PHASE I GEO-ENVIRONMENTAL DESK STUDY REPORT

Joseph Norton SEMH School (Former Deighton Centre), Huddersfield

HSP Ref: HSP2022-C4164-G-GPI-1137

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hsp consulting

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Lawrence House | 6 Meadowbank Way | Nottingham | NG16 3SB

01773 535555 | design@hspconsulting.com | www.hspconsulting.com

Joseph Norton SEMH School
Land off Deighton Road
Deighton
Huddersfield
HD2 1JP

Phase I Geo-Environmental Desk Study Report

This report was produced by HSP Consulting Engineers Ltd for Frank Shaw Associates Ltd on behalf of Kirklees Council as the Phase I Geo-Environmental Desk Study Report for the former Deighton Centre (off Deighton Road), to provide a preliminary assessment of potential ground related development constraints and to support a planning application.

Issue & Revision History

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HSP Consulting Engineers Ltd, Lawrence House, 6 Meadowbank Way, Nottingham, NG16 3SB
T 01773 535555 **W** www.hspconsulting.com

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Executive Summary

HSP Consulting Engineers Ltd has been commissioned by Frank Shaw Associates Ltd on behalf of Kirklees Council to provide technical studies to support a planning application. The geo-environmental desk study (Phase I) is one of a series of studies providing information on likely constraints to the development of the site. The purpose of the report is to collate background historical and geo-environmental data to address where possible land contamination and stability matters within Planning Policy Guidance.

The site is irregular in shape and is approximately 2.07Ha in area. Access is gained off Deighton Road in the south of the site. The site is currently vacant, with aspirations for a new educational facility on site.

Historical mapping shows the site as undeveloped with Tenters on the earliest mapping, with no further changes shown until 1957 where Deighton Secondary School is shown. This remains until the buildings were demolished in 2013. The site remains vacant at present.

An area of Made Ground is recorded in the north of the site on the BGS mapping. Made Ground should be expected where development / demolition has occurred on site. No superficial deposits are recorded on site. Bedrock geology of the Pennine Lower Coal Measures are expected beneath the site.

The site is located within a coal mining area as defined by the Coal Authority. No past underground mining has been recorded, but unrecorded shallow workings are considered to be probable.

The bedrock geology of the Pennine Lower Coal Measures are classified as a Secondary A Aquifer. The site does not lie within a source protection zone.

The site is located within an area which has a low risk for radon. No radon protection measures are required for any new development.

A small historical landfill is recorded in the north of the site, shown as a Refuse Tip on the 1966 mapping. In addition, the playing fields to the east of the site are shown as an Environment Agency historical landfill.

The Preliminary Conceptual Site Model indicates a indicates a moderate to low possibility that harm could arise to a designated receptor from identified hazards.

The executive summary contains an overview of key findings and conclusions. However, no reliance should be placed on the executive summary until the whole of the report has been read. Other sections of the report may contain information which puts into context the findings noted within the executive summary.

1. Introduction

1.1 Background

This report has been prepared to support a planning application. The brief provided by Kirklees Council indicates a new build school for children and young people with Social, Emotional and Mental Health needs at the former Deighton Centre site.

1.2 Scope and Limitations

HSP Consulting Engineers Ltd has been commissioned by Frank Shaw Associates Ltd on behalf of Kirklees Council to provide technical studies to support a planning application and enable design of a new education facility on the site. The geo-environmental desk study (Phase I) is one of a series of studies providing information on likely constraints to the development of the site. The purpose of the report is to collate background historical and geo-environmental data to address where possible land contamination and stability matters within Planning Policy Guidance.

The recommendations made in this report are based on the assessment of the published information and information provided by the Client.

1.3 Report Objectives

The objectives of this report are to:

- Establish the geological and hydrogeological conditions using existing available/published information.
- Summarise available information and identify site specific geotechnical and environmental hazards which may place a constraint upon the proposed site use.
- Produce a Conceptual Site Model and preliminary qualitative environmental risk assessment identifying potential pollution linkages between sources of contamination, pathways and receptors.
- Provide recommendations for Phase II Ground Investigation and any other assessments required.

1.4 Sources of Information

The following sources of information were used during the preparation of this report.

- Emapsite^{TM} Groundsure Enviro and Geo Insight Ref: EMS-822282_1057112
- Emapsite^{TM} Groundsure Historical Mapping Ref: EMS-822282_1057111 Various Scales
- Consultants Coal Mining Report: Ref-51003322894001
- British Geological Survey. Onshore Geoindex. www.bgs.ac.uk
- DEFRA Magic Map: http://defra.gov.uk/magicmap.aspx
- Department of the Environment Industry Profiles.
- BGS 1:50,000 Mapping Sheet Number 77, Huddersfield, 2003, Solid and Drift.

A walkover was undertaken by HSP Consulting on the 16th November 2022. The purpose of the walkover was to record the current land use, topography and principal physical features and to identify, where possible, visual and olfactory indicators of contamination.

2. Site Setting

2.1 The Site

2.1.1 Location

The site is located in Deighton, a district located in the northeast of Huddersfield. The site is located off Deighton Road, land formerly occupied by the Deighton Centre. The approximate National Grid Reference for the centre of the site is (NGR) 415904, 419561. A Site Location Plan is included in Appendix I.

2.1.2 Description

The site is irregular in shape and is approximately 2.07Ha in area. Access is gained off Deighton Road in the south of the site. During the site walkover, the access road gate was locked and barricaded with boulders / blocks, preventing vehicle access.

The site was formerly occupied by the Deighton Centre, which was demolished in 2013 and is therefore now vacant land. Demolition drawings have been provided by the client. The 'Site Finishes Plan' (Drawing Ref: SE05) indicates the following activities were to be undertaken during demolition:

- Locate, disconnect and seal all redundant drains and connections (Drawing SE06 shows the disconnections of water feed, electricity and gas).
- Demolish identified buildings including removal of perimeter pathways, paving areas, signs, retaining walls, ramps, steps and hardstanding areas – down to ground level including excavation of floor slab and foundations.
- Use suitably crushed demolition material to fill any below ground voids (presumably basement areas)
- Remove all excess demolition material off site
- Introduce 150mm layer of topsoil of former building footprint and seed.

No asbestos removal documentation has been provided.

It is also noted that that no post-demolition documentation has been provided.

While the building footprints have been removed in their entirety, the former access road and car parks remain; which generally appeared in good condition. Scrubland / overgrown greenspace occupies the former school area. A number of informal paths cut across this area, which are understood to be used by the general public. A public right of way footpath is located adjacent to the southwestern / west site boundary.

In the west of the site, a 'spring' was observed with water flowing down the bank and northwards down the site. The source of the water is unknown at this stage.

Topographically, the site lies towards the top of a natural ridge / slope. In regard to the wider area, the land to the west and southwest is at a similar level, whilst the land to the north, east and southeast falls away from the site. The topographical survey indicates the highest point on site is in the south, at approximately 136.50m AOD. The site falls away to the north, with the lowest point recorded approximately 128.80m AOD (level difference of approximately 7.50m) and also falls to the east (towards the playing fields). Sections provided with the topographical drawing show the profile from the far west of the site and across the playing fields in the east. The section shows the far west of the site at approximately 133.25m AOD, with the most eastern point of the playing fields at approximately 105.75m AOD.

Although the levels across the playing field slope to the east, it is clear that the area has been terraced historically to create a suitable playing surface.

Mature / semi mature trees are present along the southern, western and northern site boundaries, with sporadic trees / shrubs within the central areas.

The site is generally unbound around the perimeter, with the exception of the southwest boundary with the Christ Church CE Academy; which consists of green palisade fencing. The east of the site is unbound, allowing access to the adjacent playing fields. The north of the site is bound by a woodland, which slopes down to the residential dwellings off Tenter Hill Lane.

2.1.3 Surrounding Land Use

The main features of interest identified are:

North:	Woodland / Residential dwellings.
East:	Playing Fields with residential dwellings beyond.
South:	Deighton Sports Arena, Deighton Road and residential dwellings beyond.
West:	Christ Church CE Academy and residential dwellings beyond.

2.1.4 Proposed End Use

Development plans at present show a new school in the north / centre of the site, with a range of external uses including parking / drop off, farm area, forest school, habitat area and Multi-Use Games Area (MUGA). It is not known whether development plans have been finalised at this stage.

2.2 Geology

2.2.1 Made Ground

The BGS mapping indicates an area of Made Ground (undivided) in the north of the site, presumably associated with the former school on site (now demolished). Made Ground should be expected across the majority of the site where development has occurred (i.e. former buildings, existing access roads and car parks).

The playing fields to the east of the site are also recorded as Made Ground (undivided), presumably associated with the landfilling (see Section 4.3 for further details).

2.2.2 Superficial Deposits

The BGS mapping indicates the site is devoid of superficial deposits.

2.2.3 Bedrock Geology

BGS bedrock mapping indicates the site is underlain by mudstone, siltstone and sandstone of the Pennine Lower Coal Measures. Areas of sandstone are recorded in the southwest of the site are partially in the extreme northeast. The deposits are described by the BGS as *'Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.'*

2.2.4 Structural Geology

Five faults have been identified within 250m of the site boundary, all of which are recorded as normal, inferred and crossmarks on the downthrow side, the closest of which is shown 15m north of the site.

In addition, one coal seam (inferred) is shown 201m north of the site.

2.2.5 Historical Boreholes

There are ten BGS borehole record within 250m of the site. The summary of the pertinent and available records is provided in Table 2.1 below:

BGS Reference		Summary of Ground Conditions	
SE11NE375 211m E	Drilled by: Geotechnical Engineering Ltd Date: October 1994 Method: Unknown	G.L - 1.80 1.80m – 3.30 3.30m – 11.50 11.50 – 12.30 12.30 – 20.00	Soft brown sandy soil and CLAY Brown CLAY to MUDSTONE Grey MUDSTONE Dark grey MUDSTONE Grey muddy SILTSTONE NO COAL – NO FLUSH LOST
SE11NE190 229m SW	Drilled by: IGES Date: January 2000 Method: Cable Percussive	G.L – 0.10 0.10 – 0.30 0.30 – 0.40 0.40 – 0.80 0.80 – 2.75	MADE GROUND: Tarmac Brick rubble fill Light orange brown CLAY (FILL) Light brown limestone GRAVEL (FILL) No recovery (obstruction)
SE11NE191 229m SW	Drilled by: IGES Date: January 2000 Method: Cable Percussive	G.L – 0.10 0.10 – 0.50 0.50 – 0.90 0.90 – 1.30 1.30 – 3.00	Tarmac Light brown limestone gravel (FILL) Dark black brown silty clayey topsoil (MADE GROUND) Very stiff orange brown grey CLAY Dark orange grey weathered SHALE
SE11NE376 238m NE	Drilled by: Geotechnical Engineering Ltd Date: October 1994 Method: Unknown	G.L – 2.00 2.00 – 16.00 16.00 – 16.70 16.70 – 20.00	Soft brown soil and sandy CLAY Beige to grey muddy SILTSTONE Dark grey MUDSTONE Grey muddy SILTSTONE

2.2.6 Geological Hazard Ratings

The Emapsite™ Insight Report provides ground stability data for the site and surrounding area, a summary is provided in Table 2.2 below:

Table 2.2 - Summary of BGS Hazard Ratings

Hazard	Located	Direction	Hazard Potential
Potential for Collapsible Rocks Stability Hazards	On-site	-	Very Low
Potential for Landslide Ground Stability Hazards	On-site	-	Low to Very Low
Potential for Ground Dissolution Stability Hazards	On-site	-	Negligible
Potential for Compressible Ground Stability Hazards	On-Site	-	Very Low to Negligible
Potential for Running Sand Ground Stability Hazards	On-site	-	Very Low to Negligible
Potential for Shrinking or Swelling Clay Ground Stability Hazards	On-site	-	Very Low to Negligible

2.3 Mining

2.3.1 BGS Mineral Sites

No records of mineral extraction have been identified within 250m of the site.

2.3.2 Surface Ground Workings

There are thirteen surface ground workings recorded within a 250m radius of the site. Two of the records are on site and relate to unspecified heaps, recorded on the 1975 – 1988 mapping. The two records marginally appear in the southeast of the site (access road to the site) and are presumably associated with the historical terracing of the site. Three of the records are shown adjacent to the western site boundary, also relating to unspecified heaps (1965 – 1988 mapping). The area is shown as an embankment on the historical mapping.

Other records include a Mill Pond 66m southeast, unspecified pits 109m – 111m northeast (shown as embankments on the mapping) and unspecified heaps 145m southeast of the site.

2.3.3 Brine Extraction

No Brine Extraction Areas have been identified within a 250m radius of the site.

2.3.4 Historical Mineral Planning Areas

There is no Historical Mineral Planning Areas recorded within a 250m radius of the site.

2.3.5 Non Coal Mining

No records of Non-coal Mining have been identified within 250m radius of the site.

2.3.6 Coal Mining

The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report (Ref-51003322894001 dated 4th November 2022) has been obtained. The main findings are detailed below:

- No past underground mining has been recorded.
- Unrecorded shallow workings are considered to be 'probable'.
- No mine entries have been recorded within 100m of the site boundary.
- No opencast mines recorded within 500m of the site boundary.
- No coal outcrops are recorded
- The Coal Authority has not received any damage notice or claims for the subject property or any property within 50m of the enquiry boundary since 31st October 1994.

The Consultants Coal Mining Report and Mapping can be found in Appendix VI.

2.4 Hydrogeology

2.4.1 Aquifer Units

The bedrock geology of the Pennine Lower Coal Measures is classified as a Secondary A Aquifer, described by the Environment Agency as *'permeable layers capable of supporting water supplies at a local rather than strategic scale and in some cases forming an important source of base floe to rivers. These are generally aquifers formerly classified as minor aquifer'.*

2.4.2 Groundwater Vulnerability

The site is not located within a Source Protection Zone.

2.4.3 Groundwater Abstractions

There are no groundwater abstraction points recorded within 250m of the site boundary. There is one potable groundwater abstractions recorded within 2km of the site boundary. The record is located 1191m east of the site and the status shown as historical. The direct source was surface water of the River Colne.

2.4.4 Groundwater Discharge Consents

There are no groundwater discharge consents within 250m of the site.

2.4.5 Groundwater Quality

The groundwater quality on site (Aire and Calder Carb Limestone / Millstone Grit / Coal Measures) has an overall rating of Poor, recorded in 2019.

2.5 Hydrology

2.5.1 Nearest Surface Water Course

The nearest surface water course is an inland river is shown 107m north of the site.

