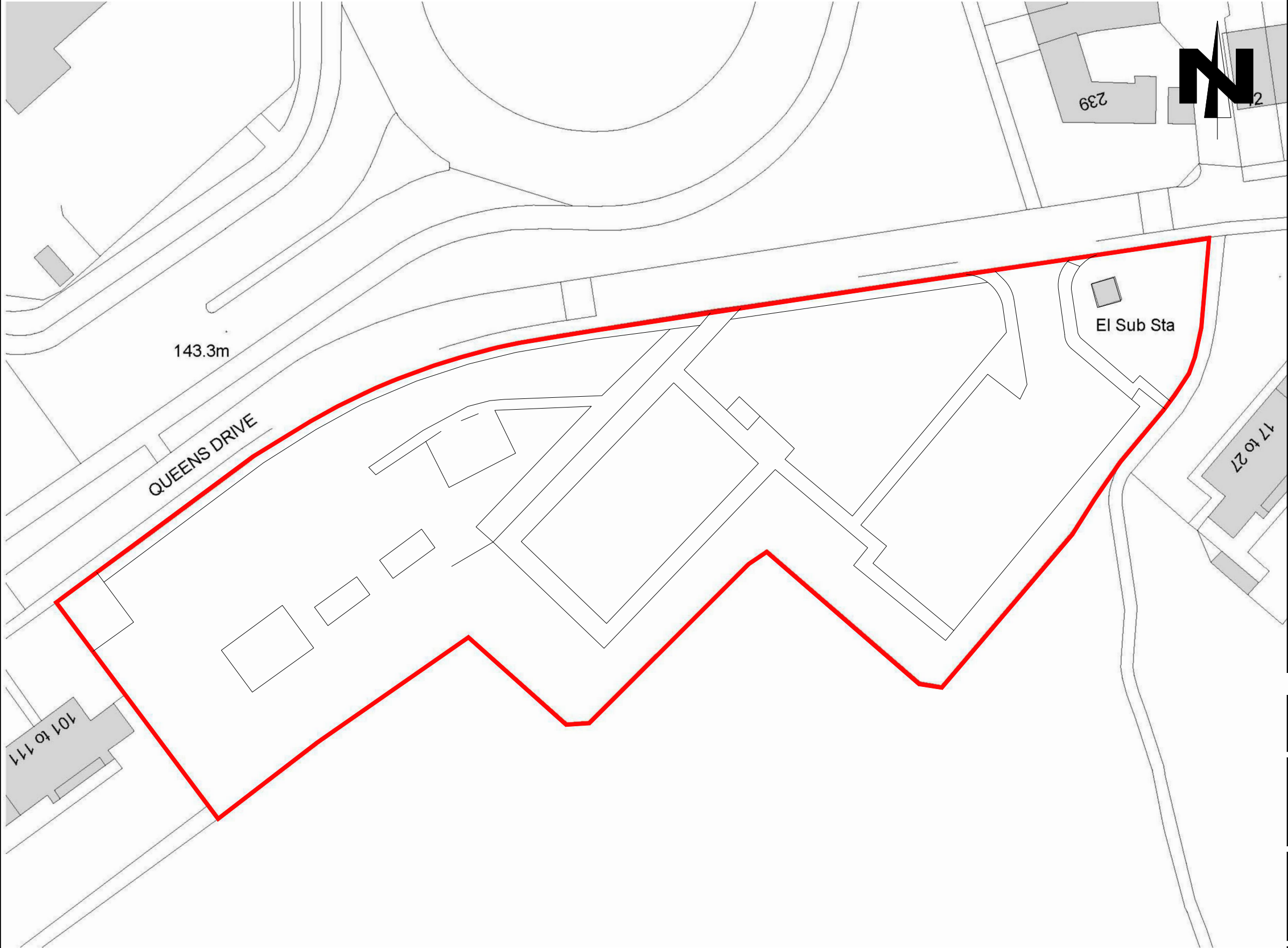
Queens Drive
Kirkhale, Rochdale, OL11 2NP

Drawing Title:

Aerial Photograph

Scale at A3: NTS @ A3	Date: 28.07.25	Drawn by: P.D	Approved by: G.W
--------------------------	-------------------	------------------	---------------------

Job Ref: 25-446	Drg no: —	Rev: —
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web: www.arc-environmental.com

