Appendix 10.1

Phase 1 Environmental Review

DARWEN ENERGY RECOVERY CENTRE (DERC)

DARWEN, LANCASHIRE

PHASE 1: GEO-ENVIRONMENTAL RISK ASSESSMENT

FOR

SUEZ

April 2019

Our Ref: RCEI68589-002 R

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1. INTRODUCTION

RPS Consulting Services Ltd (RPS) was commissioned by Suez to undertake a Phase 1 Geo-Environmental Risk Assessment of a site known as Darwen Energy Recovery Centre (DERC), located off Lower Eccleshill Road, Darwen. The nearest post code is BB3 0EH.

The report was commissioned prior to the proposed redevelopment of the site as an Energy from Waste Facility.

The aim of the review was to determine whether there was the potential for contamination to be present, which could impact future site uses/occupiers and the wider environment, significantly constrain the proposed use of the site or affect the development process. The site's suitability for its proposed use has been determined in accordance with the guidance outlined in the National Planning Policy Framework.

The environmental review comprises:

- a site inspection;
- a review of the historical land uses to assess the potential for ground contamination;
- a review of the environmental setting to assess the sensitivity of the surrounding area to contamination/pollution;
- consultation with the regulatory authorities to establish whether any significant environmental issues have been recorded, which may impact on the site;
- qualitative environmental risk assessment of the site's current and proposed use; and
- a review of existing relevant reports (if supplied).

The environmental risk assessment presented within this report has been prepared having regard to the contaminant-pathway-receptor model introduced under Part 2A of the Environmental Protection Act 1990, and associated guidance on contaminated land published by the Department of Environment, Food and Rural Affairs [and its predecessors]. The methodology is essentially a qualitative assessment, based on the identification and evaluation of potential 'contaminant-pathway-receptor contaminant linkages'. On the basis of this risk assessment, consideration has been given to the potential for the site to be designated as 'contaminated land' (under the local authority contaminated land inspection strategy) as defined in Part 2A of the Environmental Protection Act 1990. See Appendix A for further details of the Environmental Protection Act 1990 and the risk assessment process.

The scope of the report is in general accordance with:

- British Standard requirements for the 'Investigation of potentially contaminated sites - Code of practice' (ref. BS10175:2011+A1:2013);

- ‘Model Procedures for the Management of Land Contamination’ - Contaminated Land Report (CLR) 11;
- National Planning Policy Framework (2012); and
- DEFRA Environmental Protection Act 1990: Part 2A - Contaminated Land Statutory Guidance (2012).

Where appropriate, consideration has also been given to the following:

- The potential for environmental liabilities to occur under other associated regimes, for example the Water Resources Act 1991 and the Environmental Damage Regulations 2009;
- Key constraints on site redevelopment (if proposed), including the impact of other environmental issues (e.g. asbestos, flooding, ecology);

Details of the limitations of this type of assessment are described in Appendix B.

2. LAND USE

2.1 Site inspection

This section of the report is based upon observations made during a site visit on 14th January 2019. The site location and site boundary plans are shown in Figure 1. Selected photographs are shown in Appendix C.

RPS understands that the site is proposed for redevelopment as an Energy from Waste Facility. Figure 3 shows the proposed development plan.

2.1.1 The Site

Table 1: Site Description

Section	Description
Background:	The site is located within the eastern part of Darwen, to the south of Blackburn. The National Grid Reference for the approximate centre of the site is 369364E, 423949N. The site is irregular in shape and covers an area of approximately 7.33ha.
Site Layout:	Site access is via a private road in the southern part of the site which is a surfaced with asphalt with vegetation along the edges (Photo 1 & 2). The main site area exists largely as hardstanding with several buildings towards the north (Photo 3). Vegetated areas are present in the north, north east and south east. A pond is present in the eastern part of the site (Photo 4). There is a small retaining structure in the southern part of the site, constructed of brick and stone. The height of the retaining structure is approximately 2metres. Either side of the retaining structure is a steep embankment. The retaining structure appears to be in good condition with no obvious cracks visible.
Activity / Operations:	The site currently exists as a waste recycling centre. Waste is delivered to the site, segregated, repackaged and redistributed depending on the nature of the materials. No recycling processes other than segregation and sorting are undertaken on the site. The buildings in the western part of the site receive waste collected under recycling schemes. Here they are weighed and bundled to be transported to appropriate recycling centres for specialist processing. Waste here include crisp packets, batteries, tapes and other funded recycling schemes (Photo 5). The waste in the north eastern building include plastics and cardboard to be bundled for recycling and other general household wastes which are shredded and removed to a 'energy from waste' site. Any unsuitable materials are collected to be returned to the waste producer (Photo 6). The buildings in the central part of the site are used for storage of baled/packaged wastes. The outside bays between this building and the eastern building are used for storage and processing of bulk wastes which cannot be recycled and green waste (Photos 7 & 8). The north western building is a used as offices. External areas in the north west are used for vehicle car parking, with designated staff car parking in the north and lorry parking in the southern part. Land in the south is used for storage of empty skips, damaged lorries and wheelie bins. No wastes are stored or processed in this area (Photo 9). The site operates under Environmental Permit numbers EPR/BB3931AB/V002 and EPR/BB3609KA/V003.
Building Structure(s):	The warehouse in the north east is of brick construction with metal cladding to the upper sections (Photo 10). This building is the former ink building associated with the former site use and has been refurbished for its current use. A small extension has been added in the north in the last few years.

Section	Description
	The warehouse buildings in the west and centre are of brick construction (Photo 11 & 12). They are understood to have formed part of a former bronze works. The remainder of these buildings have been demolished. Springfield house in the north of the site is used as offices and is of brick construction and plaster (Photo 13). Anecdotal evidence suggests that this building was refurbished when Suez took ownership of the site.
Surface Cover:	The majority of the site is covered in hardstanding comprising concrete and tarmac. The concrete across the majority of the site comprises the floor slabs from the former buildings. This concrete is in poor condition with extensive cracking, broken out areas and unsealed joints (Photo 14 & 15). At the time of the site inspection many of these broken areas where filled with standing water, anecdotal evidence suggests that some of these voids are very deep (Photo 16). There are runs from the former machinery visible within the floorslab, the majority of these now appear to be infilled with silts and rubble (Photo 17). The general area appears to be undulating with some blocks of concrete at slightly higher elevations. Anecdotal evidence suggests that there are potential pipe runs beneath the concrete where powders and other materials were moved around site. One hole in the concrete appears to be underlain by a brick lined sump structure, potentially relating to such a feature (Photo 18). The concrete in the northern lorry park area is in equally poor condition with many cracks and broken areas (Photo 19). The concrete flooring to the warehouses and processing buildings appear to be in reasonable condition with a number of small cracks visible but no areas of broken concrete. Anecdotal evidence suggests that the concrete roadway in the north east of the site had been relayed within the last few years.
Drainage:	A site drainage plan has not been made available for review. There were a number of manholes noted across the site, some of these relate to the former site use. There are several surface waters drains visible. There is understood to be a large interceptor tank in the northern part of the site, the wastes from the interceptor are understood drain into the unnamed brook to the north of the site. (Photo 20). A United Utilities Discharge Consent, reference 716T3-2-89, dated March 2014 held by SITA permits the discharge of waste derived from contaminated rainfall from waste materials to a foul sewer at Lower Eccleshill Road limited to $10m^3$ per day. There does not appear to be an active discharge consent relating to discharge of water from the aforementioned interceptor to the unnamed brook.
Storage / Tanks:	Adblue is stored in a blue storage tank and an IBC to the south of the small building in the west of the site (Photo 21). There is a diesel tank in the north east of the site to the west of the recycling buildings. This building was locked and access to the tank was not possible (Photo 22). There was a brick bund adjoining the north of the building, potentially for a second historical tank (Photo 23).
Waste:	The site was generally in a tidy condition with wastes in their designated storage areas, however, small amount of litter and windblown wastes including plastics and papers were visible across the site (Photo 24).
Air Emissions:	RPS is not aware of any air emission licences for the current processes on site.
Electricity Transformers:	No substation or transformer units are known to be present on site.
Visual Evidence of Contamination:	No significant evidence of surface contamination was seen during the site inspection. Three monitoring boreholes were visible long the southern site boundary which are understood to be associated with the adjacent landfill site.
Statutory Nuisance:	RPS is not aware of any statutory nuisance complaints associated with the site.
Vegetation	There were numerous mature and semi mature trees present around the site boundaries and around the pond in the south east. The vegetated area between the two roadways in the south comprised grasses and conifer style trees.