2.5.2 Surface Water Quality

No surface water quality records have been recorded within a 250m radius of the site.

2.5.3 Surface Water Abstractions

There are no current surface water abstraction points recorded within a 250m radius of the site.

2.5.4 Surface Water Discharge Consents

There are no records of surface water discharge consents within 250m of the site.

2.6 Flood Risk

The site lies within an Environment Agency Flood Zone 1 (low probability) and does not lie within an area benefitting from flood defences or within an area used for flood storage. In addition, there are no records of historical flooding within 250m of the site.

There is a negligible risk to the site from groundwater flooding which is caused by unusually high groundwater levels. The risk of surface water on site is generally negligible, with a small area in the north of the site showing 1 in 1000 year return, depths greater than 1.00m. The highest risk of surface water flooding within 50m is shown as a 1 in 30 year return, depths between 0.0m and 1.00m.

Although the report provides some information on flood risk this does not constitute a flood risk assessment for the site. The flood risk information provided only relates to flooding from Rivers or Seas and surface water. It does not account for flooding from other sources such as blockages in drainage systems and artificial water features. A separate Flood Risk Assessment may be required for the site.

2.7 Radon

The site is located within an area which has a negligible probability (less than 1% of properties above the action level) for radon. No radon protection measures are considered necessary for any new dwellings on the site.

2.8 Sensitive Land Uses, Ecological and Statutory Designations

A Designated Ancient Woodland is recorded 108m north of the site, named Dyson/Screamer Wood.

A listed building is recorded 225m southwest of the site (Grade II), listed in September 1978.

No other records of sensitive land use (SAC, Designated Greenbelt, Ancient Woodland, Nature Reserves, Environmentally Sensitive Areas, Listed Buildings etc) have been identified within a 250m radius of the site.

3. Site History

The following section details the historical development of the site, with reference to historical Ordnance Survey maps. All distances are approximate and given from the site boundary. Descriptions in italics are as identified on the historical plans. For a complete list of maps consulted refer to the Emapsite™ Historical Mapping presented in Appendix III.

Table 3.1 - Summary of Historical Maps

Published Map Date & Scale	Land Use on Site	Surrounding Land Use
Date : 1854 - 1893 Scale: 1:10,560 1:2,500 County Series	The site is undeveloped and forms part of three field boundaries. A footpath is shown adjacent to the western site boundary. Tenters are shown on site on the 1854 mapping.	The area to the south of the site is developed and shown as *Deighton*. The majority of the buildings appear to be dwellings, but a *School* and *Inn* are also shown. The area to the north of the site is shown as agricultural with *Bradley Gate Wood* further north. *Middle Carr Dye Works* and a *Mill Pond* are shown approximately 110m southeast of the site.
Date : 1918 - 1931 Scale: 1:2,500 1:10,560 County Series	The site remains undeveloped.	The Dye Works is no longer shown. A *Laundry* with *Chimney* is shown approximately 190m – 200m west of the site.
Date : 1957 - 1969 Scale: 1:1,250 1: 2,500 1:10,560 National Grid Provisional	*Deighton Secondary School* is shown on the site. In addition, a number of embankments / cuttings are recorded around the school buildings, indicating that the site was terraced to form a plateau for the school.	A pit is shown on the land adjacent to the eastern site boundary. *Deighton County Primary School* is shown adjacent to the west of the site (with some cuttings / embankments also shown). A factory is recorded to the south of the *Laundry*, approximately 215m west of the site. Steady residential development is shown in the wider area to the northwest and south / southeast.
Date : 1966 - 1970 Scale: 1:1,250 National Grid	A small *Refuse Tip* is shown within the embankment in the north of the site.	The land to the east of the site is shown as *Playing Fields.*
Date : 1988 - 1993 Scale: 1:1,250 1:10,000 National Grid	The cuttings / embankments / refuse tip are no longer shown on site.	Residential development is recorded to the north of the site.
Date : 2000 - 2003 Scale: 1:1,250 1:10,000 Aerial Photography Landline National Grid	The school is now shown as *The Deighton Centre* on site. Aerial photography confirms the school on site with a number of car parks also shown. Small areas of soft landscaping are present between buildings / car parks.	No significant changes identified.
Date : 2022 Scale: 1:10,000 Aerial Photography National Grid	The school / centre is no longer shown on site. It is known that the school was demolished in 2013. The 2018 aerial photography shows the school no longer present and the area it was formerly located cleared following demolition. The access road and car parks remain in-situ.	No significant changes identified.

4. Environmental Data

4.1 Polluting Activity

4.1.1 Pollution Incidents

No pollution incidents have been recorded within 250m of the site.

4.2 Licensed Industrial Activity

4.2.1 Control of Major Accidents Hazards (COMAH)

There are no records within 250m of the site for historical COMAH and Notification of Installations Handling Hazardous Substances (NIHHS).

4.2.2 Licensed Sites

There are no Local Authority Pollution Prevention and Controls or Integrated Pollution Prevention and Controls within a 250m radius of the site.

There are no Registered Radioactive Substance Licences recorded within 250m of the site.

4.2.3 Industrial Activities

There are six current industrial activities recorded within 250m of the site. The closest record is an electricity substation 58m southwest of the site. The other records relate to a mast / wind turbine, electricity substations and published goods.

There are twelve historical industrial records within 250m of the site. The closest records relate to unspecified heaps on / adjacent to the site. Other records include a Mill Pond (66m southeast), unspecified pits (109m-111m northeast) and a laundry (161m-172m southwest/west).

4.2.4 Fuel Stations & Tanks

There are no historical or current recorded petrol stations located within a 250m radius of the site.

Two historical tanks are recorded within 250m of the site. The records are shown 208m-209m southwest of the site, identified on the 1907 and 1958-1980 historical mapping.

There are no records of high-pressure underground pipelines (oil and gas) within 250m of the site.

4.3 Waste and Material Storage Locations

4.3.1 Landfill

A small historical landfill is recorded in the north of the site, shown as a Refuse Tip on the 1966 mapping. In addition, the playing fields to the east of the site are shown as an Environment Agency historical landfill. The landfill details are shown as Deighton Playing Fields and the waste type listed as Household. No further information is provided. The Local Authority Search provided shallow spike survey results, the details of which can be found within Section 4.4.

There are no other records of Historical, Active or Recent Landfill Sites recorded within a 250m radius of the site.

4.3.2 Waste Transfer Stations

There are no operational or non-operational Registered Waste Treatment, Transfer or Disposal sites identified within a 250m radius of the site.

4.3.3 Waste Exemptions

There are no waste exemptions recorded within a 250m radius of the site.

Based on the above, the environmental sensitivity of the site can be considered to be Low at this stage.

4.4 Local Environmental Health Officer Communication

A Contaminated Land Enquiry was placed with Kirklees Council Contaminated Land Team on the 13th December. The following information has been provided.

- No determinations have been made by this Service under the provisions of the Environmental Protection Act 1990 regarding the classification of contaminated land on this site or sites in the neighbouring vicinity.
- No site investigation reports or remediation strategies for the site of interest have been submitted to this service for consultation.
- KC Ref 133 (The Deighton Centre, Deighton) lies approximately adjacent from the site of interest. Records suggest that in 1965 this was used as a spoil heap. The site was recorded as playing fields in 2009. There are no records of a waste disposal licence having been issued for this site. The waste type, depth, quantity, and date of filling is unknown. It is unlikely that there were any landfill gas and leachate controls installed here. Shallow spike surveys carried out on the tipped area between 1989 and 2003. Methane results between March 1989 and November 1993 range between 1.0% and 25.0% volume in air. Four results from September 1994, March 1995, May 1995 and July 2003 indicate methane concentrations of less than 0.1% and carbon dioxide between 4.0% and 0.5% (decreasing over time).

The correspondence is included within Appendix V.

4.5 Summary

Based on the information collated for the desk study, the geo-environmental setting of the site is summarised as follows:

- Historical mapping shows the site as undeveloped with Tenters on the earliest mapping, with no further changes shown until 1957 where Deighton Secondary School is shown. This remains until the buildings were demolished in 2013. The site remains vacant at present.
- Historically the surrounding land use has been undeveloped to the north and east, with development shown to the south and west. A pit is shown on the land to the east from 1957 before being shown as playing fields from 1966. Other notable industrial land uses include a Dye Works 110m southeast of the site and a Laundry 200m west of the site.
- An area of Made Ground is recorded in the north of the site on the BGS mapping. No superficial deposits are recorded. Bedrock geology of the Pennine Lower Coal Measures are expected beneath the site.
- The site is located within a coal mining area as defined by the Coal Authority. No past underground mining has been recorded, but unrecorded shallow workings are considered to be probable.
- The bedrock geology is classified as a Secondary A Aquifer. The site does not lie within a source protection zone.
- The site is located within an area which has a low risk for radon. No radon protection measures are required for any new development.
- A small historical landfill is recorded in the north of the site, shown as a Refuse Tip on the 1966 mapping. In addition, the playing fields to the east of the site are shown as an Environment Agency historical landfill.

5. Preliminary Conceptual Site Model (PCSM)

5.1 Introduction

The approach to the human health risk assessment reported here follows the principals given in the Land Contamination Risk Management (LCRM) Guidance[1].

The basis of above guidance is the development of the conceptual site model (CSM) which is the representation of the source-pathway-receptor (pollutant) linkages upon which the assessment of risk can be based.

5.2 Risk Assessment Approach

The approach to the human health risk assessment reported here follows the principals given in LCRM guidance, i.e. application of the following assessment hierarchy:

- Tier 1 risk screening by establishment of potential pollutant linkages, i.e. the preliminary conceptual site model (PCSM), or
- Tier 2 generic quantitative assessment using generic assessment criteria (GACs) that represent 'acceptably low' risk, or
- Tier 3 quantitative risk assessment using site specific assessment criteria (SSACs) that represent 'unacceptable risk', or where generic assessment criteria are not available, or they are not applicable to the CSM.

The potential sources of contamination based on historical and current land uses were identified using the Emapsite™ Enviro + Geo Insight Report and Emapsite™ Historical Mapping (Appendix II & III). In the absence of a standard scenario for a school environment the standard exposure scenario of residential without home grown produce has been used to identify potential exposure pathways for human health receptors. Controlled water, flora and fauna and property receptors have also been included within the PCSM. There is no change to the current end use of the site.

5.3 Preliminary Conceptual Site Model

The PCSM was produced by undertaking a Source-Pathway-Receptor analysis of the site:

Sources (**S**) are potential or known contaminant sources, e.g. a former land use:
Pathways (**P**) are environmental systems through which a contaminant could migrate, e.g. air, groundwater;
Receptors (**R**) are sensitive environmental receptors that could be adversely affected by a contaminant, e.g. Site Occupiers, groundwater resources.

For a pollutant linkage to exist between a contaminant source and a receptor, a pathway must be present.

[1] https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm

5.3.1 Sources

The potential sources of contamination within 250m of the site and associated groups of potentially contaminative substances are outlined below. The list of potential contaminants was derived from the Department of the Environment Industry Profiles. The activities and substances listed below should not be considered exhaustive and provides a guide to the likely range of contaminants which may be present.

Tenters are shown on site on the 1854 historical mapping, presumably associated with a nearby Dye Works. However, given the length of time they've no longer been present and the redevelopment of the site (building / demolition), it is considered that any limited contamination of the Tenters would no longer pose a risk.

On Site

S1: Historical and Contemporary land use: Made Ground associated with former buildings on site and their demolition.
Inorganic and organic contaminants including heavy metals, metalloids, asbestos, TPH's, and PAH's.

Off Site

S2: Historical & Contemporary Land Use: Agricultural Land, residential development, Laundry, Dye Works
Contaminants likely to be limited and migration to site unlikely but may include inorganic and organic contaminants including heavy metals, metalloids, TPH's and PAH's.

On and Off Site

S3: Ground gases: Carbon Dioxide and Methane from Made Ground, small Refuse Tip on site and Environment Agency Landfill to the east of the site.

5.3.2 Pathways

P1: Human uptake;
- Dermal contact with soils and dust
- Ingestion of soils and dust
- Inhalation of soils, dust and vapour
- Plant ingestion

P2: Horizontal and vertical migration of contaminants through potentially permeable soils and rocks

P3: Migration along preferential pathways via underground services and drainage runs (pipes, culverts and granular material

P4: Vertical and lateral migration of ground gases and/or vapour

P5: Root uptake

5.3.3 Receptors

R1: End Users: Staff and school users

R2: Construction and maintenance workers

R3: Controlled Water, Surface Water and Groundwater.

R4: Services (e.g. drinking water supply pipes) and structures (e.g. concrete used in foundations)

R5: Proposed flora and fauna

5.3.4 Preliminary Qualitative Risk Assessment

For each potential pollutant linkage identified within the PCSM, the potential risk has been assessed on the probability of a pollution event and the severity it may have on the identified receptors. The results are presented in Table 5.1 below. The methodology for the assessment is presented in Appendix IV.

Table 5.1 Preliminary Conceptual Site Model and Qualitative Risk Assessment

Source	Pathway	Receptor	Consequence	Probability	Risk	Comments
On Site **S1:** Historical and Contemporary land use: Made Ground associated with former buildings on site and their demolition.	**P1:** Human uptake pathways	**R1:** End Users **R2:** Construction and Maintenance workers	Medium	Likely	Moderate	There is the potential for shallow Made Ground associated with development of the site and demolition of the school in 2013. It is possible that end users / construction workers will come into contact with the soils across the site. The risk of human uptake pathways is considered to be MODERATE.
	P2: Horizontal and vertical migration of mobile contaminants through potentially permeable soils and rocks.	**R3:** Controlled Water and Groundwater	Mild	Low Likelihood	Low	Sources of contamination may exist on site associated with development on site (as above), however, it is considered that the potential of leaching contaminants is low and therefore the risk to controlled waters and groundwater is LOW.
	P3: Migration along preferential pathways via underground services and drainage runs (pipes, culverts and granular material)	**R4:** Services and structures	Mild	Likely	Low	Made Ground and natural deposits may be aggressive to concrete and underground utilities. Until the potential has been investigated further, the risk is considered to be LOW.
	P5: Root uptake.	**R5:** Proposed Flora and fauna	Mild	Likely	Moderate / Low	Development proposals indicates amenities including a farm, orchard and habitat areas. Made Ground is likely on site and it is possible that end users / construction workers will come into contact the soils across site. The risk is considered to be MODERATE / LOW.
Off Site **S2:** Historical & Contemporary Land Use: Agricultural Land, residential development, Laundry, Dye Works	**P2:** Horizontal and vertical migration of contaminants through potentially permeable soils and rocks	**R1:** End Users	Mild	Low Likelihood	Low	The potential sources of off-site contamination are considered to be limited and a pathway unlikely. The risk from associated from off-site sources is considered to be VERY LOW.
On and Off Site Gas Sources **S3:** Ground Gases	**P4:** Vertical and lateral migration of ground gases and/or vapour.	**R1:** End Users	Medium	Likely	Moderate	Sources of ground gas generation have been identified on and off site in the form of development / demolition of the former school and the landfill adjacent to the site. The risk at present remains unknown and should be investigated further as part of any Ground Investigation to confirm. At this stage the risk is considered to be MODERATE.