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LEGEND	
	APPROXIMATE SITE BOUNDARY

rev.	date	amendments		drawn	chckd

Client:
ADEPT CONSULTING ENGINEERS

Project Title:
Proposed Residential Development
Queens Drive
Kirkhale, Rochdale, OL11 2NP

Drawing Title:
Existing Site Layout Plan

Scale at A3:	Date:	Drawn by:	Approved by:
NTS @ A3	28.07.25	P.D	G.W

Job Ref:	Drg no:	Rev:
25-446	-	-



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LEGEND	
	APPROXIMATE SITE BOUNDARY

rev.	date	amendments	drawn	chckd

Client:
ADEPT CONSULTING ENGINEERS

Project Title:
Proposed Residential Development

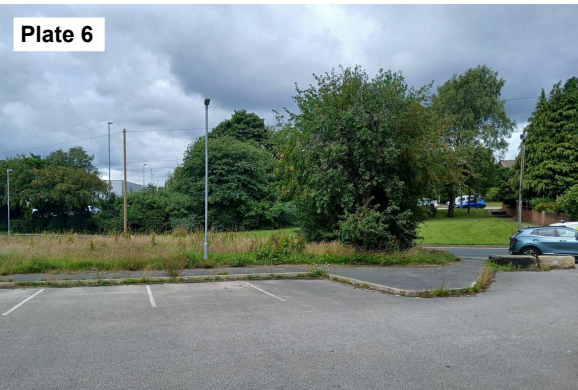
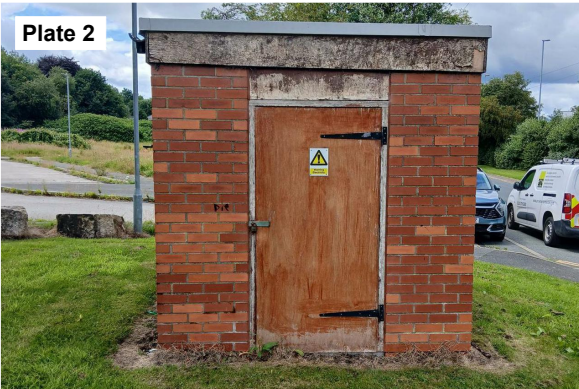
Queens Drive
Kirkhale, Rochdale, OL11 2NP

Drawing Title:

Proposed Development Layout Plan

Scale at A3: NTS @ A3	Date: 28.07.25	Drawn by: P.D	Approved by: G.W
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Job Ref: 25-446	Drg no: —	Rev: —
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St. John's Road
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Durham, DH7 8PN
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LEGEND	
	PHASE 1 SITE BOUNDARY

rev.	date	amendments	drawn	chckd

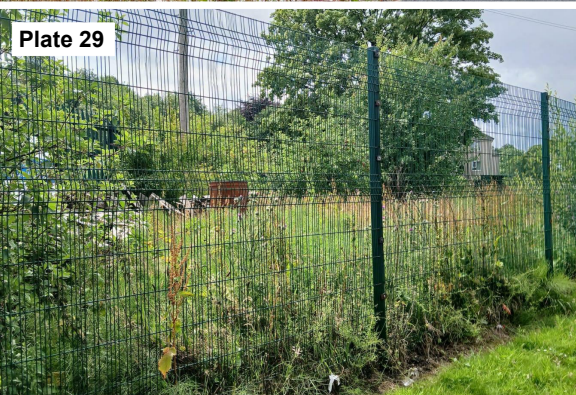
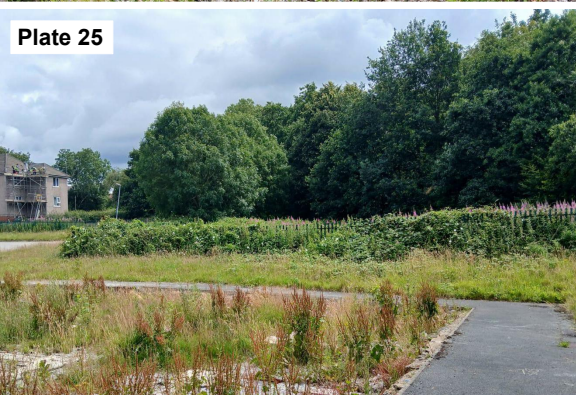
Client:
ADEPT CONSULTING ENGINEERS