Section	Description
	The embankment leading up from the main side area to the road way and then up off site towards the adjacent landfill was grasses with many mature and semi mature trees. The southern part of the site and along the roadway has pockets of overgrown areas which comprise shrub and brambles. The vegetated area in the east of the site comprised grasses with some semi mature trees. All vegetation on site appeared to be in good condition with no visible signs of distress noted. The trees along the slopes and embankments did not show any signs of bowing. Bowing within semi mature and mature trees is an indicator of potential movement within the slopes.
Other Issues:	It is understood that an asbestos survey has been undertaken at the site, however, RPS has not been provided with a copy of the report. Potential asbestos cement sheeting was identified as roofing materials within the warehouse buildings. Under current legislation (The Control of Asbestos Regulations 2012 and HSE Guidance Note HSG264), any property where asbestos-containing materials may be present, legally requires an asbestos management plan (AMP) and should be recorded in an asbestos register No Japanese Knotweed or Giant Hogweed (invasive plant species) were readily identified on or adjacent to the site at the time of the survey. (It should be noted that the identification can be limited by the seasons and in areas of dense vegetation growth). This does not constitute a formal survey.

Salient points from the site inspection are shown on the site features plan Figure 2.

2.1.2 The Surrounding Area

The site is located in an area of predominantly industrial land uses. At the time of the site inspection, neighbouring land consisted of the following:

Table 2: Site Description

Direction	Description
North:	Area of open land owned by Suez. Anecdotal evidence suggests that the area is a local nature reserve.
East:	Open land and agricultural land.
South:	Licensed landfill.
West:	The site is bound by a railway line with multiple industrial units beyond.

An unnamed stream flows from the inceptor tank in the north northwards toward Davy Field Brook. A second unnamed brook flows along the eastern site boundary. It is understood that the site drainage discharges via an interceptor in the north to the unnamed stream, however, RPS have not been able to confirm details of the discharge consent.

The pond located in the east of the site, appears to discharge in to the unnamed stream to the east. The unnamed stream appears to flow in to a pond to the northeast of the site. It is understood that potentially the surface water run-off from the landfill to the south discharges into this pond. There are no known discharged consents for this.

2.1.3 Potentially Contaminative Land Uses

Groundsure database information provides records of potentially contaminative industrial uses within 50m of the site which include the following:

- Unspecified works or factories (on site)
- Electrical features (on site)
- Bathroom fixtures, fitting and sanitary equipment (on site)
- Electrical feature (35m south)
- Containers and storage (35m south and 40m south east)
- Scrap metal merchants (50m south east)
- Road maintenance equipment (50m south east)

2.2 Site History

2.2.1 Historical Map Review

The following review is based on past editions of readily available Ordnance Survey (OS) maps. These include scales of 1:1,250, 1:2,500 and 1:10,000 dated 1849 to 2014. Selected historical maps are given in Appendix D.

Table 3: Historical Map Review - Site

On-site Land Use and Features	Dates
Undeveloped land divided into serval fields	1849 – 1891
Iron Works occupy the site with several buildings and tramways, an excavation in the north and a reservoir is mapped in the central part. The works underwent significant extension in 1909 By 1950 all buildings and tramway have been removed, the reservoir is still present.	1891 - 1950
L&YR Hoddesden Branch railway lines run along the south of the main site area. Marked as dismantled in 1965	1891
Works are developed in the west of the site with an access road in the south. The reservoir is no longer present and there are several excavations and embankments marked in the north and north east. The works underwent significant extension in the 1980s. Works underwent further extension in 2002 with additional buildings developed including the existing buildings n he north and north east. The main buildings in the southern part of the site have been demolished.	1970 to present

Historical maps indicate that the site existed as undeveloped land occupied by several fields from the earliest mapping until the 1891 plan which showed an Iron works with associated excavations, heaps, tramways and a reservoir on site. The iron works underwent several phases of extension with significant extension shown on the 1909 plan. By 1950s the buildings and infrastructure have all been removed, although the reservoir is still shown up to the 1970 plan. In the 1970s a bronze works is indicated to have been developed in the southern part of the site. This appears

to have been extended in the 1980s and early 2000s across the site area. On the 2014 plan buildings in the south of the site are indicated to have been removed.

L&YR Hoddesden Branch railway lines run along the south of the main site area from the 1891 plan. This is marked as dismantled on the 1965 plan.

Table 4: Historical Map Review – Surrounding Area

Surrounding Land Uses (250m radius)	Orientation	Distance (Metres)	Dates	
			From	To
Railway line	W	0	1849	present
Excavations and gravel pits marked Underwent significant extension in 1891 and 1909	N	0	1891	1970
Clay pit Underwent extension in 1928 Annotated as Eccleshill Quarry in 1970	S	0	1909	1980
Reservoir	S	0	1891	1970
Refuse – the former Eccleshill quarry is now shown as an area of refuse. Annotated as workings on 2010 plan	S	0	1980	2002
Hollins Brick Works Annotated as electricity works with tanks and cooling tanks in 1969 Annotated as depot on 1980	W	25	1891	Present
Eccleshill Colliery and Fire Clay works Colliery and fire clay works no longer annotated by 1965, some buildings removed. Remaining buildings annotated as works	S	100	1909	1970
Depots	W	100	1980	present
Works	NW	100	2002	present
Hollins Paper Works several large reservoirs are mapped in the vicinity of the works. Annotated as works in 1970. In 1970 the number of annotated reservoirs and the size of the reservoirs has decreased.	SW	250	1849	2014
Sewage works including filter beds and water tanks	W	400	1909	2010

Land use in the vicinity of the site has had a long and varied industrial use with uses including gravel pits, quarries, refuse tips, brick works, paper mill, colliery, depot, works, electricity works, and sewage works. The railway lines to the west of the site are annotated from the earliest mapping. Land to the north and the south of the site have had long historical of excavation and infilling with both areas been registered as landfill sites.

2.2.2 Potentially Contaminative Historical Land Uses

Groundsure database information provides records of potentially contaminative historical industrial uses from 1:10,000 scale mapping. On site features include:

- Clay pits;

- Railway sidings;
- Unspecified head;
- Unspecified tank;
- Unspecified works;
- Iron works;
- Unspecified pit;
- Refuse heap;
- Unspecified quarry; and
- Cuttings.

Features within 50m of the site which include the following:

- Brick works;
- Refuse heap;
- Railway sidings;
- Refuse heap;
- Railway building;
- Unspecified depot;
- Unspecified works; and
- Unspecified heap.

In addition, there are records of several historical tanks on site and within close proximity, these are describes as tanks, unspecified tanks and cooling tanks.

Groundsure provides details of areas of potential infilled land features, derived from the historical mapping, within 50m these include:

- Refuse heap;
- Clay pits;
- Unspecified pits;
- Unspecified quarry;
- Ponds;
- Reservoir; and
- Brick works.

2.2.3 Site Planning History

Relevant planning records for the site, obtained from Blackburn with Darwen Council Planning Department, from 2000, are summarised as follows:

- Application 10/00/0790, dated 08-11-2000, application for additional inks manufacturing facility on the site. Permission is understood to have been permitted;
- Application 10/06/1122, dated 17/11/2006, application to install a 60m high anemometry mast to measure the wind speed and direction at approximately 40m, 50m and 60m above ground level. Permission is understood to have been permitted;
- Application 10/10/0732, dated 28/10/2010, application for change in land use from B2 (general Industry) to B1 (offices). Permission granted;
- Application 10/11/0608, dated 15/06/2011, application for demolition notification (applicant is Sita UK). Status was determined as prior approval no required;
- Application 10/11/0805 dated 15/09/2011, application for installation of new ventilation condensers to supply cooling to ground and first floor. Permission granted.
- Application 10/11/0930, dated 23/09/2011, application for change of use with external building works of two existing buildings to a materials recycling facility. Permission granted;
- Application 10/12/0167, dated 28/02/2012, discharge of condition 3 of planning application 10/11/0930; status recorded as permitted;
- Application 10/12/1199, dated 02/01/2013, discharge of condition 4 of planning application 10/11/0930; status recorded as permitted;
- Application 10/13/0767, dated 20/09/2013, variation of condition no. 8 re app. Ref. 10/11/0930 to extend the operational hours of the facility. Permission granted.
- Application 10/15/0084, dated 29/01/2015, discharge of condition 2 and 13 of planning application 10/12/0558; status recorded as permitted;
- Application 10/15/1149, dated 01/10/2015, variation of condition no. 8 re app. Ref. 10/11/0930 to extend the operational hours of the facility. Permission granted.

No supporting documents for the planning applications above could be viewed on the planning portal.

3. ENVIRONMENTAL SETTING

3.1 Ground conditions

3.1.1 Geology

Based on British Geological Survey mapping (1:50,000-scale) the stratigraphic sequence beneath the site are as follows.