6. Preliminary Engineering Constraints and Recommendations

It is understood that a new education facility is proposed on site.

6.1 Geotechnical Constraints

The BGS mapping indicates Made Ground in the north of the site and Made Ground is considered likely where the former buildings on site have been demolished. Any Made Ground would have an unknown composition and strength.

The site was formerly occupied by the Deighton Centre, which was demolished in 2013. It is understood that all floor slabs and foundations were proposed to be removed and below ground level areas backfilled with demo material. No post-demolition documentation has been provided. It is possible that obstructions (former foundations / floor slabs) may remain on site below ground level.

The groundwater regime on site is unknown and should be assessed further, if possible.

The soils and groundwater on site may be aggressive to buried/surface concrete and proposed utilities and should be assessed further.

The site is located within a coal mining area as defined by the Coal Authority. No past underground mining has been recorded, but unrecorded shallow workings are considered to be probable. Deeper boreholes will be required to confirm the presence of coal seams and whether they are intact / voids.

6.2 Environmental Constraints

Any Made Ground on site may contain elevated concentrations of potentially harmful contaminants which may present a risk to the receptors identified in the PCSM including end users and construction workers.

Potential sources of ground gas in the form of Made Ground and the adjacent landfill exist. At this stage, it should be assumed that ground gas monitoring will need undertaken in accordance with BS8485:2015.

The Preliminary Conceptual Site Model indicates a moderate to low possibility that harm could arise to a designated receptor from identified hazards. it would be prudent to undertake sampling and analysis as part of any intrusive investigation to confirm the risk.

6.4 Recommendations

HSP would recommend that an intrusive geo-environmental investigation be undertaken across the site to confirm the recommendations outlined above.

The objectives of the investigation should be as follows:

- To establish the ground conditions laterally and vertically across the site, including the presence, distribution and composition of any Made Ground.
- To undertake deeper boreholes to confirm the risk posed by possible unrecorded coal workings.
- To obtain soil samples for contamination analysis, in order to refine the PCSM and undertake generic quantitative risk assessment.
- To obtain data on the ground gas and groundwater regime.
- To obtain geotechnical design parameters for the proposed new buildings including in-situ and laboratory testing.
- To assess if the soils and groundwater on site are likely to be aggressive to buried/surface concrete and proposed utilities

Appendix I

NOTES: DO NOT SCALE

N

- Approximate Red Line Boundary

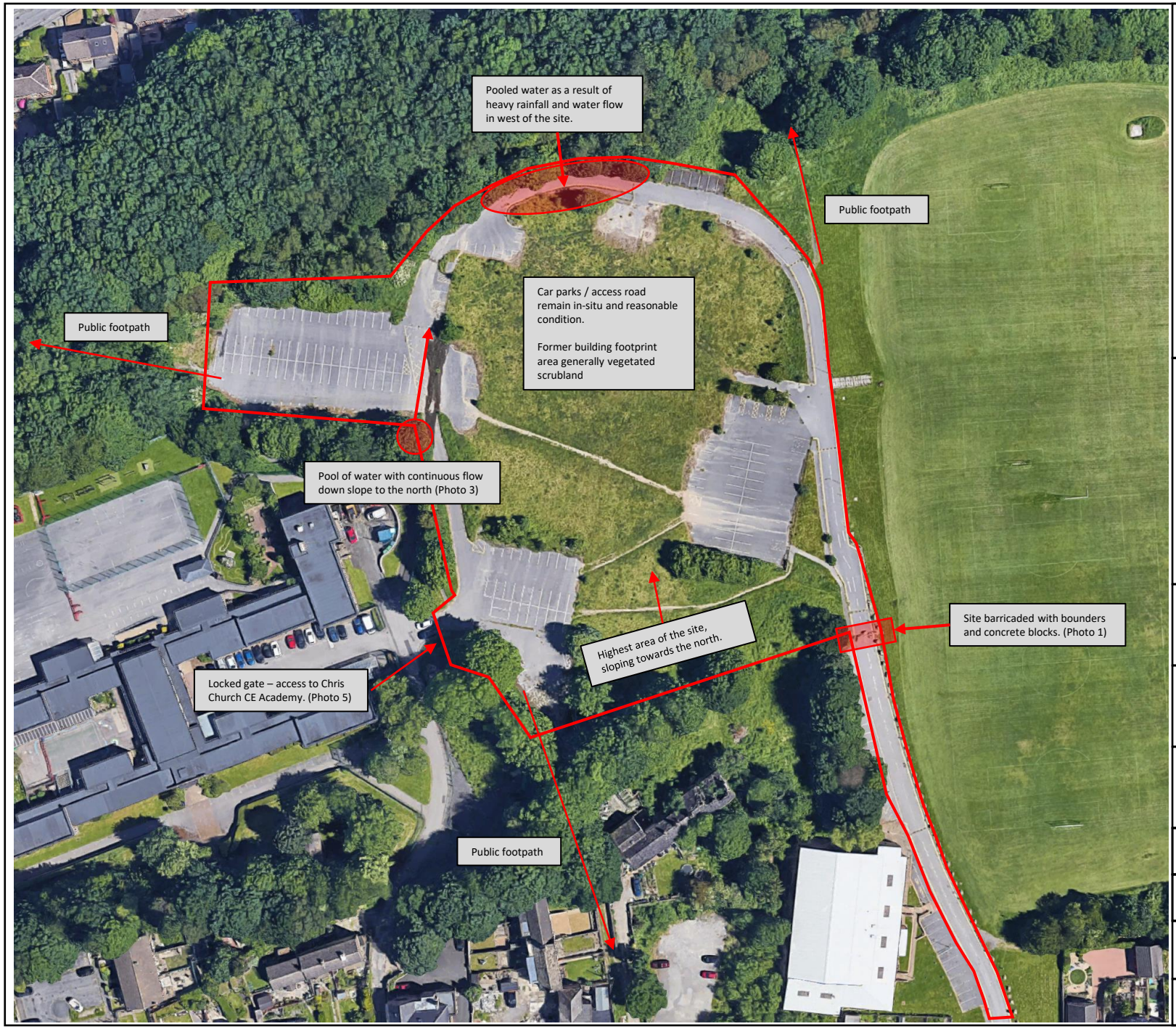
hsp consulting
Lawrence House, Meadowbank Way,
Eastwood, Nottingham, NG16 3SB
Tel: 01773 535 555 Fax: 0870 600 6091
www.hspconsulting.com

CLIENT:
Frank Shaw Associates

PROJECT:
Joseph Norton SEND School
(Former Deighton Centre)

TITLE:
Site Location Plan

SCALE@SIZE :	ISSUE:
NTS	FINAL
DESIGN/DRAWN :	DATE:
MK	Dec 2022
PROJECT No:	DRAWING No:
C4164	501



NOTES:

DO NOT SCALE

N

- Approximate Red Line Boundary

hsp consulting
Lawrence House, Meadowbank Way,
Eastwood, Nottingham, NG16 3SB
Tel: 01773 535 555 Fax: 0870 600 6091
www.hspconsulting.com

CLIENT:
Frank Shaw Associates

PROJECT:
Joseph Norton SEND School (Former Deighton Centre)

TITLE:
Walkover Observations

SCALE@SIZE :	ISSUE:
NTS	FINAL
DESIGN/DRAWN :	DATE:
MK	Dec 2022
PROJECT No:	DRAWING No:
C4164	501

Client: Frank Shaw Associates Ltd

Date: 17th November 2022

Project: C4164

Site: Former Deighton Centre

Photo No: 01

Comments:

Site Entrance – accessed via Deighton Road and following the road up past Deighton Sports Arena. That gate was locked and barricaded with boulders / concrete blocks to prevent vehicular access.

Client: Frank Shaw Associates Ltd

Date: 17th November 2022

Project: C4164

Site: Former Deighton Centre

Photo No: 02

Comments:

View from the south of the site (one of the highest points), generally facing north. The vegetated area un the centre marks the area formerly occupied by The Deighton Centre, now demolished. One of the former car parks can be seen in the right of the photo.

The site slopes from the south to the north.

Client: Frank Shaw Associates Ltd

Date: 17th November 2022

Project: C4164

Site: Former Deighton Centre

Photo No: 03

Comments:

A stream of water was observed in the west of the site. The source of the water appeared to be a small pool (larger photo), with the water flowing down the slope to the north (smaller photo). The source of the water is unknown at this stage.

Client: Frank Shaw Associates Ltd

Date: 17th November 2022

Project: C4164

Site: Former Deighton Centre

Photo No: 04

Comments:

Large existing car park located in the west of the site. A public footpath is located in the right of the photo (through the trees) which leads through to Wiggan Lane.

Client: Frank Shaw Associates Ltd

Date: 17th November 2022

Project: C4164

Site: Former Deighton Centre

Photo No: 05

Comments:

A gate is located in the southwest of the site which leads to Christ Chruch CE Academy. The gate was locked at the time of the walkover.

Client: Frank Shaw Associates Ltd

Date: 17th November 2022

Project: C4164

Site: Former Deighton Centre

Photo No: 06

Comments:

View from the centre of the site, facing south. The southern boundary comprises a woodland and slopes down to the residential dwellings on Tenter Hill Lane

Appendix II

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Joseph Norton SEMH School, Land off Deighton Road, Deighton, Huddersfield, HD2 1JP

Order Details

Date: 04/11/2022

Your ref: EMS_822282_1016755

Our Ref: EMS-822282_1057112

Site Details

Location: 415904 419561

Area: 2.07 ha

Authority: Kirklees Council

Contact us with any questions at:
info@groundsure.com
08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	1	3	8	26	-
15	1.2	Historical tanks	0	0	2	1	-
15	1.3	Historical energy features	0	0	1	10	-
16	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
17	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
18	2.1	Historical industrial land uses	2	5	11	36	-
21	2.2	Historical tanks	0	0	4	1	-
21	2.3	Historical energy features	0	0	3	16	-
22	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	1	0	0	0	-
24	3.4	Historical landfill (EA/NRW records)	1	0	0	2	-
25	3.5	Historical waste sites	0	0	0	0	-
25	3.6	Licensed waste sites	0	0	0	0	-
25	3.7	Waste exemptions	0	0	0	1	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
26	4.1	Recent industrial land uses	0	0	6	-	-
27	4.2	Current or recent petrol stations	0	0	0	0	-
27	4.3	Electricity cables	0	0	0	0	-
27	4.4	Gas pipelines	0	0	0	0	-
27	4.5	Sites determined as Contaminated Land	0	0	0	0	-

28	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
28	4.7	Regulated explosive sites	0	0	0	0	-
28	4.8	Hazardous substance storage/usage	0	0	0	0	-
28	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
28	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
29	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
29	4.12	Radioactive Substance Authorisations	0	0	0	0	-
29	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
29	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
29	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
30	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	0	4	-
31	4.19	Pollution inventory substances	0	0	0	0	-
31	4.20	Pollution inventory waste transfers	0	0	0	0	-
31	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
32	**5.1**	**Superficial aquifer**	Identified (within 500m)				
33	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
35	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
36	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37	**5.6**	**Groundwater abstractions**	0	0	0	0	24
43	**5.7**	**Surface water abstractions**	0	0	0	0	23
49	**5.8**	**Potable abstractions**	0	0	0	0	1
49	5.9	Source Protection Zones	0	0	0	0	-
49	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
50	**6.1**	**Water Network (OS MasterMap)**	0	0	10	-	-

51	6.2	Surface water features	0	0	6	-	-
52	6.3	WFD Surface water body catchments	1	-	-	-	-
52	6.4	WFD Surface water bodies	0	0	0	-	-
52	6.5	WFD Groundwater bodies	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
54	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
54	7.2	Historical Flood Events	0	0	0	-	-
54	7.3	Flood Defences	0	0	0	-	-
55	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
55	7.5	Flood Storage Areas	0	0	0	-	-
56	7.6	Flood Zone 2	None (within 50m)				
56	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding	
57	8.1	Surface water flooding	1 in 30 year, 0.3m - 1.0m (within 50m)

Page	Section	Groundwater flooding	
59	9.1	Groundwater flooding	Negligible (within 50m)

Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
60	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
61	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
61	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
61	10.4	Special Protection Areas (SPA)	0	0	0	0	0
61	10.5	National Nature Reserves (NNR)	0	0	0	0	0
62	10.6	Local Nature Reserves (LNR)	0	0	0	0	1
62	10.7	Designated Ancient Woodland	0	0	1	2	5
63	10.8	Biosphere Reserves	0	0	0	0	0
63	10.9	Forest Parks	0	0	0	0	0
63	10.10	Marine Conservation Zones	0	0	0	0	0
63	10.11	Green Belt	0	0	0	0	4
64	10.12	Proposed Ramsar sites	0	0	0	0	0

64	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
64	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
64	10.15	Nitrate Sensitive Areas	0	0	0	0	0
65	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
66	10.17	SSSI Impact Risk Zones	0	-	-	-	-
66	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
67	11.1	World Heritage Sites	0	0	0	-	-
68	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
68	11.3	National Parks	0	0	0	-	-
68	**11.4**	**Listed Buildings**	0	0	1	-	-
69	11.5	Conservation Areas	0	0	0	-	-
69	11.6	Scheduled Ancient Monuments	0	0	0	-	-
69	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
70	**12.1**	**Agricultural Land Classification**	Urban (within 250m)				
71	12.2	Open Access Land	0	0	0	-	-
71	12.3	Tree Felling Licences	0	0	0	-	-
71	12.4	Environmental Stewardship Schemes	0	0	0	-	-
71	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
72	**13.1**	**Priority Habitat Inventory**	0	1	6	-	-
73	13.2	Habitat Networks	0	0	0	-	-
73	13.3	Open Mosaic Habitat	0	0	0	-	-
73	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
74	**14.1**	**10k Availability**	Identified (within 500m)				
75	**14.2**	**Artificial and made ground (10k)**	2	1	2	4	-
77	**14.3**	**Superficial geology (10k)**	0	0	0	1	-