Project Title:
Proposed Residential Development
Queens Drive
Kirkhale, Rochdale, OL11 2NP

Drawing Title:
Site Photographic Record Sheet 1

Scale at A3: NTS @ A3	Date: 28.07.25	Drawn by: P.D	Approved by: G.W
--------------------------	-------------------	------------------	---------------------

Job Ref: 25-446	Drg no: —	Rev: —
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LEGEND	
	PHASE 1 SITE BOUNDARY

rev.	date	amendments	drawn	chckd

Client:
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Project Title:
Proposed Residential Development
Queens Drive
Kirkhale, Rochdale, OL11 2NP

Drawing Title:
Site Photographic Record Sheet 2

Scale at A3: NTS @ A3	Date: 28.07.25	Drawn by: P.D	Approved by: G.W
--------------------------	-------------------	------------------	---------------------

Job Ref: 25-446	Drg no: —	Rev: —
--------------------	--------------	-----------

APPENDIX II

Coal Authority Consultants Report

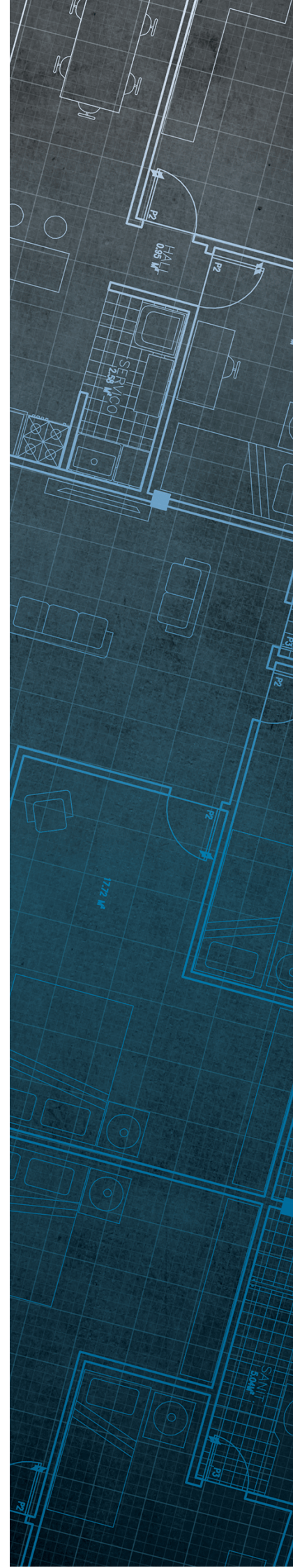


The Coal
Authority

Consultants Coal Mining Report

Land Adjacent To Queens Drive
Rochdale
Lancashire

Date of enquiry:	7 July 2025
Date enquiry received:	7 July 2025
Issue date:	7 July 2025
Our reference:	51003510158001
Your reference:	25-446



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

ARC ENVIRONMENTAL LTD

Enquiry address

Land Adjacent To Queens Drive
Rochdale
Lancashire

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

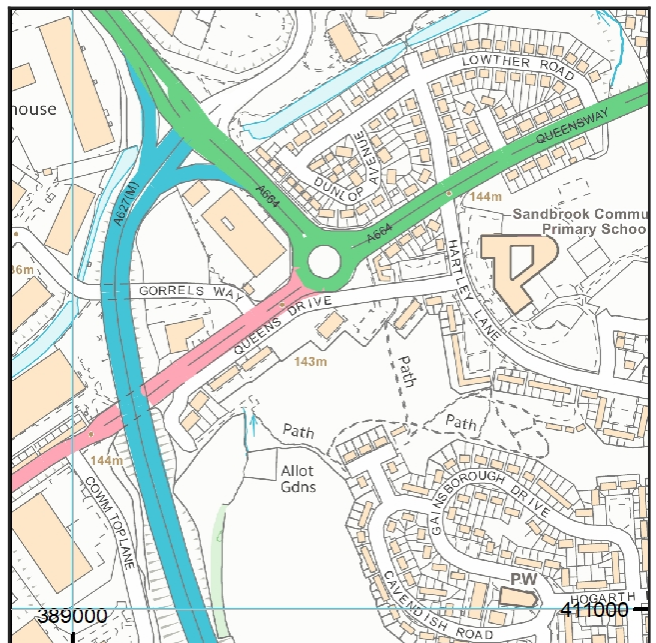
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

No past mining recorded.