Table 5: Geology

Location	Strata	Age	Description & approximate thickness
On site excluding the north east corner	Made Ground – Undivided	Modern	Variable composition. Man-made superficial deposit
Immediately to the south and encountering the southern site boundary	Made Ground - Infilled Ground	Modern	Variable composition; man-made superficial deposit. Areas where the ground has been cut away and then had artificial ground deposited, e.g., a backfilled quarry, landfill
Immediately to the north			
On site	Glacial Till	Devensian	Clay and silty clay, commonly pebbly and sandy, stiff, possibly interbedded with sand and gravel-rich lenses and rare peat.
Underlying the southern two thirds of the site	Pennine Lower Coal Measures	Carboniferous	interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils and coal seams
Underlying the northern third of the site	Old Lawrence Rock	Carboniferous	Part of the Pennine Lower Coal Measures consists well cemented sandstones
Truncating the south west corner of the main site area	Pennine Lower Coal Measures – Coal Seam	Carboniferous	Coal Seam.

There is a fault truncating the southeast of the site. In addition, there are several faults within the vicinity of the site.

The Made Ground indicated on the BGS mapping to be present to the north and the south of the site potentially relates to known historical landfilling activities. The Made Ground underlying the site relates to worked ground and voids and potentially relates to the known extensive historical industrial use of the site.

There are records of 5 boreholes located to the south of the access road in the south of the site held with the BGS archives. This record relates to five cable percussive boreholes for ICI Darwen Goose House Road Site. There is no plan showing the location of each individual borehole. The borehole records indicate that ground conditions in the vicinity of the site comprise:

- Topsoil / Made Ground encountered at surface to a depth of between 0.3 to 1.0m. Made Ground indicated by the presence of brick fragments;
- Superficial deposits comprising interbedded Clays and Sands with varying proportions of gravels and cobbles. The clays generally became stiff with depth. This was encountered to depths of 5.5 and 9.5m and was not fully penetrated to a depth of 9.85m in one borehole.
- Bedrock comprising moderately weak mudstone recorded in one borehole and moderately weak sandstone in the remaining boreholes.
- No groundwater is recorded on the borehole logs.

3.1.2 Mining and Mineral Extraction

The site is in an area of potential underground coal mining. Information from the Coal Authority Interactive Map Viewer indicates that:

- There is a single mine entry in the southern extent of the site;
- Coal outcrops are present which potentially encroach the south eastern extent of the site; and,
- A 'Development High Risk Area' is associated with the mine entry outcrops.

As the site is located in an area of known underground coal mining a Coal Authority Consultants Coal Mining Report has been obtained. This indicates:

- There are no known records past underground mining beneath the site;
- There are no records of 'Probable unrecorded shallow workings';
- There are no spine roadways recorded at shallow depth;
- There is a record of a single mine entry on site. There are no details of any treatment which may have been carried out historically on the shaft;
- Dib Hole coal seam outcrops in the south east of the site. The data indicates that the seam is potentially workable.
- There are no recorded opencast mines within 500m of the site;
- There are no recorded Coal Authority managed tips within 500m of the site;
- There are no records of site investigations or remediated sites within 50m of the site;
- The Coal Authority has not received a damage notice or claim for the site or any properties within 50m of the site;
- The Coal Authority has not received a damage notice or claim for the site; and,
- There are no recorded instances of min gas or mine water treatments schemes within 500m of the site.

There are two records of BGS recorded Mineral Sites within 250m of the site, detailed below. Mineral sites are records of site where natural resources have been extracted by opencast or underground mining methods.

Table 6: BGS Recorded Mineral Sites

Location	Site name	Status	Details
42m east	Hollins Brickworks	Ceased	A surface mineral working for clay and shale
117m south	Goose House	Ceased	A surface mineral working for sandstone

The Groundsure report indicates that there are several historical surface ground working features on site including: cuttings, clay pit, unspecified quarry, unspecified pit, refuse heap, pond, reservoir and unspecified heap. In addition, there are a number of surface working features within close proximity of the site (up to 50m) including: Reservoir, Brick Works, Refuse Heaps, refuse heap, and pond.

3.1.3 Other Land Stability Issues

British Geological Survey Ground Stability Hazard ratings for the site are summarised as follows

Table 7: BGS Ground Stability Hazard Ratings

Hazard	Hazard Potential
Collapsible ground	Very low
Compressible ground	Negligible to moderate – the potential presence of peat bands and the soft/loose made ground means that there is locally the potential for compressible ground to be present beneath the site.
Ground dissolution	Negligible
Landslide	Very low to low
Running sand	Negligible to low – bands of granular made ground or superficial deposits have the potential to form running sands particularly where shallow groundwater is present.
Shrinking or swelling clay	Very low, however, Glacial Till can locally have a low to medium volume change potential and be subject to desiccation in densely vegetated areas.

3.2 Water

3.2.1 Hydrogeology

Based on the Environment Agency's Groundwater Vulnerability mapping (1:100,000-scale) the aquifer classification of the geology beneath the site are summarised in Table 8.

Table 8: EA Aquifer Classification

Strata	Aquifer Classification	Description
Glacial Till	Secondary Undifferentiated Aquifer	These formations have varying characteristics in different locations
Pennine Lower Coal Measures	Secondary A Aquifer	These formations are formed of permeable layers capable of supporting water supplies
Old Lawrence Rock		

Strata	Aquifer Classification	Description
Pennine Lower Coal Measures – Coal Seam		at a local scale, in some cases forming an important source of base flow to rivers

According to Environment Agency data, the site is not located in a groundwater Source Protection Zone.

3.2.2 Hydrology

Under the Water Framework Directive, the Environment Agency identifies no watercourses within 1km of the site which are classified within the local River Basin Management Plan. A list of all nearby watercourses and water bodies is as follows:

Table 9: Surface Water Features

Watercourse / body	Quality Classification	Distance and Direction
Unnamed stream flowing to a 'spread' leading to the Davy Field Brook	N/A	Immediately to the north
Unnamed brook	N/A	Flowing along the eastern site boundary.
Davy Field Brook	Monitoring point located 590m north Biological Quality Grave 2009 = A Chemical Quality Grade 2009 = A	275m north
Flash Brook (flowing into Davy Field Brook)	N/A	300m north east
River Darwen	Monitoring point 515m north west Biological Quality Grave 2009 = C Chemical Quality Grade 2009 = B	350m. west

3.2.3 Fluvial / Tidal Flood Risk

According to the Environment Agency (EA) flood map, the site is not located within an indicative fluvial flood zone.

The Risk of Flooding from Rivers and the Sea (RoFRaS) Flood rating for the site is recorded as very low (less than 1 in 1000 change of flooding in any given year).

3.2.4 Surface Water Flood Risk

According to the Environment Agency (EA) surface water flood map, parts of the site in the south east and south of the main area are at risk of surface water flooding. However, the majority of the site is not within an area at risk from surface water flooding.

3.2.5 Groundwater Flood Risk

The British Geological Survey indicates the site is located in an area susceptible to Superficial Deposits flooding with flooding occurring at surface.

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

groundwater levels is exceeded. Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions.

Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (superficial deposits flooding) or with unconfined aquifer (Clearwater flooding).

3.2.6 Water Abstractions

Information provided by the Environment Agency indicates that there are records of two licensed groundwater abstractions and two licensed surface water abstractions within 1km of the site. The details of these are as follows:

Table 10: Water Abstraction Licences

Licence Holder	Source	Details	Distance and Direction
Groundwater			
St Regis Paper Company	Groundwater, direct source	Licence number is 2671340038 Original start date 16/12/1966 This is an historical abstraction for general use relating to secondary category and general cooling. Water can be abstracted at a maximum daily volume of 373.26m^3 and an annual volume of 2877270m^3. The point source is Eccleshill mineshaft overflow at intake to Hollins papermill.	300m west
		Licence number is 2671340038 Original start date 16/12/1966 This is an historical abstraction for general use relating to secondary category and general cooling. Water can be abstracted at a maximum daily volume of 373.26m3 and an annual volume of 2877270m3. The point source is borehole at Hollins Paper Mill	400m west
Surface water			
St Regis Paper Company / D S Smith Paper Limited	Nag Bent Stream, Darwen	Licence number 2671340037 Original start date 16/12/1966 This is an historical abstraction for general use relating to general cooling; boiler feed; and process water. Water can be abstracted at a maximum daily volume of 9183.07m3 and annual volume of 1400000m3. The license was transferred to D S Smith Paper Limited in 2012 as Issue 102.	300m west, 430m south west and 875m south west
Crown Berger Ltd	Point source, surface non-tidal / recirculating tanks within LIC Holder's Works	Licence number 2671340036 Original start date 09/12/1966 This is an historical abstraction for process water and general cooling.	460m north west

There are no records of any potable abstractions within 2km of the site.

3.3 Sensitive Sites / Designated Protected Areas

Natural England data indicates that there are no Sites of Special Scientific Interest, National Nature Reserves, Special Protection Areas, RAMSAR, World Heritage Sites, Nation Parks, Areas of Outstanding Beauty, or Environmentally Sensitive Areas, within 1km of the site.