78	14.4	Landslip (10k)	0	0	0	1	-
79	14.5	Bedrock geology (10k)	3	1	10	12	-
81	14.6	Bedrock faults and other linear features (10k)	0	1	5	8	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
82	15.1	50k Availability	Identified (within 500m)				
83	15.2	Artificial and made ground (50k)	1	0	0	1	-
84	15.3	Artificial ground permeability (50k)	1	0	-	-	-
85	15.4	Superficial geology (50k)	0	0	0	1	-
86	15.5	Superficial permeability (50k)	None (within 50m)				
86	15.6	Landslip (50k)	0	0	0	1	-
86	15.7	Landslip permeability (50k)	None (within 50m)				
87	15.8	Bedrock geology (50k)	3	1	10	8	-
89	15.9	Bedrock permeability (50k)	Identified (within 50m)				
89	15.10	Bedrock faults and other linear features (50k)	0	1	5	6	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
91	16.1	BGS Boreholes	0	0	10	-	-
Page	Section	Natural ground subsidence					
93	17.1	Shrink swell clays	Very low (within 50m)				
94	17.2	Running sands	Very low (within 50m)				
96	17.3	Compressible deposits	Very low (within 50m)				
98	17.4	Collapsible deposits	Very low (within 50m)				
99	17.5	Landslides	Moderate (within 50m)				
101	17.6	Ground dissolution of soluble rocks	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
103	18.1	Natural cavities	0	0	0	0	-
104	18.2	BritPits	0	0	0	1	-
104	18.3	Surface ground workings	2	5	6	-	-
105	18.4	Underground workings	0	0	0	1	2
105	18.5	Historical Mineral Planning Areas	0	0	0	1	-

106	**18.6**	**Non-coal mining**	0	0	0	0	6
107	18.7	Mining cavities	0	0	0	0	0
107	18.8	JPB mining areas	None (within 0m)				
107	**18.9**	**Coal mining**	Identified (within 0m)				
107	18.10	Brine areas	None (within 0m)				
108	18.11	Gypsum areas	None (within 0m)				
108	18.12	Tin mining	None (within 0m)				
108	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
109	**19.1**	**Radon**	Less than 1% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
110	**20.1**	**BGS Estimated Background Soil Chemistry**	7	7	-	-	-
111	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
111	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
112	21.1	Underground railways (London)	0	0	0	-	-
112	21.2	Underground railways (Non-London)	0	0	0	-	-
112	21.3	Railway tunnels	0	0	0	-	-
112	21.4	Historical railway and tunnel features	0	0	0	-	-
112	21.5	Royal Mail tunnels	0	0	0	-	-
113	21.6	Historical railways	0	0	0	-	-
113	21.7	Railways	0	0	0	-	-
113	21.8	Crossrail 1	0	0	0	0	-
113	21.9	Crossrail 2	0	0	0	0	-
113	21.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 30/05/2021

Site Area: 2.07ha

Recent site history - 2018 aerial photograph

Capture Date: 01/07/2018

Site Area: 2.07ha

Recent site history - 2012 aerial photograph

Capture Date: 26/03/2012

Site Area: 2.07ha

Recent site history - 2000 aerial photograph

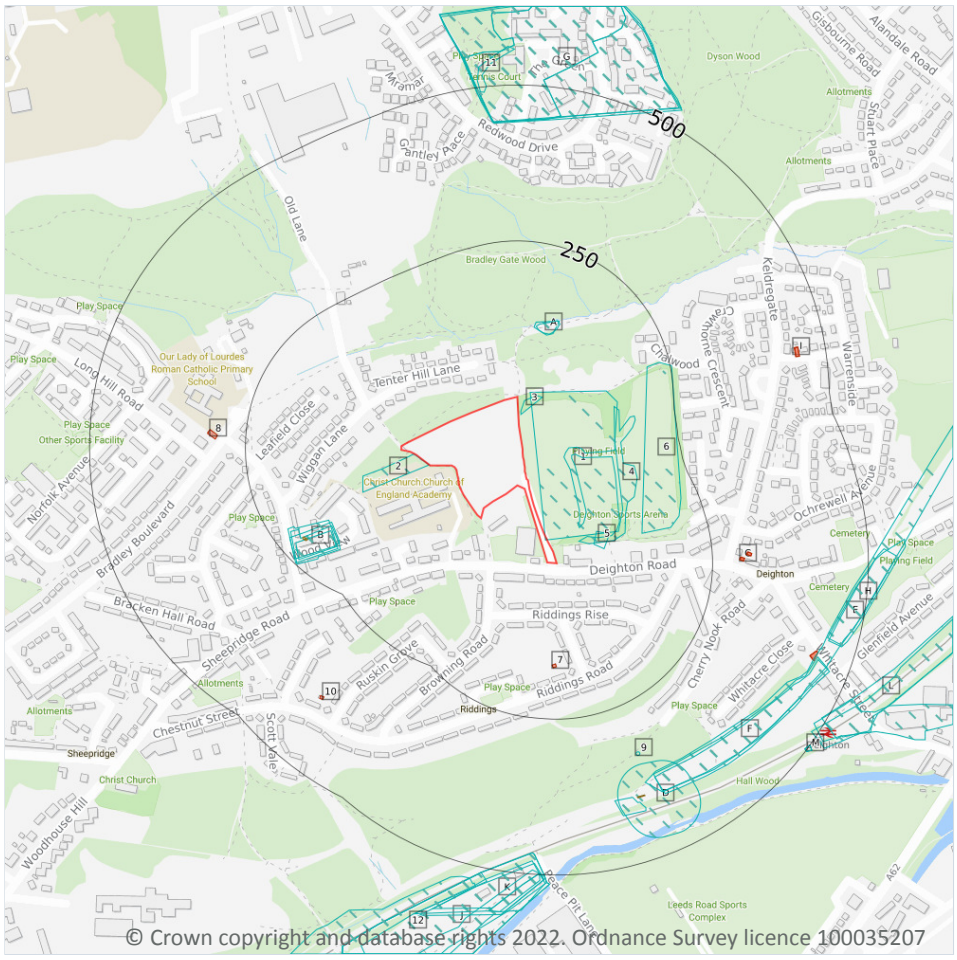
Capture Date: 05/08/2000

Site Area: 2.07ha

OS MasterMap site plan

Site Area: 2.07ha

1 Past land use



1.1 Historical industrial land uses

Records within 500m	38

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

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
1	**On site**	**Unspecified Heap**	**1975 - 1988**	**1540060**

ID	Location	Land use	Dates present	Group ID
2	0m W	Unspecified Heap	1965 - 1988	1485733
3	4m NE	Unspecified Heap	1965	1511060
4	45m SE	Unspecified Heaps	1965	1439505
5	66m SE	Mill Pond	1905	1425505
A	109m NE	Unspecified Pit	1948	1470725
A	111m NE	Unspecified Pit	1956 - 1965	1497659
6	145m SE	Unspecified Heap	1975 - 1988	1483425
B	161m SW	Laundry	1948 - 1956	1540215
B	162m W	Laundry	1905	1476411
B	165m SW	Laundry	1938	1502770
B	172m SW	Laundry	1965	1545278
9	329m SE	Unspecified Shaft	1905	1425056
D	349m SE	Unspecified Pit	1892 - 1905	1513518
E	369m SE	Cuttings	1948	1487631
F	372m SE	Cuttings	1956 - 1988	1487561
F	376m SE	Cuttings	1938	1521294
D	392m S	Unspecified Heap	1892 - 1905	1532993
G	440m N	Sanatorium	1938	1495700
G	442m N	Sanatorium	1951	1485113
G	442m N	Hospital	1975	1443182
G	442m N	Sanatorium	1966	1471638
G	442m N	Sanatorium	1948	1463062
H	451m SE	Cuttings	1956 - 1988	1471936
H	453m SE	Cuttings	1938	1536607
J	466m S	Fire Clay Works	1956	1512391
J	466m S	Unspecified Commercial/Industrial	1965	1553846
K	479m S	Unspecified Commercial/Industrial	1905	1505933
K	483m S	Unspecified Commercial/Industrial	1938	1507665

ID	Location	Land use	Dates present	Group ID
L	486m SE	Cuttings	1938 - 1948	1463510
L	490m SE	Cuttings	1892 - 1905	1544376
11	491m N	Unspecified Ground Workings	1985	1412299
L	492m SE	Railway Sidings	1956	1521005
J	493m S	Railway Sidings	1956	1541593
M	497m SE	Railway Building	1905	1470073
M	497m SE	Railway Building	1948	1547974
12	498m S	Railway Sidings	1938 - 1948	1552954
K	498m S	Railway Sidings	1905	1458052

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	3

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

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
B	208m SW	Unspecified Tank	1958 - 1980	238140
B	209m SW	Unspecified Tank	1907	223094
D	396m SE	Unspecified Tank	1907	223109

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	11

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or

succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
7	162m S	Electricity Substation	1967 - 1985	143167
C	293m E	Electricity Substation	1985	135226
C	294m E	Electricity Substation	1967 - 1971	138080
8	296m W	Electricity Substation	1974 - 1993	146401
C	305m E	Electricity Substation	1967 - 1985	136495
C	306m E	Electricity Substation	1971	134520
10	382m SW	Electricity Substation	1999	128964
E	432m SE	Electricity Substation	1985	145241
E	432m SE	Electricity Substation	1967 - 1971	146873
I	451m E	Electricity Substation	1970 - 1996	137189
I	451m E	Electricity Substation	1979	145697

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

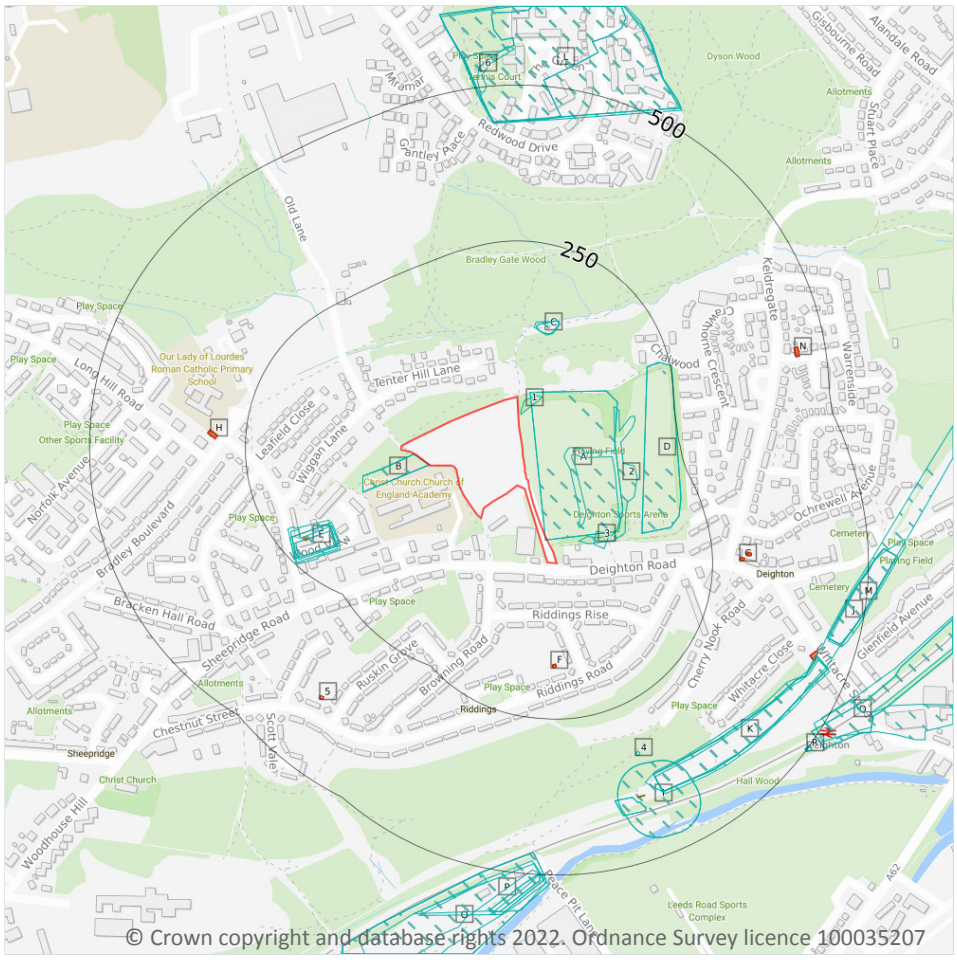
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



2.1 Historical industrial land uses

Records within 500m	54

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

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Heap**	**1988**	**1540060**
A	**On site**	**Unspecified Heap**	**1975**	**1540060**
B	0m W	Unspecified Heap	1988	1485733

ID	Location	Land Use	Date	Group ID
B	0m W	Unspecified Heap	1965	1485733
B	0m W	Unspecified Heap	1975	1485733
1	4m NE	Unspecified Heap	1965	1511060
2	45m SE	Unspecified Heaps	1965	1439505
3	66m SE	Mill Pond	1905	1425505
C	109m NE	Unspecified Pit	1948	1470725
C	111m NE	Unspecified Pit	1965	1497659
C	111m NE	Unspecified Pit	1956	1497659
D	145m SE	Unspecified Heap	1988	1483425
D	145m SE	Unspecified Heap	1975	1483425
E	161m SW	Laundry	1956	1540215
E	162m W	Laundry	1905	1476411
E	165m SW	Laundry	1938	1502770
E	166m SW	Laundry	1948	1540215
E	172m SW	Laundry	1965	1545278
4	329m SE	Unspecified Shaft	1905	1425056
I	349m SE	Unspecified Pit	1892	1513518
I	349m SE	Unspecified Pit	1905	1513518
J	369m SE	Cuttings	1948	1487631
K	372m SE	Cuttings	1988	1487561
K	372m SE	Cuttings	1965	1487561
K	372m SE	Cuttings	1956	1487561
K	372m SE	Cuttings	1975	1487561
K	376m SE	Cuttings	1938	1521294
I	392m S	Unspecified Heap	1892	1532993
I	392m S	Unspecified Heap	1905	1532993
L	440m N	Sanatorium	1938	1495700
L	442m N	Sanatorium	1951	1485113