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:

16820		
-------	--	--

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

None recorded within 50 metres of the enquiry boundary.

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

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

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

Based on the responses in this report, no further information has been highlighted.

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.

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

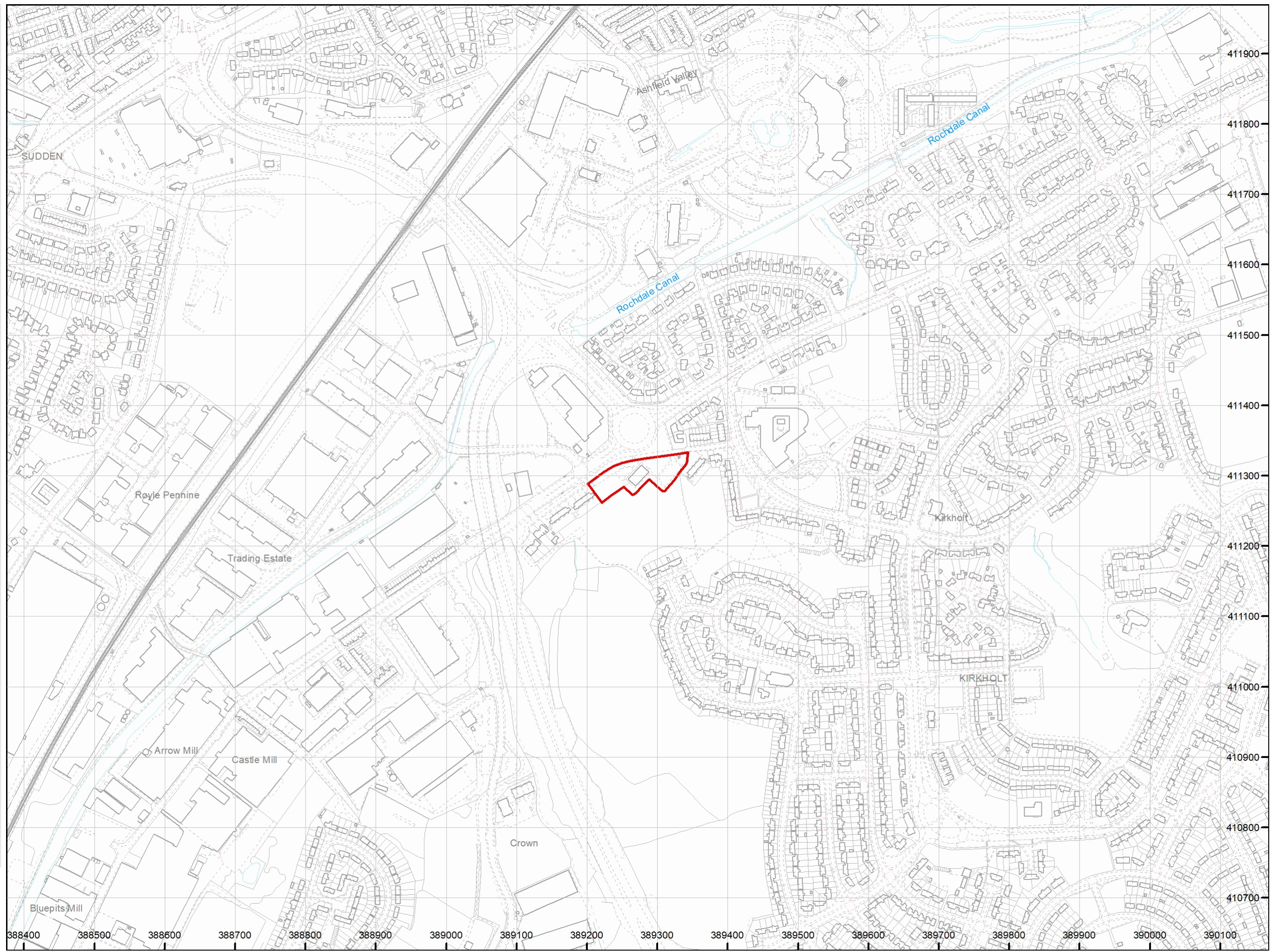
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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 

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



APPENDIX III

Landmark Information Group – Envirocheck Report



Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

380671801_1_1

Customer Reference:

25-446

National Grid Reference:

389270, 411300

Slice:

A

Site Area (Ha):

0.51

Search Buffer (m):

1000

Site Details:

17, Queens Drive

ROCHDALE

OL11 2NP

Client Details:

Mr D McGrath

Arc Environmental Ltd

Unit 1

Elliot Court

St John's Road

Meadowfield

Durham

DH7 8PN

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	15
Hazardous Substances	19
Geological	20
Industrial Land Use	26
Sensitive Land Use	51
Data Currency	52
Data Suppliers	58
Useful Contacts	59

Introduction

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

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Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and Public Health England. The probability result is only valid for properties above ground. All basement and cellar areas are considered to be at additional risk from high radon levels. If an underground room such as a cellar or basement makes up part of the living or working accommodation, the property should be tested regardless of Radon Affected Area status.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3		3		
Prosecutions					
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 3				2
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 4			2	7
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5		Yes		
Pollution Incidents to Controlled Waters	pg 5		4	3	8
Historical Prosecutions					
Registered Radioactive Substances					
Substantiated Pollution Incident Register	pg 7			1	
Water Abstractions	pg 8		2		4 (*5)
Water Industry Act Referrals	pg 10				1
Groundwater Vulnerability Map	pg 10	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 11	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 11	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 11		6	6	8
Water Framework Directive - Catchment	pg 13	Yes	Yes		
Water Framework Directive - Groundwater	pg 14	Yes			
Water Framework Directive - Surface Waters					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites	pg 15			1	
Historical Landfill Sites	pg 15			2	
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 15		1		
Licensed Waste Management Facilities (Locations)	pg 15			2	
Local Authority Landfill Coverage	pg 16	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 16		2	1	9
Potentially Infilled Land (Water)	pg 17		2	6	26
Registered Landfill Sites	pg 18			1	
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 19				2
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 20	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 20	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 22		1	2	7
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 24	Yes	n/a	n/a	n/a
Mining Instability	pg 24	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 24		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 24	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 24	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 26		10	35	110
Fuel Station Entries	pg 39				3
Points of Interest - Commercial Services	pg 40		4	6	31
Points of Interest - Education and Health	pg 43				4
Points of Interest - Manufacturing and Production	pg 43		2	12	47
Points of Interest - Public Infrastructure	pg 48				12
Points of Interest - Recreational and Environmental	pg 49				7
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 51				1
Ramsar Sites					
Sites of Special Scientific Interest	pg 51		1		
Special Areas of Conservation	pg 51		1		
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (W)	0	1	389250 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (S)	0	1	389274 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	0	1	389300 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	7	1	389350 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	12	1	389250 411250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	18	1	389350 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	24	1	389200 411250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	24	1	389274 411250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	66	1	389200 411200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	119	1	389100 411350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	121	1	389150 411400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	151	1	389100 411400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	175	1	389050 411200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	207	1	389150 411500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	220	1	389000 411200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	231	1	389100 411500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	245	1	389000 411150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	257	1	389600 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	258	1	389600 411350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	287	1	388950 411150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	312	1	389250 410950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	314	1	388950 411100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	342	1	388900 411450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	344	1	388950 411050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	363	1	389274 410900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	387	1	388850 411450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	399	1	388850 411100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	400	1	388900 411550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	401	1	388950 411600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	407	1	389750 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	408	1	389750 411350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (E)	409	1	389750 411300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	411	1	388850 