Sunnyhurst wood located 825m to the east of the site is a Local Nature Reserve.

Land immediately to the east of the site is within the Liverpool, Manchester and West Yorkshire Greenbelt.

3.4 Landfills and Waste Sites

Information provided by a number of sources (detailed below) shows that there are three recorded licensed or known historical landfill sites and nine waste treatment / transfer sites recorded within 250m of the site.

Table 11: Landfills and Waste Sites

Source of Record	Licence Details	Waste Type and Details	Distance and Direction
Landfill Sites			
Environment Agency Landfill Site and Environment Agency Licensed waste sites	Land / premises at Goosehouse Lane, Darwen, BB3 0EH Operator: Infinis (Re-Gen) Limited	Type: household, commercial and industrial landfill Size: <25000 tonnes Environmental Permitting Regulation (Waste) Licence number: GOO001 EPA reference: EA/EPR/TP3091CZ/V002 Waste Management Licence No: 54008 Annual tonnage 5000 Licence issued 18/03/1977 Modified 21/06/2000	On site - encroaching on the eastern extent of the access road in the south. 140m east
Environment Agency Historic Landfill Site	Wolstenholme Bronze Powders, Lower Eccleshill Road Licence holder: Wolstenholme Bronze Products	Site Reference: L1/10/065, K1/10/020. Waste type: inert, industrial and commercial First recorded 31/12/1977. Licensed issued: 22/07/1977	On site – located in the northern part of the site.
	Hollins Paper Mill, Hollins Grove Street Licence holder: Reed Paper and Board (UK) limited	Site reference: WD/100/64. L1/10/064, K1/10/23, Licence No 18. Waste type: inert and industrial First recorded 31/05/1947 Last recorded 31/01/1991 License issued 02/05/1977 Licence surrendered: 01/02/1991,	100m west
Local Authority and Historical mapping	n/a	Refuse tip – 1966 mapping	250m north west
	n/a	Refuse tip – 1971 and 1997 mapping	480m north west

Source of Record	Licence Details	Waste Type and Details	Distance and Direction
Scrap Yards & Waste Transfer / Treatment Sites			
Waste Treatment, transfer or disposal sites	Ground workings and refuse heap	Historical mapping dated 1930	On site
	Ground workings and refuse heap	Historical mapping dated 1954	Immediately to the south
	Ground workings and refuse heap	Historical mapping dated 1954 and 1967	20m north west
	Ground workings and refuse heap	Historical mapping dated 1954	80m north west
	Scrap Yard	Historical mapping dated 1990 and 1996	95m south east
	Ground workings and refuse heap	Historical mapping dated 1954 and 1967	105m west
	Waste treatment plant, Goosehouse Lane Planning application Reference 10/05/0318	Development of a waste management facility including a residual waste transfer building, a materials recycling facility, composting plant and offices. Planning permission was withdrawn by Blackburn Borough Council	135m south east
	Scrap yard	Historic mapping dated 1991, 1993 and 1994	160m south east
Environment Agency Licensed waste sites	Darwen Materials Recycling Facility. Operator: Suez recycling and recovery UK Ltd	Type: 75kte Material Recycling Facility Size: <25000 tonnes Environmental Permitting Regulation (Waste) Licence number: SIT739 EPA reference: EA/EPR/BB3931AB/V003 Waste Management Licence No: 103327 Annual Tonnage: 74999 Licence issued 13/03/2012 Modified 26/06/2015	On site
		Type: Special Waste Transfer Station Size: >=75000 Environmental Permitting Regulation (Waste) Licence number: SIT794 EPA reference: EA/EPR/BB3609KAS/V004 Waste Management Licence No: 401488 Annual tonnage 110000 Licence issued 19/11/2004 Modified 30/06/2016	

3.5 Local Authority Searches

There are no records sites within 500m of the site which have been classified as contaminated land under Section 78R of the Environmental Protection Act 1990.

3.6 Pollution Incidents

Environment Agency data indicates that there are two records of 'major' or 'significant' pollution incidents within 500m of the site.

Table 12: Pollution Incidents

Date	Incident Number	Pollutant	Receiving Medium & Severity of Incident	Distance & Direction
27/08/2004	262813	Other pollutant	Water impact: category 4 (no impact) Land Impact: category 2 (significant) Air Impact: category 4 (no impact)	270m south east
10/03/2004	222033	Oil and fuel, diesel	Water impact: category 2 (significant) Land Impact: category 4 (no impact Air Impact: category 4 (no impact)	370m north

Information provided within the Entec Desk study indicates that there are a number of pollution incidents to controlled waters which relate to the site, however the environmental database searches undertaken by RPS does not identify these incidents. These pollution incidents which relate to the release of organics and metals in the tributary for Davy Field Brook and are classified as Category 3 (minor) and Category 2 (significant). The cause is recorded on a number of occasions as human operator, other causes are not recorded.

In addition, there are records of a number of other pollution incidents within close proximity to the site, which may potentially have impacted the controlled waters in close proximity of the site but are not related to any on site activity.

3.7 Authorised Processes

3.7.1 Discharge consents

Environment Agency and Local Authority data indicates that there are thirteen licenced discharge consents within 500m of the site.

Table 13: Discharge Consents Records

Licence Holder	Permitted Activity	Distance & Direction
Wolstenholme International Ltd (interceptor pit)	Discharge: Trade Discharges – process effluent- not water company Permit number: 017180566 Effective date: 15/07/1996 Revocation date: 10/09/2009 Status: Revoked Receiving water: Davy Field Brook	40m north west
Hollins Paper Mill	Discharges: Trade Discharges – process effluent- not water Permit number: 017190055 Effective date: 01/09/1979 Revocation date: 06/04/1990 Status: Revoked Receiving water: River Darwen	330m north west

Licence Holder	Permitted Activity	Distance & Direction
Darwen STW	Discharges: Sewage discharge – STW Storm Overflow/Storm Tank and Final/Treated Effluent– water company Permit number: 017160025 Effective date: 07/04/1998 Revocation date: - Status: modified 01/01/2010 Receiving water: River Darwen	340m north west 425m north west 645m north west
BBNO165 CSO	Discharges: Sewage discharge –Storm Overflow/Storm Tank – water company Permit number: NPSWQD002980 Effective date: 07/10/2008 Revocation date: - Status: New consent Receiving water: River Darwen	355m north west
Crown Decorative Products	Discharges: Trade Discharges – cooling waters Permit number: 017190112 Effective date: 13/12/1973 Revocation date: 23/08/1995 Status: Revoked Receiving water: River Darwen	370m north west
Darwen STW	Discharges: Sewage discharge – STW Storm Overflow/Storm Tank – water company Permit number: 17160025 Effective date: 19/10/1979 Permit version: 13 Status: Modified (14/10/2008) Receiving water: River Darwen	370m north west
Akzo Nobel	Discharges: Trade Discharges – unspecified Permit number: 017190570 Effective date: 23/07/1996 Revocation date: 29/09/1996 Status: revoked Receiving water: River Darwen	395m north west
	Discharges: Trade Discharge – Site Drainage (contaminated surface water, Not Waste site) Permit number: 017190504 Effective date: 05/09/1994 Revocation date: - Status: Post BRA – historic only Receiving water: River Darwen	
Crown Decorative Products	Discharges: Trade Discharges – cooling water Permit number: 017190113 Effective date: 13/12/1973 Revocation date: 13/02/1991 Status: revoked Receiving water: River Darwen:	400m west
Darwen SSO	Discharges: Sewage discharge –sewer storm overflow – water company Permit number: 017160092 Effective date: 23/11/1982 Revocation date: - Status: Pre NRA Receiving water: River Darwen	405m west

Licence Holder	Permitted Activity	Distance & Direction
Clarence Street	Discharges: Sewage Discharge – sewer storm overflow – water company Permit number: 01BBN0101 Effective date: 01/04/1991 Revocation date: - Status: Varied by application Receiving water: River Darwen	410 to 415m south west
	Discharges: Sewage Discharge – sewer storm overflow – water Permit number: 01LA1915 Effective date: 03/05/1973 Revocation date: 03/05/1973 Status: Revoked Receiving water: River Darwen	
Hollings Paper Mill	Discharges: Trade Discharges – process effluent- not water Permit number: 011191/6/DN Effective date: 01/04/1991 Revocation date: 01/04/1991 Status: revoked Receiving water: River Darwen	445m west

3.7.2 Environmental Permits

Environment Agency and Local Authority data indicates that there are several processes regulated by an Environmental Permit (under the Environmental Permitting Regulations 2010) within 500m of the subject site.