ID	Location	Land Use	Date	Group ID
L	442m N	Sanatorium	1966	1471638
L	442m N	Hospital	1975	1443182
L	442m N	Sanatorium	1948	1463062
M	451m SE	Cuttings	1988	1471936
M	451m SE	Cuttings	1965	1471936
M	451m SE	Cuttings	1956	1471936
M	451m SE	Cuttings	1975	1471936
M	453m SE	Cuttings	1938	1536607
O	466m S	Unspecified Commercial/Industrial	1965	1553846
O	466m S	Fire Clay Works	1956	1512391
P	479m S	Unspecified Commercial/Industrial	1905	1505933
P	483m S	Unspecified Commercial/Industrial	1938	1507665
Q	486m SE	Cuttings	1948	1463510
Q	490m SE	Cuttings	1892	1544376
Q	490m SE	Cuttings	1905	1544376
6	491m N	Unspecified Ground Workings	1985	1412299
Q	492m SE	Railway Sidings	1956	1521005
O	493m S	Railway Sidings	1956	1541593
R	497m SE	Railway Building	1948	1547974
R	497m SE	Railway Building	1905	1470073
P	498m S	Railway Sidings	1938	1552954
P	498m S	Railway Sidings	1948	1552954
P	498m S	Railway Sidings	1905	1458052

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	5

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

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
E	208m SW	Unspecified Tank	1980	238140
E	209m SW	Unspecified Tank	1958	238140
E	209m SW	Unspecified Tank	1959	238140
E	209m SW	Unspecified Tank	1907	223094
I	396m SE	Unspecified Tank	1907	223109

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	19

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

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
F	162m S	Electricity Substation	1967	143167
F	162m S	Electricity Substation	1971	143167
F	162m S	Electricity Substation	1985	143167
G	293m E	Electricity Substation	1985	135226
G	294m E	Electricity Substation	1967	138080
G	294m E	Electricity Substation	1971	138080
H	296m W	Electricity Substation	1974	146401
H	296m W	Electricity Substation	1993	146401
G	305m E	Electricity Substation	1985	136495

ID	Location	Land Use	Date	Group ID
G	306m E	Electricity Substation	1971	134520
G	306m E	Electricity Substation	1967	136495
5	382m SW	Electricity Substation	1999	128964
J	432m SE	Electricity Substation	1985	145241
J	432m SE	Electricity Substation	1971	146873
J	433m SE	Electricity Substation	1967	146873
N	451m E	Electricity Substation	1996	137189
N	451m E	Electricity Substation	1979	145697
N	451m E	Electricity Substation	1970	137189
N	451m E	Electricity Substation	1971	137189

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

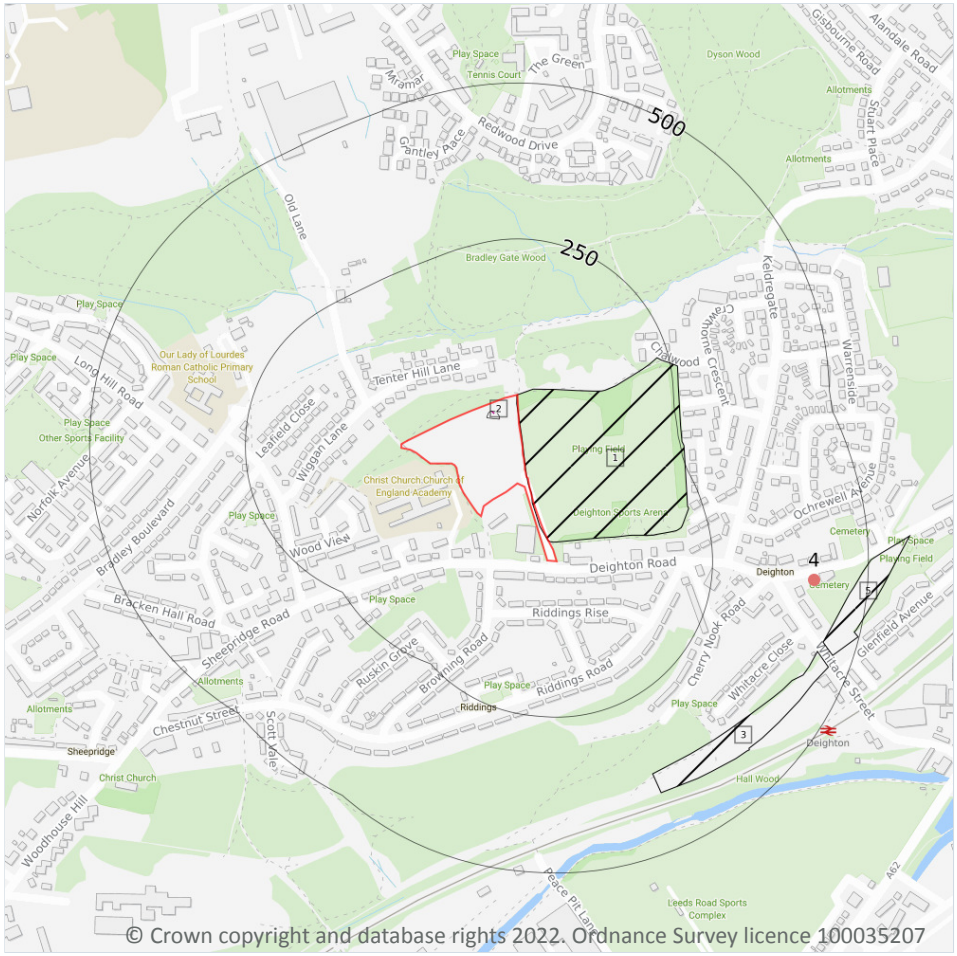
2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	1

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

Features are displayed on the Waste and landfill map on **page 23**

ID	Location	Site address	Source	Data type
2	**On site**	**Refuse Tip**	**1966 mapping**	**Polygon**

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	3

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

Features are displayed on the Waste and landfill map on **page 23**

ID	Location	Details		
1	**On site**	**Site Address: Deighton Playing Fields, Deighton Road, Riddings, Huddersfield** **Licence Holder Address: -**	**Waste Licence: -** **Site Reference: -** **Waste Type: Household** **Environmental Permitting Regulations (Waste) Reference: -** **Licence Issue: -** **Licence Surrender: -**	**Operator: -** **Licence Holder: -** **First Recorded -** **Last Recorded: -**
3	373m SE	Site Address: Railway Cutting North of Deighton Station, Whitacre Street, Deighton, Huddersfield Licence Holder Address: -	Waste Licence: - Site Reference: - Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded 01/01/1996 Last Recorded: 31/12/2000
5	446m SE	Site Address: Railway Cutting North of Deighton Station, Whitacre Street, Deighton, Huddersfield Licence Holder Address: -	Waste Licence: - Site Reference: - Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded 01/01/1996 Last Recorded: 31/12/2000

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	1

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

Features are displayed on the Waste and landfill map on **page 23**

ID	Location	Site	Reference	Category	Sub-Category	Description
4	414m E	73, DEIGHTON ROAD, HUDDERSFIELD, HD2 1LS	WEX238746	Disposing of waste exemption	Not on a farm	Burning waste in the open

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

4 Current industrial land use

Site Outline

Search buffers in metres (m)

Recent industrial land uses

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	6

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 26**

ID	Location	Company	Address	Activity	Category
A	58m SW	Electricity Sub Station	West Yorkshire, HD2	Electrical Features	Infrastructure and Facilities
A	93m SW	Mast	West Yorkshire, HD2	Telecommunications Features	Infrastructure and Facilities
1	94m E	Wind Turbines	West Yorkshire, HD2	Energy Production	Industrial Features

ID	Location	Company	Address	Activity	Category
2	162m SW	Electricity Sub Station	West Yorkshire, HD2	Electrical Features	Infrastructure and Facilities
3	164m S	Electricity Sub Station	West Yorkshire, HD2	Electrical Features	Infrastructure and Facilities
4	228m SW	The Charlesworth Group	250, Deighton Road, Huddersfield, West Yorkshire, HD2 1JJ	Published Goods	Industrial Products

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	**0**

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	**0**

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	0

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

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	4

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

Features are displayed on the Current industrial land use map on **page 26**

ID	Location	Details	
5	433m NE	Incident Date: 24/09/2005 Incident Identification: 348829 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	496m S	Incident Date: 11/06/2002 Incident Identification: 84075 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
B	496m S	Incident Date: 11/06/2002 Incident Identification: 84075 Pollutant: Atmospheric Pollutants and Effects:General Biodegradable Materials and Wastes Pollutant Description: Smoke:Other Animal Matter	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
B	496m S	Incident Date: 11/06/2002 Incident Identification: 84075 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other Animal Matter	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

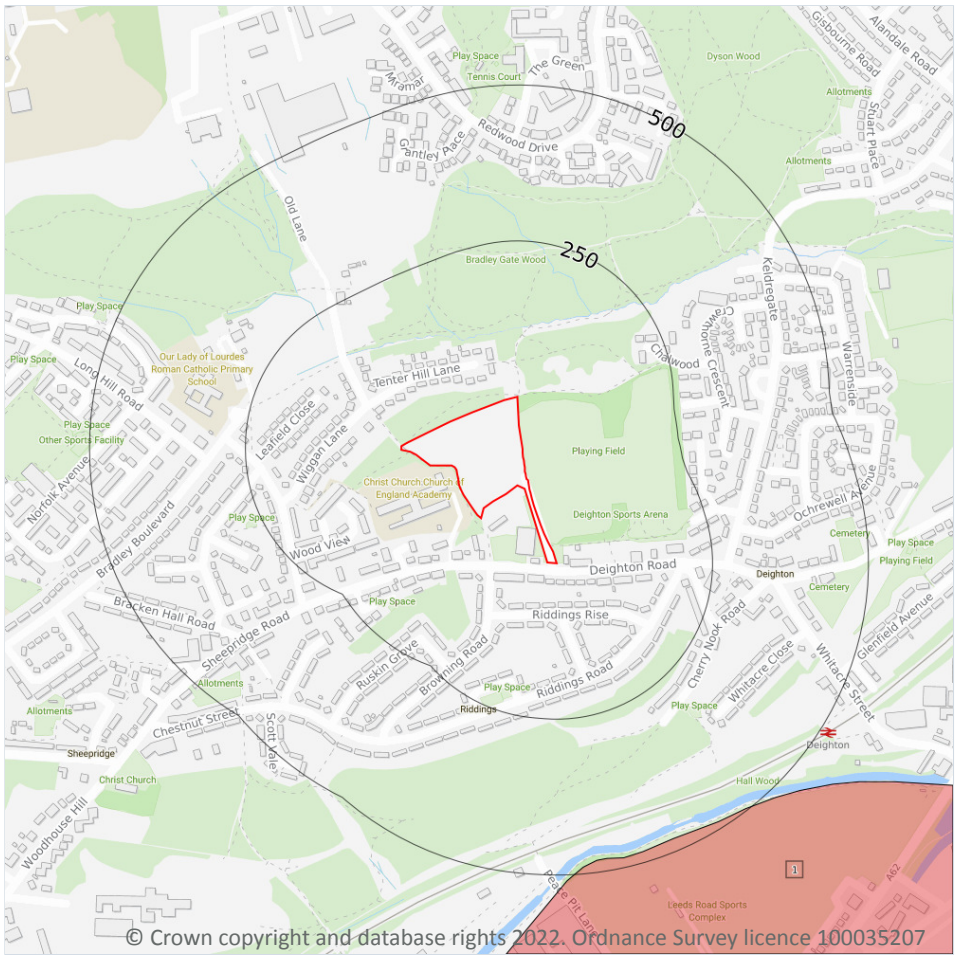
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m	1

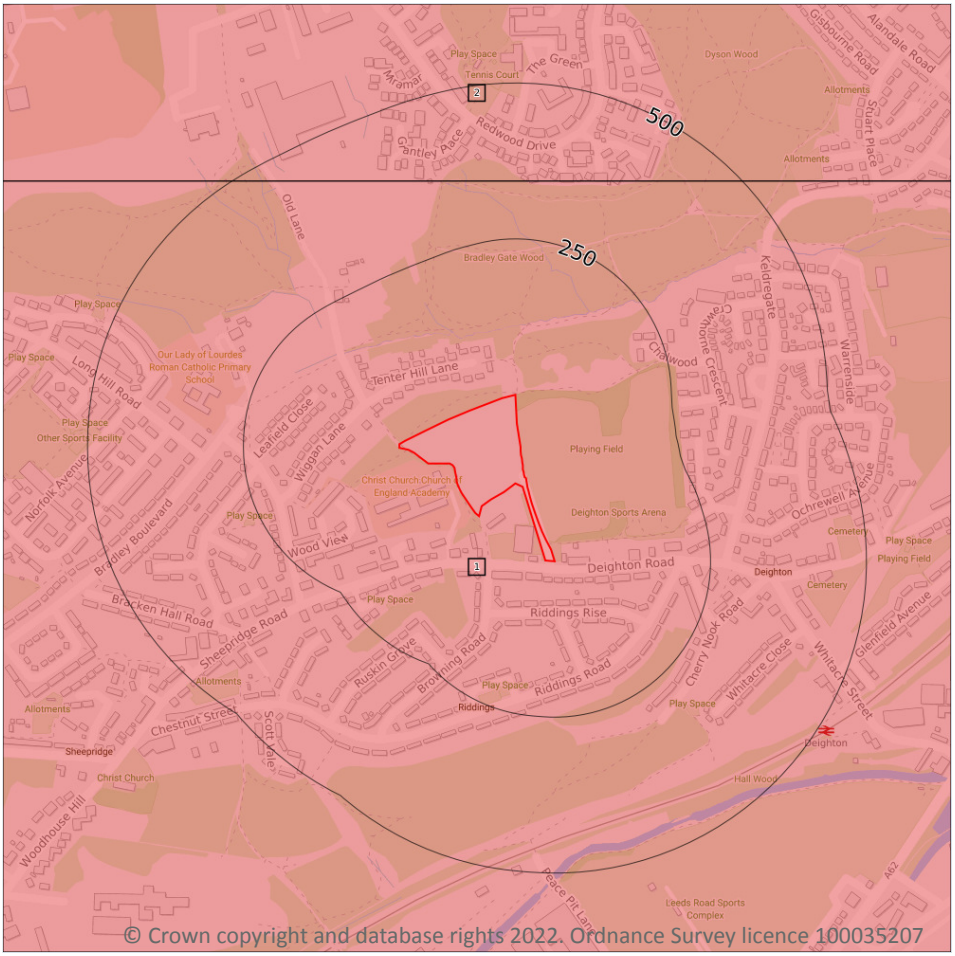
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 32**

ID	Location	Designation	Description
1	480m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m	2