411500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	417	1	388800 411400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	425	1	388850 411050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	433	1	388900 411600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	439	1	388850 411550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	454	1	388800 411500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	454	1	389000 411700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	456	1	388750 411350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (NE)	462	1	389750 411550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	467	1	388800 411050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	476	1	389050 411750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	480	1	388800 411550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	494	1	388800 411000
1	Discharge Consents Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Hartley Lane Cso Rear Of Sandbrook, Hartley Lane, Kirkholt, Rochdale, Greater Manchester, OL11 2lr Authority: Environment Agency, North West Region Catchment Area: Unknown Reference: 01ROC0066 Permit Version: 2 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 21st September 2020 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Not Supplied Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	242	2	389560 411440
1	Discharge Consents Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Hartley Lane Cso Rear Of Sandbrook, Hartley Lane, Kirkholt, Rochdale, Greater Manchester, OL11 2lr Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01roc0066 Permit Version: 1 Effective Date: 1st April 1991 Issued Date: Not Supplied Revocation Date: 31st December 1994 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Not Supplied Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	242	2	389560 411440
1	Discharge Consents Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Hartley Lane Cso Rear Of Sandbrook, Hartley Lane, Kirkholt, Rochdale, Greater Manchester, OL11 2lr Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Eprsb3396re Permit Version: 1 Effective Date: 21st September 2020 Issued Date: 21st September 2020 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of Suddon Brook Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	250	2	389570 411437
2	Integrated Pollution Controls Name: Dale Joinery Ltd Location: Queensway, ROCHDALE, Lancashire, OL11 2PR Authority: Environment Agency, North West Region Permit Reference: AV5071 Dated: 2nd December 1996 Process Type: IPC new application Description: 6.7 A (A) Timber processes within Miscellaneous Industries Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Unknown	A7NE (SW)	693	2	388705 410800
2	Integrated Pollution Controls Name: Dale Joinery Ltd Location: Queensway, ROCHDALE, Greater Manchester, OL11 2PR Authority: Environment Agency, North West Region Permit Reference: BD5771 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 6.7 A (A) Timber processes within Miscellaneous Industries Status: Authorisation revoked Positional Accuracy: Unknown	A7NE (SW)	697	2	388700 410800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Local Authority Pollution Prevention and Controls Name: Crs Petrol Filling StationCrs Food Ltd Location: Sandbrook Park, Sandbrook Way, ROCHDALE, Lancashire, OL11 1SA Authority: Pembrokeshire County Council, Environmental Health Department Permit Reference: 13 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Manually positioned to the address or location	A18SW (N)	407	3	389210 411724
4	Local Authority Pollution Prevention and Controls Name: Taylor Engineering & Plastics Location: Queensway, ROCHDALE, Lancashire, OL11 2QW Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: 35/06 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/23 Coating of metal and plastic Status: Permitted Positional Accuracy: Manually positioned to the road within the address or location	A12SE (SW)	494	4	388800 411000
5	Local Authority Pollution Prevention and Controls Name: Inx International Ltd Location: Unit 6b Transpennine Trading Estate, Gorrels Way, Rochdale, OL11 2PX Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: 131/09 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/44 Manufacture of coating materials Status: Permitted Positional Accuracy: Manually positioned to the address or location	A12SE (W)	606	4	388631 411084
6	Local Authority Pollution Prevention and Controls Name: Tesco Petrol Station Location: Silk Street, ROCHDALKE, Lancashire, OL11 3ER Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: 86/09 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	726	4	388612 411711
7	Local Authority Pollution Prevention and Controls Name: Commercial Contract Engineers Location: Eagle Technology Park, Queensway, Rochdale, OL11 1tq Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: 47/06 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles Status: Authorised Positional Accuracy: Manually positioned to the address or location	A14NE (E)	834	4	390136 411590
8	Local Authority Pollution Prevention and Controls Name: Webmaster Ltd Location: Unit 5 Astra Industrial Centre, Royle Barn Road, Castleton, ROCHDALE, Lancashire, OL11 3DT Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: 38 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/32 Adhesive coating Status: Authorised Positional Accuracy: Automatically positioned to the address	A12SW (W)	859	4	388350 411170
9	Local Authority Pollution Prevention and Controls Name: Johnsons Dry Cleaners Uk Ltd Location: Manchester Road, Rochdale, OL11 2st Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: 123/09 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	880	4	388423 411697