Table 14: Environmental Permits – historic IPC and IPPC permits

Licence Holder	Permitted Activity	Distance and Direction
Crown Paints Limited	Organic Chemicals Plastic Materials EG Polymers Permit number VP3136GB Original permit number VP3136GB EA/EPR/VP3136GB/T001 Issue date: 02/04/2009 Status Transfer effective	115m north west
	Organic chemicals recovering etc acrylic acid etc Permit number: VP3136GB EPR reference EA/EPR/VP3136GB/T01. Issue date 02/04/2009 Status Transfer effective	215m north west
St Regis Paper Co Ltd	Paper and Pulp Manufacturing Processes Permit number AU6277 Original permit number: IPCAPP Date approved 01/02/1999 Effect dated: 01/03/1999 Status – revoked now IPPC	210m west
	Combustion any fuel, Paper and Pulp Manufacturing Processes Permit number BK1406 Original Permit number BK1406 Issue date 20/03/2002 Status: superseded by PAS	

Licence Holder	Permitted Activity	Distance and Direction
Akzo Nobel Decorative Coating Ltd	Manufacturing and use of organic chemical Permit number: AK4788 Original permit number: IPCAPP Date approved 11/02/194 Effect dated: 21/03/194 Status: superseded by variation	215m north west
	Manufacturing and use of organic chemical Permit number: BC6608 Original permit number: IPCMINVAR Date approved 24/11/1998 Effect dated: 30/11/1998 Status: superseded by variation	
	Manufacturing and use of organic chemical Permit number: BS2615 Original permit number: IPCMINVAR Date approved 24/07/2002 Effect dated: 31/07/2002 Status: superseded by variation	
	Manufacturing and use of organic chemical Permit number: BT8422 Original permit number: IPCMINVAR Date approved 10/12/2002 Effect dated: 16/12/2002 Status: revoked now IPPC	
	Organic chemicals recovering etc acrylic acid etc Permit Number BU5445IP Irginal Permit Number BU5445IP Issue Darte 13/12/2006 Status: superseded.	
Lucite International UK Limited	Organic chemicals, plastic materials eg polymers Permit number ZP3733CG Original permit number BL8678IJ Issue date 09/03/2012 Status superseded	390m south
	Organic chemicals, plastic materials eg polymers Permit number QP3636YP Original permit number BL8678IJ Issue date 16/02/2017 Status Effective	
St Regis Paper Co Ltd	Combustion Processes Permit Number: AA2020 Original Permit Number: IPCMINVAR Date approved: 07/02/1992 Effective date: 07/02/1992 Status: superseded by variation	400m west
	Combustion Processes Permit Number: BC5067 Original Permit Number: IPCMINVAR Date approved: 24/11/1998 Effective date: 30/11/1998 Status: superseded by variation	

Licence Holder	Permitted Activity	Distance and Direction
	Combustion Processes Permit Number: BH7423 Original Permit Number: IPCMINVAR Date approved: 22/03/2000 Effective date: 24/03/2000 Status: revoked now IPPC	

Table 15: Environmental Permits – List 1 and List 2 Dangerous Substances Inventory Site

Name	Receiving water	Authorise substances	Status	Distance & Direction
Wolstenholme international Ltd	River Darwen	Copper, pH zinc	not active	40m north west
St Regis Paper Co- outlet W1	-	Tributyltin, Triphenyltin, Pentachlorophenol	-	Active
St Regis Paper Co	River Darwen	Mercury (other)	Not active	400m west
Darwen Wwtw(north West Water Ltd) Secondary Outfall	-	Tributyltin, Triphenyltin,	Not active	450m north west
St Regis Paper Co	River Darwen	Tributyltin, Triphenyltin,	Not active	450m north west
Darwen Secondary Stw	-	Mercury (other)	Not active	450m north west
Darwen Tertiary Stw	-	Mercury (other)	Not active	470m north west
Darwen Wwtw (north west water) tertiary Outfall	-	Tributyltin, Triphenyltin,	Not active	470m north west

Table 16: Environmental Permits – Activities and Enforcements

Licence Holder	Permitted Activity	Distance and Direction
Wolstenholme International	Process: Non-ferrous metal foundry process Status: Historical permit Permit type: Part B	On site
Express Asphalt	Process: Other miner processed Status: Current permit Permit type: Part B	50m south east
Darwen Raodstone Ltd	Process: Roadstone coating processes Status: Historical permit Permit type: Part B	50m south east
Crown paints (formerly Akzo Nobel)	Process: Coating processes Status: Current permit Permit type: Part B	155m south
Darwen Roadstone Ltd	Process: Roadstone Coating Processes Status: Historical Permit Permit type: Part B	225m south

3.7.3 COMAH and NIHHS Sites

There are no records of any operations under the Control of Major Accident Hazards (COMAH) or any Notification of Installation Handling Hazardous Substances (NIHHS) within 500m of the site.

3.7.4 Registered Radioactive Substances

There are no records of any registered radioactive substances within 500m of the site.

3.7.5 Petroleum Licences/ Petrol and Fuel Stations

Groundsure information indicates the presence of no current fuel filling stations within 500m of the site. There are no records of any historical petrol and fuel sites within the 500m of the site.

There are two records of historical garage and motor vehicle repair sites within 500m of the site, both recorded on the 1954 historical mapping. These are located 390m south west and 400m south west of the site.

3.7.6 National Grid Underground services

There are no records of National Grid high voltage underground electricity transmission cables and no records of National Grid high pressure gas transmission pipelines within the vicinity of the site.

3.8 Radon

According to the Indicative Atlas of Radon in England and Wales published by the Health Protection Agency (part of Public Health England) and the British Geological Survey, the site is located in an area where less than 1% of properties area above the radon action level. Therefore, no radon protective measures are necessary.

3.9 Background Soil Chemistry

The BGS soil chemistry for environmental assessments gives indicative natural concentration values (estimated) for the natural soils at the site for a selection of Contaminants of Potential Concern (CoPC). These have been reproduced below:

Table 17: Background Soil Chemistry

Element	Arsenic	Cadmium	Chromium	Nickel	Lead
Concentration (mg/kg)	<15	<1.8	60-90	15-30	<100

The values presented in the above table are an indication of expected natural background concentration levels, and thereby can be used to provide a baseline estimate that can be used when assessing chemical data during future ground investigations at the site.

3.10 Unexploded Ordnance Risk

CIRIA Report C681 (stone et al 2009) outlines recommendations for dealing with the potential risk associated with the legacy of Unexploded Ordnance Risk, largely relating the WWII bombing and military sites. Reference to the Zetica Regional Unexploded Bomb Risk map for Lancashire indicates that the site is in an area of very low/low potential risk from Unexploded Bombs.

The site is not within an area of known military history. In general accordance with the CIRIA Report no further consideration of Unexploded Ordnance is required.

3.11 Existing Reports / Correspondence

RPS has been provided with the reports detailed below for review. RPS cannot vouch for the accuracy of the information provided within the reports and legal reliance should be sought from the original authors of the reports where their content is considered material to the characterisation of the site. The reports include:

- GKN Reinforcements Ltd Report No. S.M.956 Lower Eccleshill Site Investigation Darwen, dated July 1963;
- Northern Foundations Report No S.I.6911 Investigations at Wolstenholme International Ltd, Darwen dated April 1997;
- ERM Report No. 0012728 Phase 1 Environmental Due Diligence Assessment Wolstenholme International Ltd, Darwen dated December 2003;
- Entec UK Ltd Phase 1 Desk Study Geo-Environmental Report, Eccleshill Road, Darwin, Blackburn for SITA UK dated September 2010;
- Fairhurst Geo-Environmental Ground Investigation Report, Darwen Ink Works Redevelopment, report reference D/I/D/92064/04 dated January 2012.

Salient points from the review of these reports are summarised below.

GKN Reinforcements Ltd Report No. S.M.956 Lower Eccleshill Site Investigation Darwen, dated July 1963

This site investigation was undertaken to support the foundation design of the former works on site. No environmental testing was undertaken as part of the site investigation. The report does not include an exploratory hole location plan, therefore the location of the boreholes on site are unknown.

Four boreholes were sunk on site to a maximum depth of 7.5m bgl and encountered the following ground conditions:

- Made Ground between 2.0m and 6.6m bgl, generally comprising sand, ash, gravel, brick and iron slag. In one borehole iron slag was the predominant constituent to a depth of 6m bgl;

- Underlying the Made Ground is underlain by firm silty clays which is locally laminated and contains traces of shale and gravels.

Report No S.I.6911 Investigations at Wolstenholme International Ltd, Darwen Northern Foundations 1997.

This investigation was looking into the potential for expansive slag to be present within the Made Ground which is causing uplift of the floor slab. No environmental testing or risk assessment for Human Health or controlled waters was undertaken as part of the assessment. The report does not include an exploratory hole location plan, therefore the location of the boreholes on site are unknown.

Three trial pits within the building footprint were sunk. Ground conditions beneath comprise Made Ground with varying proportion of slag identified. Three samples selected on the basis of the slag and foundry waste were sent to Thomas Research Services Ltd. for analysis.