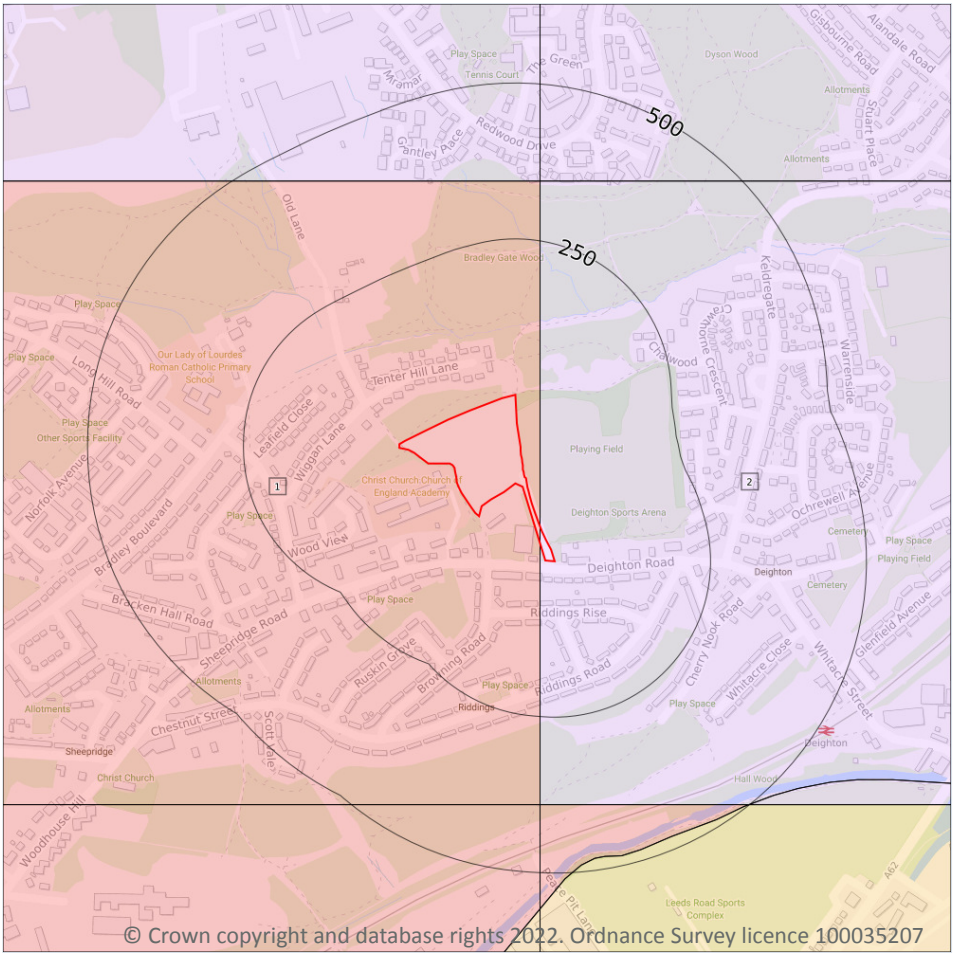
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 33**

ID	Location	Designation	Description
1	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
2	343m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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

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

Features are displayed on the Groundwater vulnerability map on **page 35**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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

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

5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones

5.6 Groundwater abstractions

Records within 2000m	24

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 37**

ID	Location	Details	
-	1168m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - PW-1 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416896 Northing: 418613	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1186m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW01 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416888 Northing: 418578	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1189m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW02 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416893 Northing: 418579	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1192m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW03 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416898 Northing: 418580	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1195m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW04 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416903 Northing: 418581	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -

ID	Location	Details	
-	1198m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW05 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416908 Northing: 418582	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1201m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW06 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416913 Northing: 418583	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1204m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW07 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416918 Northing: 418584	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1207m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW08 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416923 Northing: 418585	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1210m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW09 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416928 Northing: 418586	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -

ID	Location	Details	
-	1213m SE	Status: Active Licence No: NE/027/0011/020 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - ALLUVIUM - CW10 AT SYNGENTA Data Type: Point Name: AstraZeneca UK Ltd Easting: 416933 Northing: 418587	Annual Volume (m^3): 30,660 Max Daily Volume (m^3): 84 Original Application No: NPS/WR/028379 Original Start Date: 17/12/2019 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 17/12/2019 Version End Date: -
-	1239m S	Status: Historical Licence No: 2/27/11/060 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: GROUNDWATERS Point: BOREHOLE X4 - CARBONIFEROUS MILLSTONE GRIT Data Type: Poly4 Name: ZENECA FINE CHEMICAL MANUFACTURING ORGANISATION Easting: 416690 Northing: 418150	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/01/1966 Version End Date: -
-	1239m S	Status: Historical Licence No: 2/27/11/060 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: GROUNDWATERS Point: BOREHOLE 2 - MILLSTONE GRIT - HUDDERSFIELD Data Type: Point Name: SYNGENTA LTD Easting: 416370 Northing: 418200	Annual Volume (m^3): 881,941 Max Daily Volume (m^3): 1,091.06 Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 23/06/2017 Version End Date: -
-	1239m S	Status: Historical Licence No: 2/27/11/060 Details: Process Water Direct Source: GROUNDWATERS Point: BOREHOLE 2 - MILLSTONE GRIT - HUDDERSFIELD Data Type: Point Name: SYNGENTA LTD Easting: 416370 Northing: 418200	Annual Volume (m^3): 881,941 Max Daily Volume (m^3): 1,091.06 Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 23/06/2017 Version End Date: -

ID	Location	Details	
-	1305m NW	Status: Historical Licence No: 2/27/12/322 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: KIRKLEES METROPOLITAN COUNCIL Easting: 415300 Northing: 420800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 10/09/1998 Expiry Date: 31/10/2007 Issue No: 100 Version Start Date: 10/09/1998 Version End Date: -
-	1305m NW	Status: Historical Licence No: 2/27/12/322 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - BRADLEY Data Type: Point Name: KIRKLEES METROPOLITAN COUNCIL Easting: 415300 Northing: 420800	Annual Volume (m^3): 7500 Max Daily Volume (m^3): 100 Original Application No: - Original Start Date: 10/09/1998 Expiry Date: 31/10/2007 Issue No: 100 Version Start Date: 10/09/1998 Version End Date: -
-	1305m NW	Status: Historical Licence No: 2/27/12/339 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - BRADLEY Data Type: Point Name: Kirklees Active Leisure Easting: 415300 Northing: 420800	Annual Volume (m^3): 7500 Max Daily Volume (m^3): 100 Original Application No: - Original Start Date: 05/12/2007 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 25/09/2014 Version End Date: -
-	1305m NW	Status: Active Licence No: 2/27/12/339/R01 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - BRADLEY Data Type: Point Name: Kirklees Active Leisure Easting: 415300 Northing: 420800	Annual Volume (m^3): 7,500 Max Daily Volume (m^3): 100 Original Application No: NPS/WR/017362 Original Start Date: 01/04/2015 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/04/2015 Version End Date: -
-	1408m SE	Status: Historical Licence No: 2/27/11/060 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: GROUNDWATERS Point: BOREHOLE 1 - MILLSTONE GRIT - HUDDERSFIELD Data Type: Point Name: SYNGENTA LTD Easting: 416690 Northing: 418150	Annual Volume (m^3): 881,941 Max Daily Volume (m^3): 1,091.06 Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 23/06/2017 Version End Date: -

ID	Location	Details	
-	1408m SE	Status: Historical Licence No: 2/27/11/060 Details: Process Water Direct Source: GROUNDWATERS Point: BOREHOLE 1 - MILLSTONE GRIT - HUDDERSFIELD Data Type: Point Name: SYNGENTA LTD Easting: 416690 Northing: 418150	Annual Volume (m^3): 881,941 Max Daily Volume (m^3): 1,091.06 Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 23/06/2017 Version End Date: -
-	1718m SW	Status: Historical Licence No: 2/27/11/171 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: HUDDERSFIELD DYEING CO LTD Easting: 415000 Northing: 418000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 24/05/1990 Expiry Date: - Issue No: 100 Version Start Date: 24/05/1990 Version End Date: -
-	1718m SW	Status: Active Licence No: 2/27/11/171 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - HUDDERSFIELD Data Type: Point Name: HUDDERSFIELD DYEING CO LTD Easting: 415000 Northing: 418000	Annual Volume (m^3): 136,410 Max Daily Volume (m^3): 637.07 Original Application No: 6256 Original Start Date: 24/05/1990 Expiry Date: - Issue No: 100 Version Start Date: 24/05/1990 Version End Date: -
-	1917m NE	Status: Historical Licence No: 2/27/12/186 Details: Boiler Feed Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: BOTTOMLEY & SON LIMITED Easting: 417500 Northing: 420800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/07/1998 Version End Date: -
-	1917m NE	Status: Active Licence No: 2/27/12/186 Details: Boiler Feed Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - BRADLEY Data Type: Point Name: E BOTTOMLEY & SONS LTD Easting: 417500 Northing: 420800	Annual Volume (m^3): 109,090 Max Daily Volume (m^3): 1,364 Original Application No: 4308(2) Original Start Date: 28/04/1966 Expiry Date: - Issue No: 102 Version Start Date: 03/03/2008 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**23**

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 37**

ID	Location	Details	
-	936m SE	Status: Historical Licence No: 2/27/11/059 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER COLNE Data Type: Poly3 Name: ZENECA FINE CHEMICAL MANUFACTURING ORGANISATION Easting: 416660 Northing: 418270	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 12/04/1985 Version End Date: -
-	949m SE	Status: Active Licence No: 2/27/11/059 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER COLNE & TRIBUTARIES - POINT 4 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416830 Northing: 418890	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -
-	949m SE	Status: Active Licence No: 2/27/11/059 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER COLNE & TRIBUTARIES - POINT 4 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416830 Northing: 418890	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -

ID	Location	Details	
-	1113m S	Status: Active Licence No: 2/27/11/059 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER COLNE AND TRIBUTARIES - POINT 5 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416330 Northing: 418320	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -
-	1113m S	Status: Active Licence No: 2/27/11/059 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER COLNE AND TRIBUTARIES - POINT 5 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416330 Northing: 418320	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -
-	1191m E	Status: Historical Licence No: 2/27/11/162 Details: Potable Water Supply - Direct Direct Source: SURFACE WATER Point: RIVER COLNE Data Type: Point Name: YORKSHIRE WATER SERVICES LTD Easting: 417200 Northing: 419200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 02/03/1977 Expiry Date: - Issue No: 100 Version Start Date: 02/03/1977 Version End Date: -
-	1218m SE	Status: Active Licence No: 2/27/11/059 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER COLNE & TRIBUTARIES - POINT 2 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416690 Northing: 418370	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -

ID	Location	Details	
-	1218m SE	Status: Active Licence No: 2/27/11/059 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER COLNE & TRIBUTARIES - POINT 2 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416690 Northing: 418370	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -
-	1288m SE	Status: Historical Licence No: 2/27/11/059 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER COLNE - DALTON WORKS HUDDERSFIELD Data Type: Line Name: ZENECA FINE CHEMICAL MANUFACTURING ORGANISATION Easting: 416660 Northing: 418270	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 12/04/1985 Version End Date: -
-	1288m SE	Status: Active Licence No: 2/27/11/059 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER COLNE AND TRIBUTARIES POINT 3 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416660 Northing: 418270	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -
-	1288m SE	Status: Active Licence No: 2/27/11/059 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER COLNE AND TRIBUTARIES POINT 3 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416660 Northing: 418270	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -

ID	Location	Details	
-	1381m SE	Status: Active Licence No: 2/27/11/059 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER COLNE & TRIBUTARIES - POINT 1 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416690 Northing: 418180	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -
-	1381m SE	Status: Active Licence No: 2/27/11/059 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER COLNE & TRIBUTARIES - POINT 1 - DALTON WORKS Data Type: Point Name: SYNGENTA LTD Easting: 416690 Northing: 418180	Annual Volume (m^3): 24,600,000 Max Daily Volume (m^3): 67,200 Original Application No: 665 Original Start Date: 27/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/07/2002 Version End Date: -
-	1718m SW	Status: Historical Licence No: 2/27/11/131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: HUDDERSFIELD CANAL Data Type: Point Name: BRITISH WATERWAYS Easting: 415000 Northing: 418000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/02/1993 Version End Date: -
-	1718m SW	Status: Historical Licence No: 2/27/11/131 Details: General use relating to Secondary Category (Very Low Loss) Direct Source: SURFACE WATER Point: HUDDERSFIELD CANAL Data Type: Point Name: BRITISH WATERWAYS Easting: 415000 Northing: 418000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 26/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 17/02/1993 Version End Date: -

ID	Location	Details	
-	1718m SW	Status: Active Licence No: 2/27/11/131 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: HUDDERSFIELD CANAL Data Type: Point Name: Canal and River Trust Easting: 415000 Northing: 418000	Annual Volume (m^3): 400,000 Max Daily Volume (m^3): 1,800 Original Application No: 2266 Original Start Date: 26/05/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/01/2008 Version End Date: -
-	1718m SW	Status: Active Licence No: 2/27/11/131 Details: Process Water Direct Source: SURFACE WATER Point: HUDDERSFIELD CANAL Data Type: Point Name: Canal and River Trust Easting: 415000 Northing: 418000	Annual Volume (m^3): 400,000 Max Daily Volume (m^3): 1,800 Original Application No: 2266 Original Start Date: 26/05/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/01/2008 Version End Date: -
-	1917m NE	Status: Historical Licence No: 2/27/12/185 Details: Boiler Feed Direct Source: SURFACE WATER Point: RIVER CALDER Data Type: Point Name: E BOTTOMLEY & SON LTD Easting: 417500 Northing: 420800	Annual Volume (m^3): 109090 Max Daily Volume (m^3): 1364 Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 101 Version Start Date: 16/01/2006 Version End Date: -
-	1917m NE	Status: Active Licence No: 2/27/12/185 Details: Boiler Feed Direct Source: SURFACE WATER Point: RIVER CALDER - BRADLEY Data Type: Point Name: E BOTTOMLEY & SONS LTD Easting: 417500 Northing: 420800	Annual Volume (m^3): 109,090 Max Daily Volume (m^3): 1,364 Original Application No: 4308 Original Start Date: 28/04/1966 Expiry Date: - Issue No: 102 Version Start Date: 03/03/2008 Version End Date: -