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	Local Authority Pollution Prevention and Controls Name: Zinc Alloy Ltd Location: Royle Barn Road, ROCHDALE, Lancashire, OL11 3EZ Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/23 Coating of metal and plastic Status: Authorisation revoked Positional Accuracy: Manually positioned to the road within the address or location	A12SW (W)	905	4	388318 411092
11	Local Authority Pollution Prevention and Controls Name: Sealocrete Pla Products Ltd Location: Dicken Green Mill, Greenfield Lane, ROCHDALE, Lancashire, OL11 2 Authority: Rochdale Metropolitan Borough Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/44 Manufacture of coating materials Status: Site Closed Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	938	4	390070 411926
	Nearest Surface Water Feature	A13SW (SW)	64	-	389181 411212
12	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 7th June 1995 Incident Reference: 95621350 Catchment Area: Roch Receiving Water: Not Given Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (N)	73	2	389300 411400
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: ROCHDALE Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Unknown Note: Rochdale; Unknown Incident Date: 9th June 1997 Incident Reference: 97621034 Catchment Area: Rochdale Canal Receiving Water: Canal Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	197	2	389005 411295
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Gas Oil Note: Not Supplied Incident Date: 9th March 1995 Incident Reference: 95620485 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Leaking Tank Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	202	2	389000 411295
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 19th October 1994 Incident Reference: 94622311 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13NW (W)	202	2	389000 411300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	Pollution Incidents to Controlled Waters Property Type: Industrial: Other Location: River Rochdale Canal, Gorrels Way, River Rochdale Authority: Environment Agency, North West Region Pollutant: Chemicals - Paints / Dyes Note: Yellow Incident Date: 21st April 1998 Incident Reference: SO980717 Catchment Area: Rochdale Canal Receiving Water: Canal Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12SE (W)	302	2	388900 411295
14	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Diesel In , Rochdale Canal, CASTLETON Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Unknown Note: Rochdale Canal; Not Identified Incident Date: 8th June 1997 Incident Reference: 97621016 Catchment Area: Rochdale Canal Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (W)	302	2	388900 411300
15	Pollution Incidents to Controlled Waters Property Type: WSC Sewage, Sewerage & Supply: Northumbrian Water Ltd Location: Sudden Brook, Off Valley Road, ROCHDALE, Greater Manchester Authority: Environment Agency, North West Region Pollutant: Storm Sewage Note: Not Supplied Incident Date: 2nd August 1999 Incident Reference: 30955 Catchment Area: Roch Receiving Water: River Stretch (Freshwater) Cause of Incident: Climatic Conditions : Localised High Rainfall Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m	A18SE (N)	469	2	389300 411800
16	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Other Note: Rochdale Canal; Lack Of Do Incident Date: 8th July 1994 Incident Reference: 94621509 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Low Dissolved Oxygen Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	533	2	389600 411800
17	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Affected; Oil To Drains Incident Date: 19th August 1996 Incident Reference: 96621846 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	759	2	388500 411000
18	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Rochdale Canal; Oil Incident Date: 11th February 1996 Incident Reference: 96620258 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	855	2	388500 410800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Suddin Brook, River Roch Authority: Environment Agency, North West Region Pollutant: Chemicals - Paints / Dyes Note: A Deep Purple Colour Incident Date: 23rd January 1998 Incident Reference: SO980170 Catchment Area: Roch Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	899	2	388400 411695
20	Pollution Incidents to Controlled Waters Property Type: Pollution Found Source Not Determined Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Rochdale Canal; Thin Oil Film Incident Date: 14th April 1996 Incident Reference: 96620759 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	915	2	388500 410700
21	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Oils - Diesel (Including Agricultural) Note: Rochdale Canal; Diesel Incident Date: 11th April 1996 Incident Reference: 96620734 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	993	2	388405 410695
21	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Other Fuel Oil Note: Not Supplied Incident Date: 23rd January 1995 Incident Reference: 95620099 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	994	2	388400 410700
21	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Affected; Contaminated Sprinkler Water Incident Date: 30th May 1996 Incident Reference: 96621157 Catchment Area: Rochdale Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	997	2	388400 410695
22	Substantiated Pollution Incident Register Authority: Environment Agency - North West Region, South Area Incident Date: 16th February 2009 Incident Reference: 654206 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Oils - Unknown	A18SE (NE)	333	2	389451 411648