The report concludes that the variability but occasionally high concentration of free lime and basic steel slag are most likely the cause of past expansion. T indicates that there remains a potential for further expansion to occur due to the concentration of feel lime and slag present across the site.

Report No. 0012728 Phase 1 Environmental Due Diligence Assessment Wolstenholme International Ltd, Darwen ERM 2003

This report covers the whole site area and also land to the north of the site. The report was prepared by ERM was to support the potential sale and leaseback programme of the site land and buildings. At the time of the site inspection of the report the bronze foundry was still operational and given details of potential risk associated with on-going processes.

The report states its key findings are:

- Air Emissions: the introduction of the Solvent Emission Directive and the PPC regulations were being implemented at the time the report was written, ERM state the implications are not known at the time of writing and improvements / upgrades to plant may be required.
- Asbestos: Asbestos containing materials are present on the roofing in the east of the site (still on site). The report doesn't state if asbestos was present in other buildings on site. Reference to the 2003 survey states that any identify asbestos was in good or reasonable condition. ERM recommend future removal or encapsulation of asbestos containing materials in the future.
- Site History: ERM noted that during the site inspection the floor in the bronze manufacturing area was lifted. ERM state the floor movement is monitored every six months. Erm recommend monitoring is continued.

- Soil and Groundwater Contamination: ERM conclude that potential current on site and off site sources of contamination have been identified. ERM state the low permeability Glacial Till will protect the underlying Coal Measures, however, the unnamed brook immediately to the north of the site is vulnerable to on site contamination. ERM recommend that a full Phase 2 baseline investigation is carried out.

Phase 1 Desk Study Geo-Environmental Report SITA UK Entec UK Ltd 2010

This report was carried out by Entec to support the acquisition of the site for potential future development as a waste management facility. The report covers the whole site area and the land to the north.

The report concludes that the potential contamination presents risks to future users, surface waters, groundwater and further infrastructure, which will require some form of mitigation.

The report recommends the following actions:

- continue additional surface water monitoring; and
- Undertake a site investigation to establish baseline conditions.

It is unknown if these works were undertaken and RPS has not been provided with reports detailing there finding.

Fairhurst Geo-environmental Report dated 2012

This investigation was carried out in 2012 and is located in the north eastern part of the site only in the vicinity of the former ink building, which is now occupied by material recycling facility plant.

The site investigation works were undertaken by CC Geotechnical Limited and the findings reported within a factual report. RPS have not been provided with a copy of the factual report. Site works comprised seven cable percussive boreholes to a maximum depth of 10m; four dynamic percussive boreholes to a maximum depth of 6.0m; five trial pits to a maximum depth of 3.2m; two hand excavated pits to expose foundations and five concrete cores within the internal areas.

Ground conditions encountered comprised:

- Within the building footprint:
    - Reinforced concrete slab between 0.2 and 0.35m thick - Internal area only;
    - Made Ground to depths of between 0.8 and 2.8, and comprised sandy gravel and gravelly sand sub base and silt sand gravel and clay in varying proportions. A membrane was locally encountered beneath the concrete lab. Slag was encountered in a single window sample location in the central building area.

- Superficial deposits proven to depths of 10.0m and comprised firm to stiff slightly sandy to sandy, slightly gravelly to gravelly silty clay, locally a sandy slightly gravelly clayey silt was encountered.

- External areas:
  - Topsoil was encountered to depths of between 0.1 and 0.2m bgl;
  - Concrete hardstanding was present at ground level in two locations;
  - Made Ground encountered to depths of between 0.6 and 3.9m. Generally comprised: sandy gravelly sub base and a silt sand gravel and clay in varying proportions. Locally a sand was encountered to a depth of 1.3m.
  - Superficial deposits proven to depths of 10.0m and comprised firm to stiff slightly sandy to sandy, slightly gravelly to gravelly silty clay, locally a sandy slightly gravelly clayey silt was encountered. In a single boreholes silt and clays where fully penetrated to a depth of 4.6m and underlain by sands and gravels to full depth (10.0m).
- Bedrock was not encountered in any exploratory borehole.

Groundwater was encountered in three exploratory holes during drilling at depths between 3.9 and 8.20m. Standing levels during the monitoring were recorded between 0.52 and 5.0m.

Fairhurst undertook an environmental risk assessment of the chemical testing carried out at the site and based on their assessment concluded the site did not pose a risk to end users. But they concluded that surface waters and groundwater are considered to potentially impacted by ammonia and sulphates.

It should be noted that Fairhurst only scheduled a single sample of Made Ground for an asbestos screen and no asbestos was detected in this single sample.

Fairhurst recommended that during the construction ongoing monitoring should be carried out to characterise groundwater contamination it is not known whether this addition groundwater monitoring took place.

The Fairhurst report made no assessment of ground stability due to historical underground mining at the site.

4. ENVIRONMENTAL RISK ASSESSMENT

4.1 Background

This Risk Assessment consists of an appraisal of the contaminant-pathway-receptor ‘contaminant linkages' which is central to the approach used to determine the existence of ‘contaminated land' according to the definition set out under Part 2A of the Environmental Protection Act 1990. For a risk to exist (under Part 2A), all three of the following components must be present to facilitate a potential 'pollutant linkage'.

- **Contaminant** referring to the source of contamination (Hazard).
- **Pathway** for the contaminant to move/migrate to receptor(s).
- **Receptor** (Target) that could be affected by the contaminant(s).

Receptors include human beings, other living organisms, crops, controlled waters and buildings / structures. The assessment includes a qualitative review for the ‘significant possibility of significant harm’ (SPOSH). The mere presence of a contaminant source / hazard at a site does not mean that there will necessarily be attendant risks or that the site will be designated as 'contaminated land'. For further details see Appendix A.

In addition, the assessment includes consideration of redevelopment constraints, the site’s ‘suitability for use’ and the perception by any future purchasers regarding the potential impact on investment value/saleability.

The Risk Assessment comprises:

- A summary of current and historical land use and environmental sensitivity information demonstrated as a tabular Conceptual Model with Contaminant, Pathway and Receptor components (in accordance with Model Procedures for the Management of Land Contamination’ - Contaminated Land Report (CLR) 11).
- An assessment of Overall Risk. This risk is assessed in relation to ‘Ground Contamination’ and ‘Other Environmental Issues’.
- Details of notable environmental issues and key operational issues (outside ground contamination aspects).

The assessment aims to determine the potential level of risk associate with different sources and receptors, based on the likelihood of the contaminant to be present, whether a pathway exists and the sensitivity of the receptors. As part of the assessment the potential risks to receptors for potential source is given one of the following classifications:

- **Low risk** - it is considered unlikely that issues within the category will give rise to significant harm or a liability/cost for the owner of the site.
- **Moderate risk** - it is possible, but not certain that issues within the category will give rise to significant harm or a liability/cost for the owner of the site.
- **High risk** - there is a high potential that issues within the category will give rise to significant harm or a liability/cost for the owner of the site.

4.2 Conceptual Model Summary

Potential Sources	Considered Pathways	Potential Receptors	Risk Assessment
On Site The site is currently a waste recycling and recovery centre, which stores, segregates and repackages wastes. . There is a fuel tank within the north eastern corner of the site which is situated in a building historically associated with the ink works on site. There is evidence of a second bunded area to the south of this building which potentially historical housed a second tank. Ad blue tanks are stored to the south of the western buildings. Historically, the site was occupied by a bronze works, with the foundry processes occurring in the western part of the site and ink works in the east. Previous to this the site was occupied by an Iron Works with associated reservoir. There is the potential that use of the site has generated a wide range of soil and groundwater contamination including: • Metals, • PAHs, • Acids and solvents; • Cyanide and thiocyanate; • Inks and dyes • Petroleum Hydrocarbons, • Asbestos	**Human Health** Dermal contact Inhalation of soil dust Ingestion of soil dust Inhalation soil vapours	Current site users Future site users Construction/ maintenance personnel Off-site receptors	**MODERATE TO HIGH** There is the potential for contaminated soils to be present across the site associated with land uses, including the bronze works, iron works and ink works, landfills, infilled ground and railway lines. The previous site investigations undertaken at the site indicate that the Made Ground contains slag, ash and clinker materials. Soils have been found to contain metals, PAHs, asbestos and localised hydrocarbons. It should be noted that the previous investigations do not provide chemical analysis across the whole site area and the data is limited. The site has a long development history and there is the potential that historical and current buildings to have asbestos containing materials within their makeup. Therefore, there is the potential for asbestos containing materials to be present in the near surface soils. During normal use of the site the disturbance of soils will be limited thereby limiting the potential for site users to be exposed to contaminants. During redevelopment, soils will be disturbed which will increase the exposure risk relating to any soil contaminants including asbestos. The risks associated with soil and groundwater contamination will need to be managed during the redevelopment. At present, the potential risk to post-development site users cannot be quantified. A detailed site investigation and risk assessments should be undertaken prior to redevelopment. Based on the information presented within this report, the potential risk to human health receptors is considered to be **Moderate to High.**
	Controlled Waters Leaching of mobile contaminants from made ground. Vertical and lateral migration of mobile contaminants in permeable strata. Migration along subsurface structures.	Shallow groundwater (made ground) Secondary Undifferentiated Aquifer (Glacial Till) Secondary A Aquifer (Pennine Lower Coal Measures, Old Lawrence Rock and Coal Seam)	**MODERATE TO HIGH** Based on the historical information and the BGS mapping it is considered that the site is underlain by Made Ground which in turn is underlain by cohesive strata associated with the Glacial Till. There is the potential for granular deposits to be present as bands. The Made Ground on site is likely to be of variable permeability and where it is granular in nature it may potential have a high permeably. The underlying cohesive superficial deposits will have a low permeability, any sand and gravel lenses will have a high permeability. The underlying bedrock is Mudstone which weathers