ID	Location	Details	
-	1933m NE	Status: Historical Licence No: 2/27/12/267 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER CALDER - DALTON WORKS HUDDERSFIELD Data Type: Point Name: ZENECA FINE CHEMICAL MANUFACTURING ORGANISATION Easting: 417700 Northing: 420500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 24/02/1971 Expiry Date: - Issue No: 101 Version Start Date: 21/11/1999 Version End Date: -
-	1933m NE	Status: Historical Licence No: 2/27/12/267 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: RIVER CALDER - DALTON WORKS - HUDDERSFIELD Data Type: Point Name: ZENECA FINE CHEMICAL MANUFACTURING ORGANISATION Easting: 417700 Northing: 420500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 24/02/1971 Expiry Date: - Issue No: 101 Version Start Date: 21/11/1999 Version End Date: -
-	1933m NE	Status: Historical Licence No: 2/27/12/267 Details: Transfer between sources Direct Source: SURFACE WATER Point: RIVER CALDER - DALTON WORKS - HUDDERSFIELD Data Type: Point Name: ZENECA FINE CHEMICAL MANUFACTURING ORGANISATION Easting: 417700 Northing: 420500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 24/02/1971 Expiry Date: - Issue No: 101 Version Start Date: 21/11/1999 Version End Date: -
-	1933m NE	Status: Active Licence No: 2/27/13/201 Details: Transfer Between Sources (Pre Water Act 2003) Direct Source: SURFACE WATER Point: RIVER CALDER - DALTON WORKS - HUDDERSFIELD Data Type: Point Name: SYNGENTA LTD Easting: 417700 Northing: 420500	Annual Volume (m^3): 1,136,500 Max Daily Volume (m^3): 27,300 Original Application No: 5041 Original Start Date: 21/10/1999 Expiry Date: - Issue No: 102 Version Start Date: 01/04/2006 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	1

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 37**

ID	Location	Details	
-	1191m E	Status: Historical Licence No: 2/27/11/162 Details: Potable Water Supply - Direct Direct Source: SURFACE WATER Point: RIVER COLNE Data Type: Point Name: YORKSHIRE WATER SERVICES LTD Easting: 417200 Northing: 419200	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 02/03/1977 Expiry Date: - Issue No: 100 Version Start Date: 02/03/1977 Version End Date: -

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

5.9 Source Protection Zones

Records within 500m	0

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

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

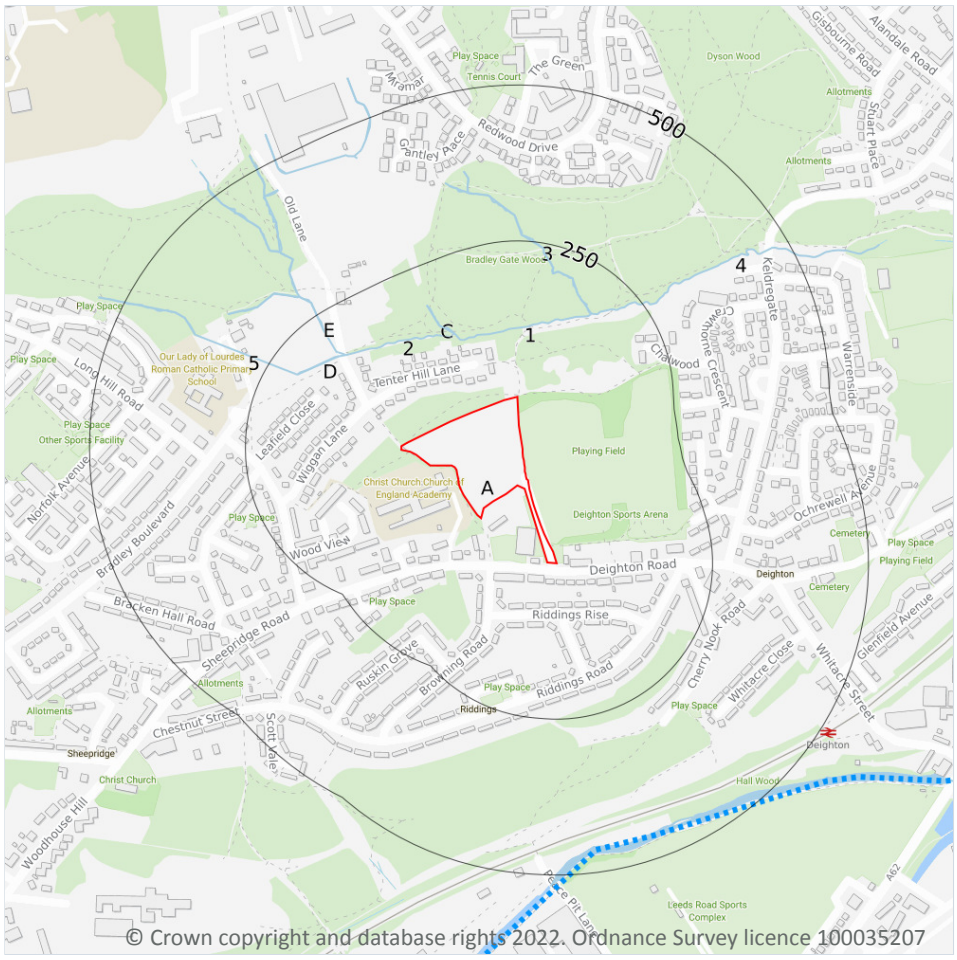
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



6.1 Water Network (OS MasterMap)

Records within 250m	10

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

Features are displayed on the Hydrology map on **page 50**

ID	Location	Type of water feature	Ground level	Permanence	Name
1	107m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
2	124m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	127m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	171m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	171m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	173m NW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
3	177m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
4	178m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	181m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	202m NW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**6**

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

Features are displayed on the Hydrology map on **page 50**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 50**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Colne from River Holme to River Calder**	**GB104027062550**	**Colne and Holme**	**Aire and Calder**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on **page 50**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	946m SE	River	Colne from River Holme to River Calder	GB104027062550	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site	1

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

Features are displayed on the Hydrology map on **page 50**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Aire & Calder Carb Limestone / Millstone Grit / Coal Measures.**	**GB40402G700400**	**Poor**	**Poor**	**Good**	**2019**

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

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

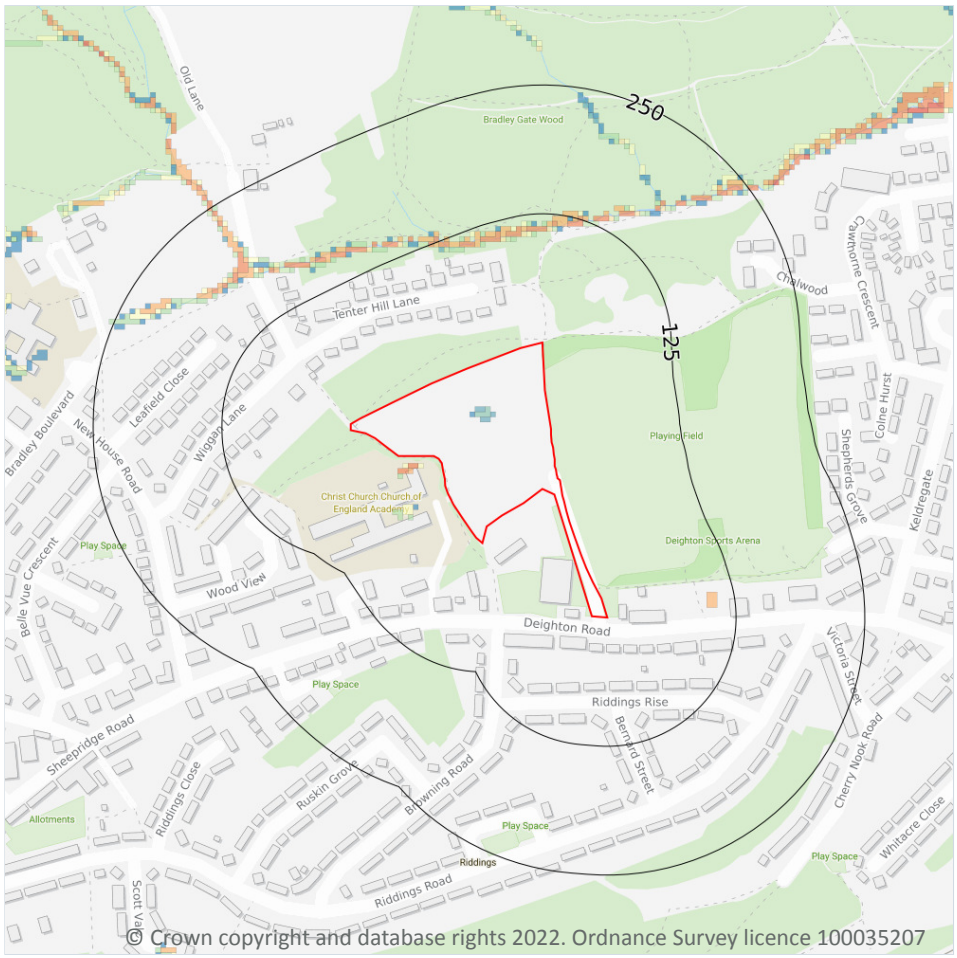
7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding



Site Outline

Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 1000 year, Greater than 1.0m**
Highest risk within 50m	**1 in 30 year, 0.3m - 1.0m**

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

Features are displayed on the Surface water flooding map on **page 57**

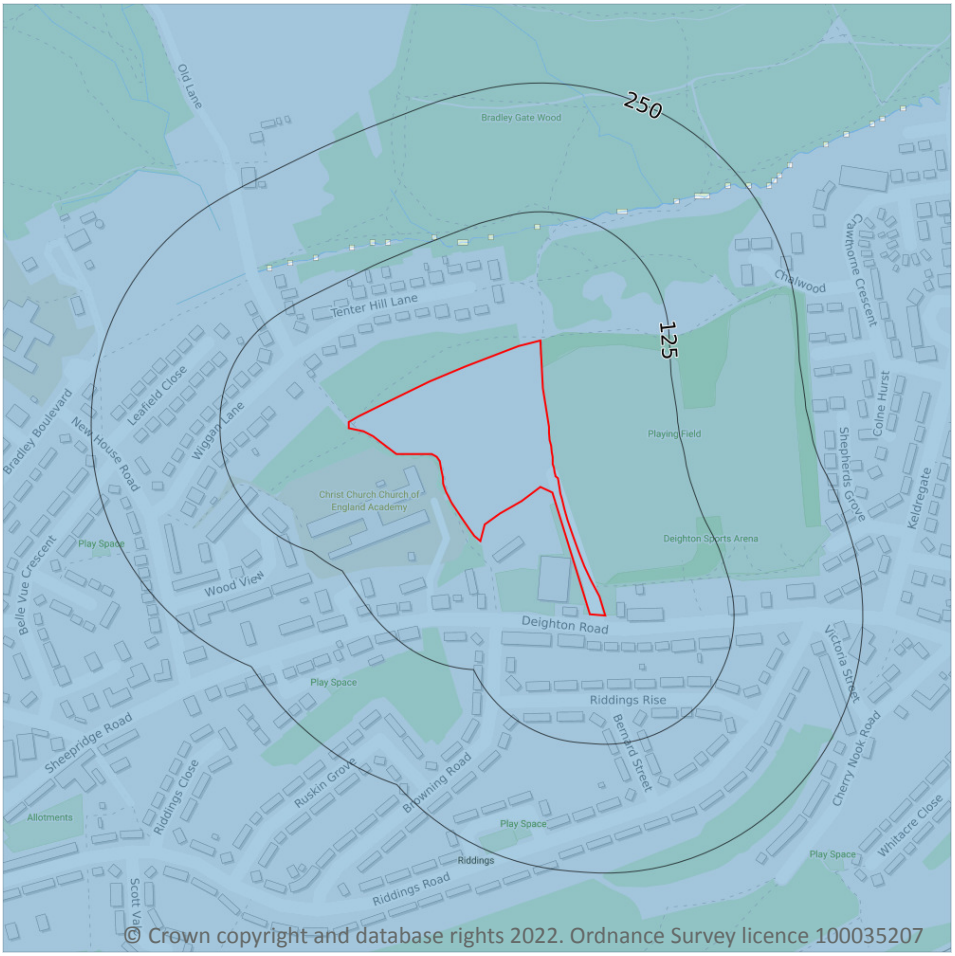
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

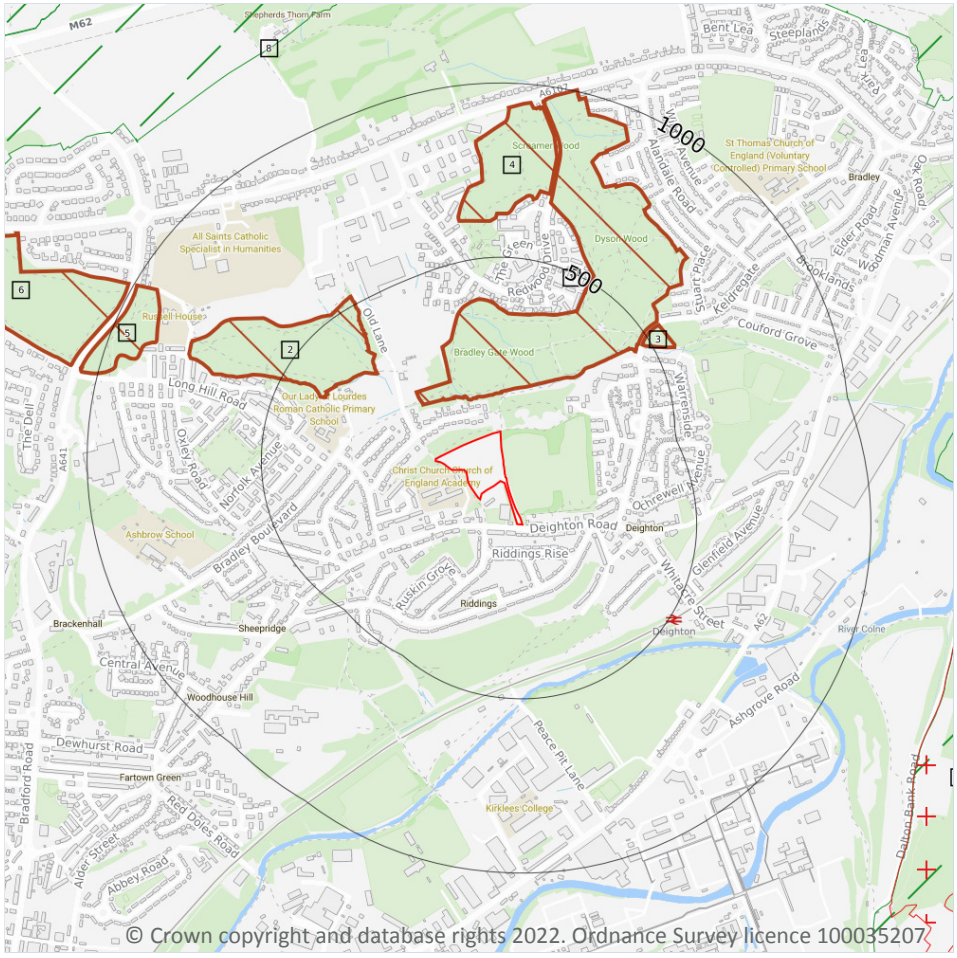
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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

Features are displayed on the Groundwater flooding map on **page 59**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	1

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

Features are displayed on the Environmental designations map on **page 60**

ID	Location	Name	Data source
9	1285m E	Dalton Bank	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	8

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

Features are displayed on the Environmental designations map on **page 60**

ID	Location	Name	Woodland Type
1	108m N	Dyson/screamer Woods	Ancient Replanted Woodland
2	297m NW	Lower Fell Greave	Ancient & Semi-Natural Woodland
3	477m NE	Dyson/screamer Woods	Ancient Replanted Woodland
4	605m N	Dyson/screamer Woods	Ancient Replanted Woodland
5	870m W	Upper Fell Greave	Ancient Replanted Woodland
6	1009m NW	Upper Fell Greave	Ancient Replanted Woodland
-	1471m N	Bradley Wood	Ancient Replanted Woodland
-	1958m W	Gernhill Wood	Ancient Replanted Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	4

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

Features are displayed on the Environmental designations map on **page 60**

ID	Location	Name	Local Authority name
7	1194m E	South and West Yorkshire	Kirklees
8	1243m NW	South and West Yorkshire	Kirklees
11	1660m NW	South and West Yorkshire	Calderdale
-	1889m NE	South and West Yorkshire	Calderdale

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	0

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

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

SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site	0

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

This data is sourced from Natural England.