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	Water Abstractions Operator: M S Gadhi & A Raazaq Licence Number: 2569002026 Permit Version: Not Supplied Location: Borehole, Crest Mill, Queensway, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Manufacturing Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 655 Yearly Rate (m3): 91829 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13NW (W)	197	2	389005 411300
24	Water Abstractions Operator: Mr M Gadhi And Mr A Raazaq Licence Number: 2569002074 Permit Version: Not Supplied Location: Rochdale Canal At Queensway, Castleton, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Boiler Feed Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 114 Yearly Rate (m3): 36368 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (W)	220	2	389000 411200
25	Water Abstractions Operator: Sealocrete Pla Ltd Licence Number: 2569002107 Permit Version: 100 Location: Rochdale Canal At Queensway, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 45 Yearly Rate (m3): 10456 Details: Dicken Green Mill, Queensway Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	960	2	390070 411960
25	Water Abstractions Operator: Sealocrete Pla Ltd Licence Number: 2569002107 Permit Version: 100 Location: Rochdale Canal At Queensway, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Dicken Green Mill, Queensway Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	960	2	390070 411960

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	Water Abstractions Operator: Dunphy Combustion Ltd Licence Number: 2569002178 Permit Version: 101 Location: Catchpit Fed By Surface Drainage At Premises, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises, Queensway, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th February 1991 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	976	2	390200 411800
26	Water Abstractions Operator: Dunphy Oil & Gas Burners Ltd Licence Number: 2569002178 Permit Version: 100 Location: Catchpit Fed By Surface Drainage At Premises, Rochdale Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 34 Yearly Rate (m3): 2318 Details: Premises, Queensway, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th March 1981 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	976	2	390200 411800
	Water Abstractions Operator: Sonoco Industrial Packaging Licence Number: 2569002024 Permit Version: Not Supplied Location: Rochdale Canal, Castleton, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 123 Yearly Rate (m3): 30458 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7SW (SW)	1120	2	388400 410500
	Water Abstractions Operator: J & J Makin Convertors Ltd Licence Number: 2569002076 Permit Version: 100 Location: Rochdale Canal At Rochdale, Lancs Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 391 Yearly Rate (m3): 136380 Details: Premises At Norwich Street, Rochdale Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 1993 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A20NW (NE)	1361	2	390300 412300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Riggs Ltd Licence Number: 2569002113 Permit Version: Not Supplied Location: Rochdale, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Boiler Feed Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 27 Yearly Rate (m3): 4319 Details: Rochdale Canal Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A25SW (NE)	1649	2	390600 412400
	Water Abstractions Operator: J & J Makin Ltd. Licence Number: 2569002097 Permit Version: Not Supplied Location: Rochdale Canal, Moss Bridge Road, ROCHDALE, Lancashire Authority: Environment Agency, North West Region Abstraction: Boiler Feed Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 9 Yearly Rate (m3): 3410 Details: Licence Status: Lapsed Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A25SE (NE)	1888	2	390900 412400
	Water Abstractions Operator: Rochdale Sheet Metal Co Ltd Licence Number: 2569002100 Permit Version: 100 Location: Jackwell Fed By Rochdale Canal@ Premises,Globe Machine Works Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Boiler Feed Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 7 Yearly Rate (m3): 1023 Details: Premises At Globe Machine Works Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st August 1989 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A25SE (NE)	1946	2	390900 412500
27	Water Industry Act Referrals Name: Processed Light Alloys Ltd Location: 2 THE ASTRA CENTRE, ROYLE BARN ROAD, CASTLETON, ROCHDALE, LANCASHIRE, OL11 3DT Authority: Environment Agency, North West Region Permit Reference: BA6097 Dated: 15th January 1998 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations Status: Application received by the EA but is not yet authorised Positional Accuracy: Manually positioned to the address or location	A12SW (W)	862	2	388343 411213
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A13SW (W)	0	2	389234 411293

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A13NE (S)	0	2	389274 411300
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (S)	0	5	389274 411300
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13SW (W)	0	5	389234 411293
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (S)	0	5	389274 411300
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 48.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (SW)	64	6	389181 411212
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (SW)	103	6	389186 411165
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (SW)	104	6	389184 411165
31	OS Water Network Lines Watercourse Form: Canal Watercourse Length: 1445.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A13NW (N)	196	6	389207 411509

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	OS Water Network Lines Watercourse Form: Canal Watercourse Length: 115.0 Watercourse Level: Underground Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A13NW (NW)	203	6	389181 411509
33	OS Water Network Lines Watercourse Form: Canal Watercourse Length: 1199.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A13NW (W)	203	6	389014 411373
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 131.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NE (NE)	318	6	389571 411554
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A18SE (NE)	383	6	389535 411663
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SE (NE)	383	6	389535 411663
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1017.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sudden Brook Catchment Name: Mersey Primacy: 1	A18SW (N)	400	6	389220 411719
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sudden Brook Catchment Name: Mersey Primacy: 1	A18SE (N)	417	6	389318 411749
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 332.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sudden Brook Catchment Name: Mersey Primacy: 1	A18SE (N)	459	6	389376 411790
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 51.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SW (E)	506	6	389836 411214