Potential Sources	Considered Pathways	Potential Receptors	Risk Assessment
• Ground gases (methane and carbon dioxide). **Off Site** The railway lines running along the western site boundary have been present since the earliest mapping. Land immediately to the north and the south of the site includes historical excavations, clay pits and quarries which were subsequently infilled. The landfill to the site is a licenced waste management facility. Land use in the near vicinity of the site has had a long and varied industrial use, including brick works, paper mill, colliery, depot, works, electricity works, and sewage works. There are records of three historical landfill sites in close proximity and records of several waste treatment sites within close proximity. Potential contaminants include: • Metals, • Sulphate, • PAHs, • Petroleum Hydrocarbons, • Asbestos • PCBs • Ground gases (methane and carbon dioxide).		Unnamed stream – tributary to Davy Field Brook immediately north of the site Davyfield Brook (260m N) River Darwen (350m W)	to a clay therefore there is the potential for shallow bedrock to be present as a cohesive layer. The presence of cohesive strata potentially limit downward migration of mobile contaminants. Groundwater is considered to be present at shallow depths across the site, sitting within the Made Ground. It is anticipated that any shallow groundwater will flow towards the northwest, toward the River Darwen and the Davy Field Brook. The underlying Pennine Lower Coal Measures strata consist of mudstone, sandstone and coal seams, there is a potential for secondary permeability to be present where underlain coal seams have been mined. The Pennine Lower Coal Measures are not considered to be a highly sensitive receptor as the strata has a long history of mining activity in the vicinity of the site. There is an interceptor located in the north of the site, which discharges into the unnamed brook to the north. This brook in turn flows into Davy Field Brook to the north. This interceptor has been present on site since its former use as a bronze works and represents a potential pathway for contamination to surface waters. Based on the information presented within this report, the potential risk to controlled waters receptors is considered to be **Moderate to High.**
	Infrastructure Direct contact with fill or contaminated soils Migration of ground gas	Current building structures Future building structures Underground utility services Off-site structures	**MODERATE** There is the potential for Made Ground, locally of significant thickness, to be present across the site area, particularly in the area of the former reservoir. There are records of several landfills in the immediate vicinity of the site. Putrescible and organic materials are a potential source for ground gas. There is the potential that shallow soils may locally contain concentrations of petroleum hydrocarbons and PAHs which may potentially permeate plastic water supply pipes The Made Ground and superficial deposits may contain sulphates which would need to be considered when assessing for concrete classification. Based on the information present within this risk assessment, the potential risk to infrastructure is considered to be **Moderate**.

4.3 Other Environmental Issues

Environmental Issues:
Given the age of the building, it is possible that asbestos containing material is present within the building fabric. Under current legislation (The Control of Asbestos Regulations 2012 and HSE Guidance Note HSG264), any property where asbestos-containing materials may be present, legally requires an asbestos management plan (AMP) and should be recorded in an asbestos register. Given the proposed redevelopment of the site, a formal Demolition Asbestos Survey should also be conducted prior to any demolition work commencing. All tanks and interceptors will require decommissioning as part of the enabling works, certificates from such works will need to be held in the site health and safety file and provided as part of the verification report. The former footprint of the previous buildings on site are still present. It is not known whether any basements where present associated with these. Anecdotal evidence suggests that underground tunnels and pipe runs may be present. There remains a potential for underground structures and void to be present beneath the site. It is recommended the potential presence of the tunnels/pipe lines is investigated. It is recommended that a drainage survey is undertaken prior to the redevelopment to locate all potential surface water and foul water drains and the location of any interceptor tanks. There is the potential for hydrocarbon contamination to be present around the drainage runs and interceptor tanks. This should be taken during redevelopment to remove the drainage runs and to identify any potentially impacted soils. RPS recommends undertaking an intrusive environmental ground investigation to establish the nature, extent and implications of any ground contamination beneath the site. The scope should be confirmed with the Local Authority Environmental Health Officer prior to works commencing. It is envisaged that the works would be completed under a condition attached to any planning approval granted for the proposed change in use of the site. The site is located in an area that has been subject to infilling. It would therefore be prudent to consider the potential for geotechnical / structural issues associated with the stability of the proposed buildings and infrastructure.

5. PRELIMINARY GEOTECHNICAL RISK ASSESSMENT

5.1 Introduction

It is understood that the site is to be redeveloped as an Energy from Waste site, as shown on the proposed shown in figure 3. It is understood that the proposed building will include a bunker which will be excavated below ground and a chimney stack.

5.2 Preliminary Geotechnical Risk Register

Table 18 summarises the potential geotechnical hazards associated with the development. Providing an assessment of whether the site is likely to be affected by the hazard and the possible consequences an engineering consideration.

Table 18: Preliminary Geotechnical Risk Register

Hazard Description	Potential for hazard to be present / affect the site?	Comments / possible engineering requirements where hazard present
Sudden lateral / vertical changes is ground conditions	High	The available BGS information indicates that the ground conditions across the site are likely to be variable. Made Ground is indicated as been present across the majority of the site area. This is underlain by Glacial Till which in turn is underlain by Pennine Lower Coal Measures and Old Lawrence Rock. The historical site investigations reviewed indicate that the depth and composition of the Made Ground across the site vary greatly. Variation in the nature and distribution of soils may result in excessive differential and total settlement.
Deeper pockets of Made Ground	High	Based on the previous site investigation and given the long industrial history of the site the layer of Made Ground is known to be present across the site to a variable thickness. There is a potential for deeper pockets of Made Ground to be present across the site. Made Ground on site has the potential for uncontrolled settlement which could results in excessive creep and differential and total settlement of buildings and infrastructure. Made Ground is not a suitable founding strata and any foundation will be required to penetrate the full thickness and found in competent underlying natural strata. There is a potential for buried obstructions to be present within any Made Ground associated with the historical land uses.
Expansion of the Made Ground	High	Historical report indicate that slag materials present within the Made Ground have the potential to be susceptible to expansion. Expansion of slag within the Made Ground has the potential to cause heave and uplift of floor slabs across the site. The volume of slag is unknown at this time and will need to be confirmed by intrusive investigation.
Ground dissolution features / natural cavities	Low	Ground conditions beneath the site are not consistent with this feature.

Hazard Description	Potential for hazard to be present / affect the site?	Comments / possible engineering requirements where hazard present
Highly compressible / low bearing capacity soils, (including soft clay)	Moderate	There is a potential for pockets of low strength clays to be present within the Glacial Till deposits and completely weathered Pennine Coal Measures Mudstones presence beneath the Made Ground across the site the site These low strength strata could result in excessive differential and total settlement of buildings and infrastructure.
Shrinking and swelling clays	Moderate	The near surface soils may be of moderate volume change potential (this should be confirmed via geotechnical laboratory testing), which could result in settlement / heave of foundations and earthworks in particular when located within the influence of trees and vegetation. To mitigate the effects of potential heave or shrinkage, formation levels within these strata should be protected and their exposure time kept to a minimum prior to casting and buried concrete.
Concrete classification	Moderate	The superficial deposits and the Made Ground may contain sulphate bearing soils. Previous site investigation undertaken at the site indicate that Made Ground to have a Design Sulphate Class of DS-2 and a ACEC Class of AC-2. However, it should be noted this investigation was limited to the north east of the site only. Chemical laboratory analysis should be undertaken on soil samples collected from each strata encountered beneath the site to determine a Design Sulphate Class and an Aggressive Chemical Environment for Concrete (ACEC) Classification for proposed buried structures as part of the development.
Underground mining	Moderate to High	The site is in an area of known underground mining. A colliery is shown on historical mapping 100m to the south of the site. A Coal Seam (Dib Hole) is shown to truncate the southwest corner of the site. The Coal Authority report obtained for the site indicates there are no records of past underground mining and there are no probably unrecorded shallow workings. There is a single mine entry located in the south of the site for coal extraction. The Coal Authority have no records of any treatment which have been carried out on the shaft. On this basis, the site is considered to be at potential risk form mining related subsidence and mining related ground investigation works may be required.
Seismic activity	Low	The Eurocode 8 seismic hazard zoning maps for the UK (Musson and Sargeant, 2007) indicate that horizontal Peak Ground Acceleration (PGA) values with 10% probability of being exceeded in 50 years (475 year return period) are between 0.00g and 0.02g, which is considered very low.
High groundwater table	Low to Moderate	There is potential for shallow ground to be present beneath the site, with perched ground water present within the Made Ground and any sand bands within Glacial Till. Previous site investigation reviewed indicate the presence of shallow groundwater across the site. Groundwater control/exclusion measures may be required to enable formation of any excavations required at the site depending on localised conditions. This may include pump and pumping, dewatering or sheet piled cofferdams in extreme circumstances However, requirements for this should be confirmed via intrusive investigation and subsequent groundwater level monitoring.