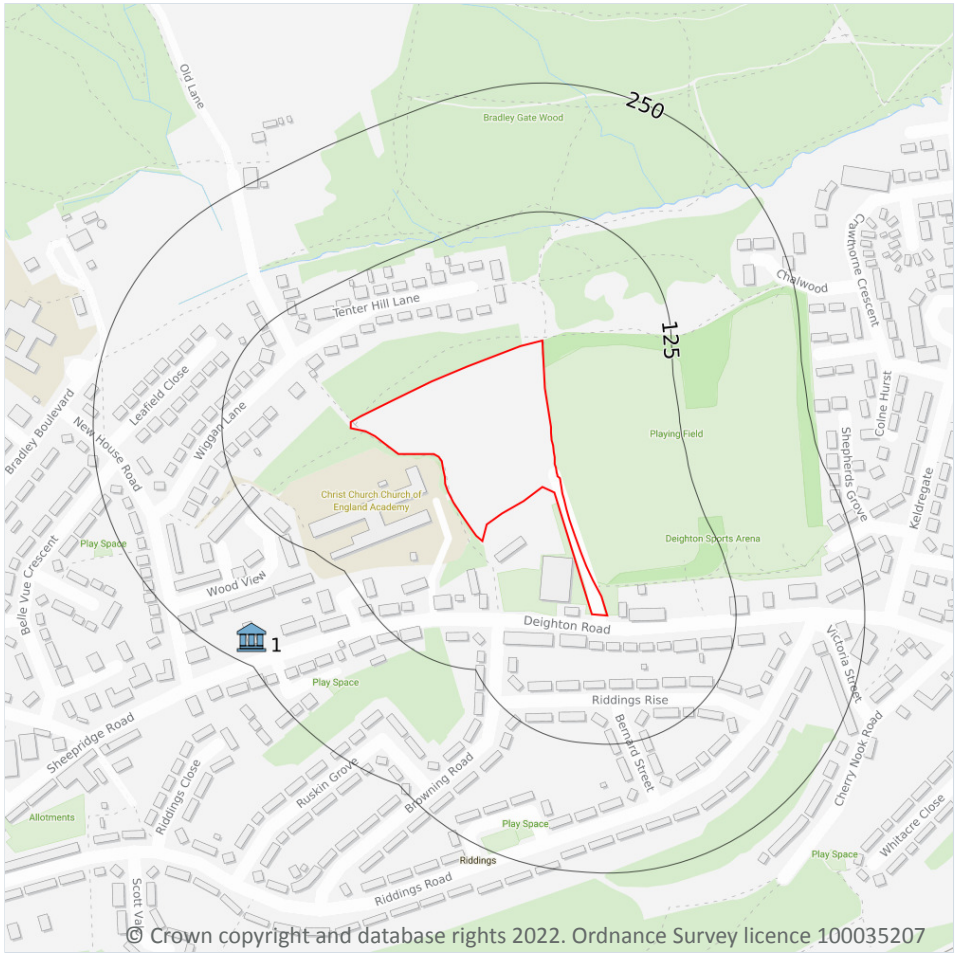
10.18 SSSI Units

Records within 2000m	0

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

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on **page 67**

ID	Location	Name	Grade	Reference Number	Listed date
1	225m SW	250, Deighton Road, Ashbrow, Kirklees, HD2	II	1313846	29/09/1978

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

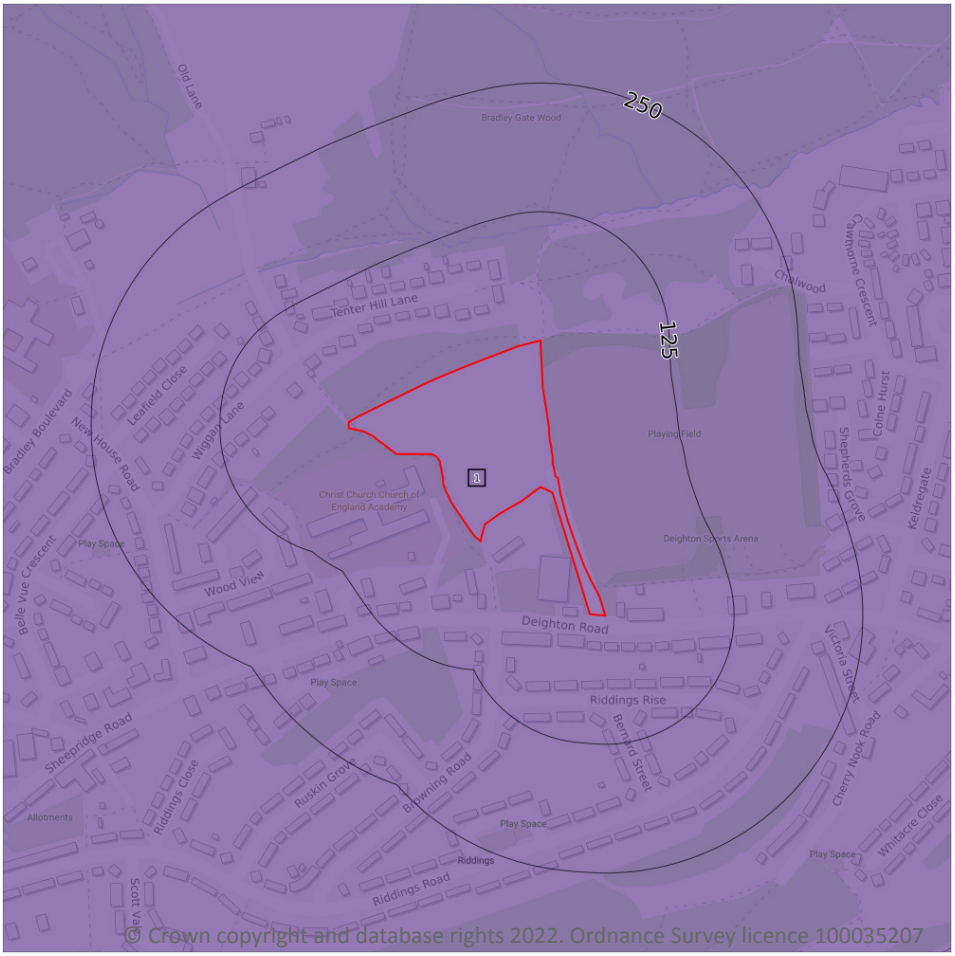
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	1

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

Features are displayed on the Agricultural designations map on **page 70**

ID	Location	Classification	Description
1	**On site**	**Urban**	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

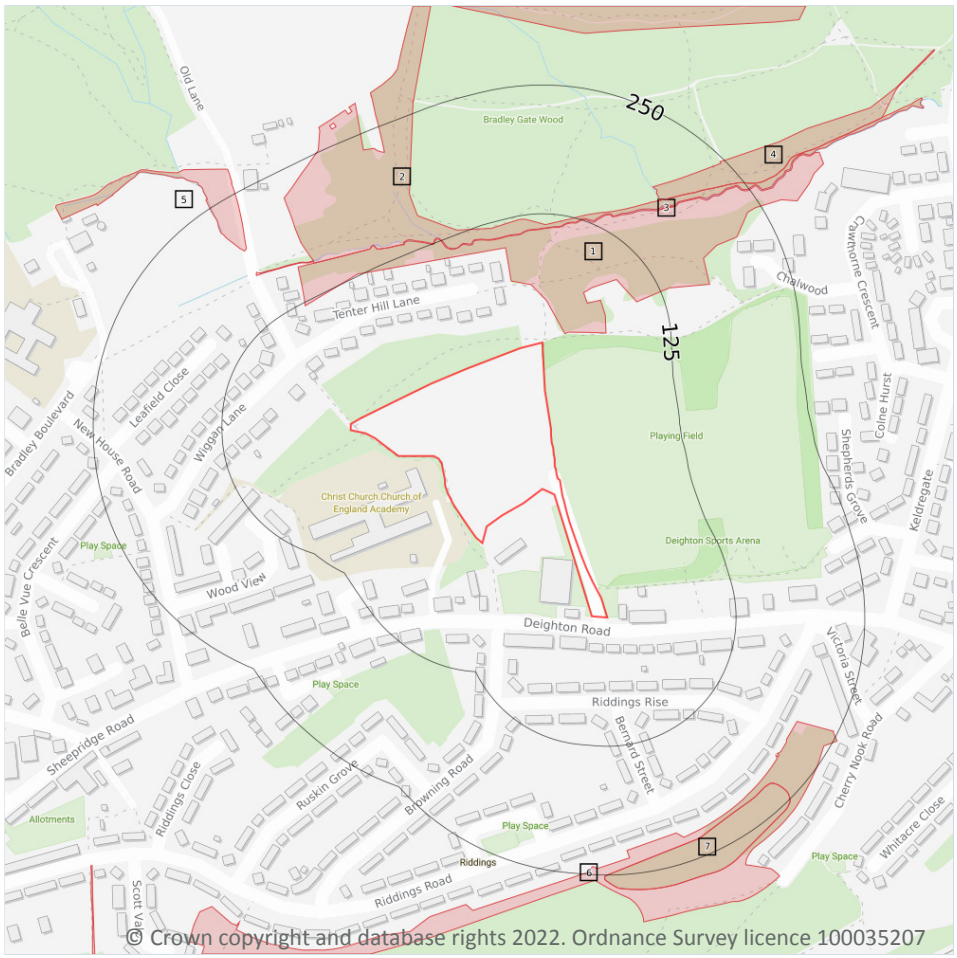
12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders

Habitat Networks

- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	7

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

Features are displayed on the Habitat designations map on **page 72**

ID	Location	Main Habitat	Other habitats
1	23m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	108m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	173m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	179m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	197m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	210m SE	No main habitat but additional habitats present	Additional: DWOOD (INV 50%)
7	225m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**0**

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**0**

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

This data is sourced from Natural England.

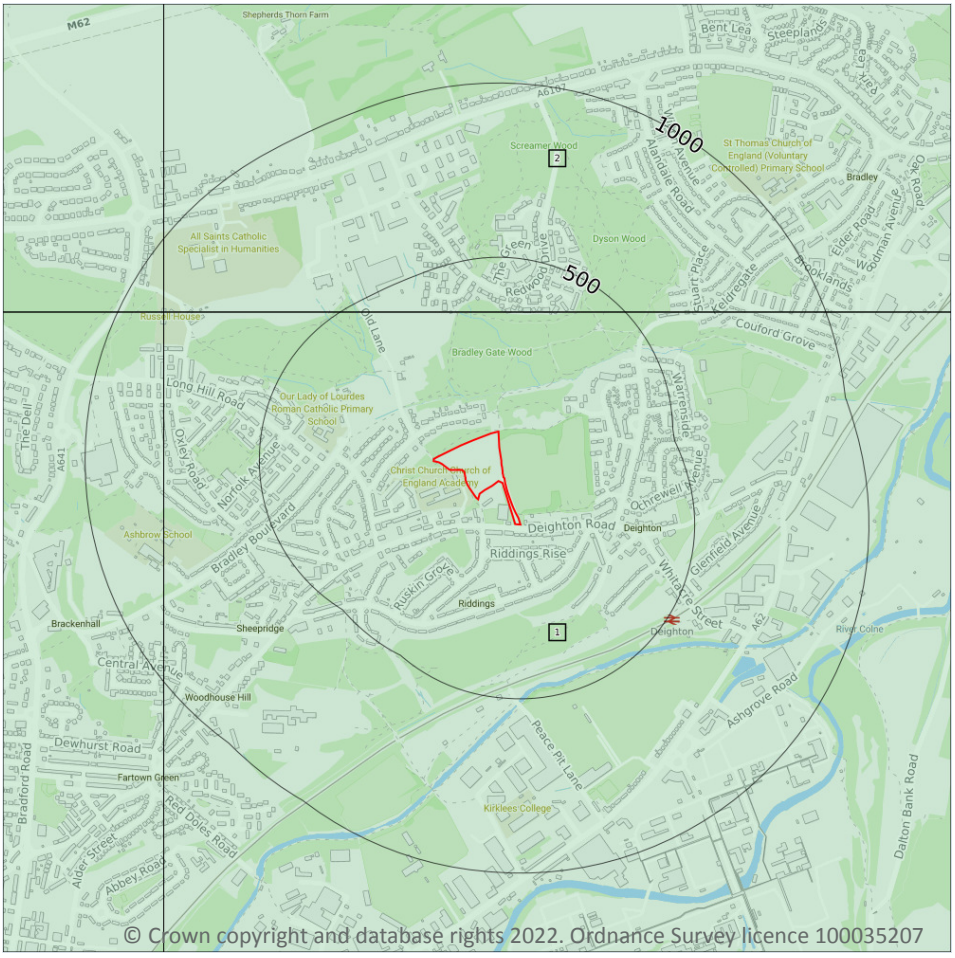
13.4 Limestone Pavement Orders

Records within 250m	**0**

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m	2

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 74**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SE11NE**
2	343m N	Full	Full	Full	Full	SE12SE

This data is sourced from the British Geological Survey.