Hazard Description	Potential for hazard to be present / affect the site?	Comments / possible engineering requirements where hazard present
Radon	Low	According to the Indicative Atlas of Radon in England and Wales the site is located in an area where less than 1% of properties are above the radon action level and no radon protection measures are required.
Slope stability / retaining structures	Moderate	There are a number of embankments and slopes in the south are the site, with land to the south continuing to slope off site. Land to the east and north of the site slopes toward the north. No evidence of instability on any of the slopes was noted during the site inspection. The composition of the materials making up the slope or the condition of the small retaining structure is unknown. A retaining wall is present to the south of the site, this is of brick and stone construction. The wall appears to be in good condition with no cracks visible. The existing slopes and level differences along the southern boundary are anticipated to be generally retained. Deep storage pits will be required as part of the Energy from Waste facility. These will require an embedded retaining wall solution which should be designed based on site specific geotechnical information.

6. CONCLUSIONS & RECOMMENDATIONS

6.1 Conclusions

The site is occupied by a waste recycling and recovery centre. This concrete is in poor condition, with extensive cracking and broken areas. Land in the east is vegetated with a large pond on site.

Historically, the site was occupied by an Iron works with associated, excavations, heaps, tramways and a reservoir on site. By 1950s the buildings and infrastructure have all been removed, although the reservoir is still shown up to the 1970 plan. In the 1970s a bronze works and ink works were developed in the southern part of the site. On the 2014 plan buildings in the south of the site are shown to have been removed.

Land use in the vicinity of the site has had a long and varied industrial use, with uses including gravel pits, quarries, refuse tips, brick works, paper mill, colliery, depot, works, electricity works, and sewage works.

Based on the historical information and the BGS mapping it is considered that the site is underlain by Made Ground which in turn is underlain by Glacial Till. These are underlain by strata of the Pennine Lower Coal Measures Formation.

The site is in an area of known underground coal mining, a Coal Authority Consultant Report indicates that there are no records of past undergrounds mining but a workable seam is understood to outcrop on site.

There is an interceptor in the north of the site, which discharges into the unnamed brook in the north. It is understood that the discharge is permitted and that the interceptor was present as part of the previous site uses.

Made Ground present across the site, including that associated with an infilled reservoir and historical landfilling may contain putrescible material which is a potential source of ground gases. There are two historical landfill sites, one immediately to the south and one immediately north of the site, which are a potential off site source of ground gases.

Based on the findings of the desk-based study and the review of the previous reports there is the potential for ground contamination to be present across the site, which may pose a risk to human health, controlled waters and the built environment. Therefore, it is recommended that an intrusive investigation and risk assessments for human health and controlled waters are carried out across the site. There is a potential that remediation works will be required.

Previous report indicates that there is the potential for the slag present within the made ground to be expansive, if this was to occur could there is potential for impact on the proposed foundations and floor slabs causing uplift.

6.2 Recommendations

RPS recommends undertaking an intrusive environmental ground investigation to establish the nature, extent and implications of any ground contamination beneath the site. Scope to be confirmed with the Local Authority Environmental Health Officer prior to works commencing. It is envisaged that the works would be completed under a condition attached to any planning approval granted for the proposed change in use of the site.

RPS considers it prudent to undertake a series of deeper rotary boreholes on site to rule out the presence of any unrecorded coal mine workings.

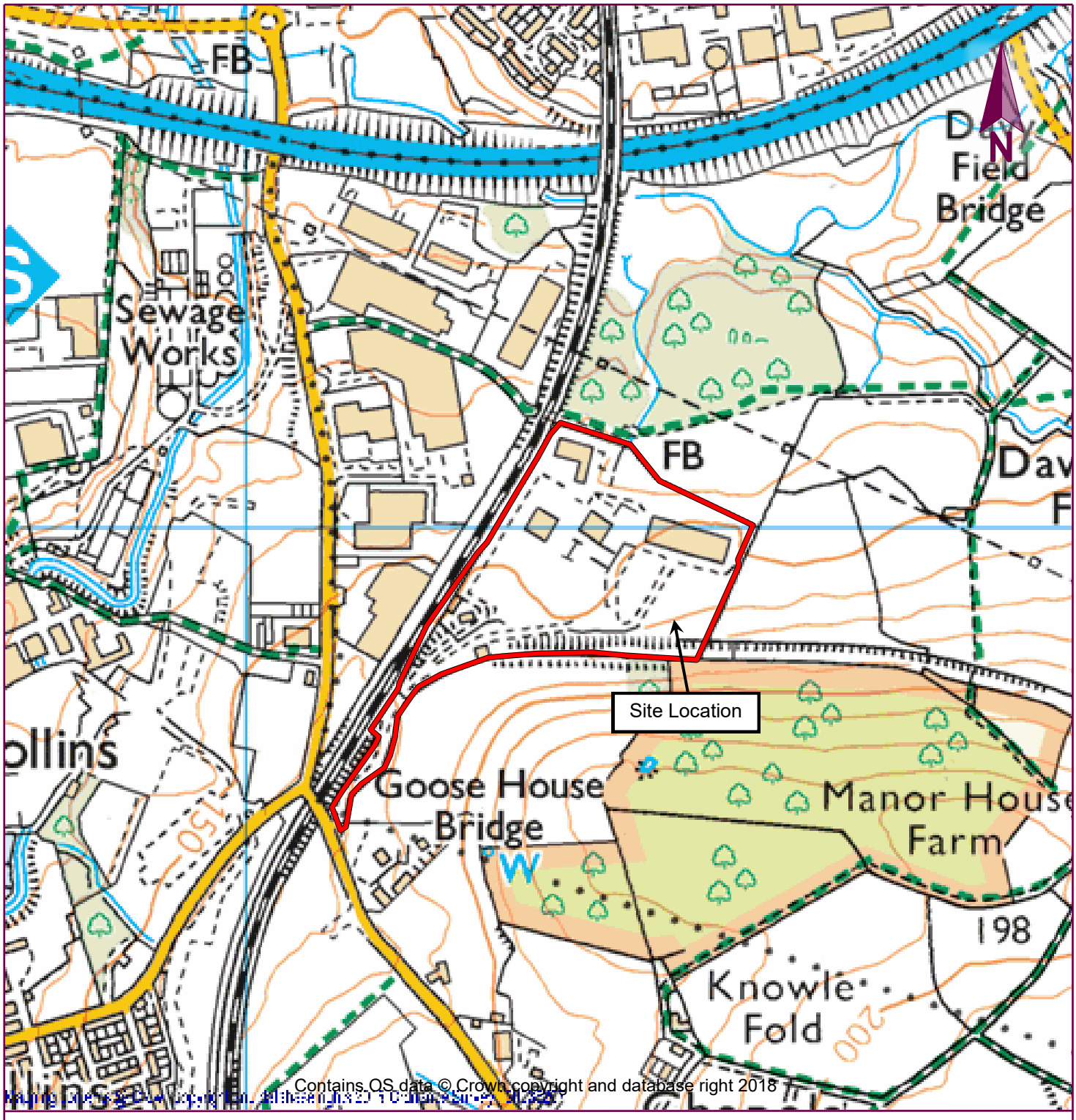
Given the proposed redevelopment of the site, a formal Demolition Asbestos Survey should also be conducted prior to any demolition work commencing.

All tanks and interceptors on site should be appropriately decommissioned as part of the enabling works, certificates from such works will need to be held in the site health and safety file and provided as part of the verification report.

It is recommended that a drainage survey is undertaken prior to the redevelopment to locate all potential surface water and foul water drains and the location of any additional interceptor tanks. There is the potential for hydrocarbon contamination to be present around the drainage runs and interceptor tanks. Care should be taken during redevelopment to remove the drainage runs and to identify any potentially impacted soils.

FIGURE 1

Site Location Plan



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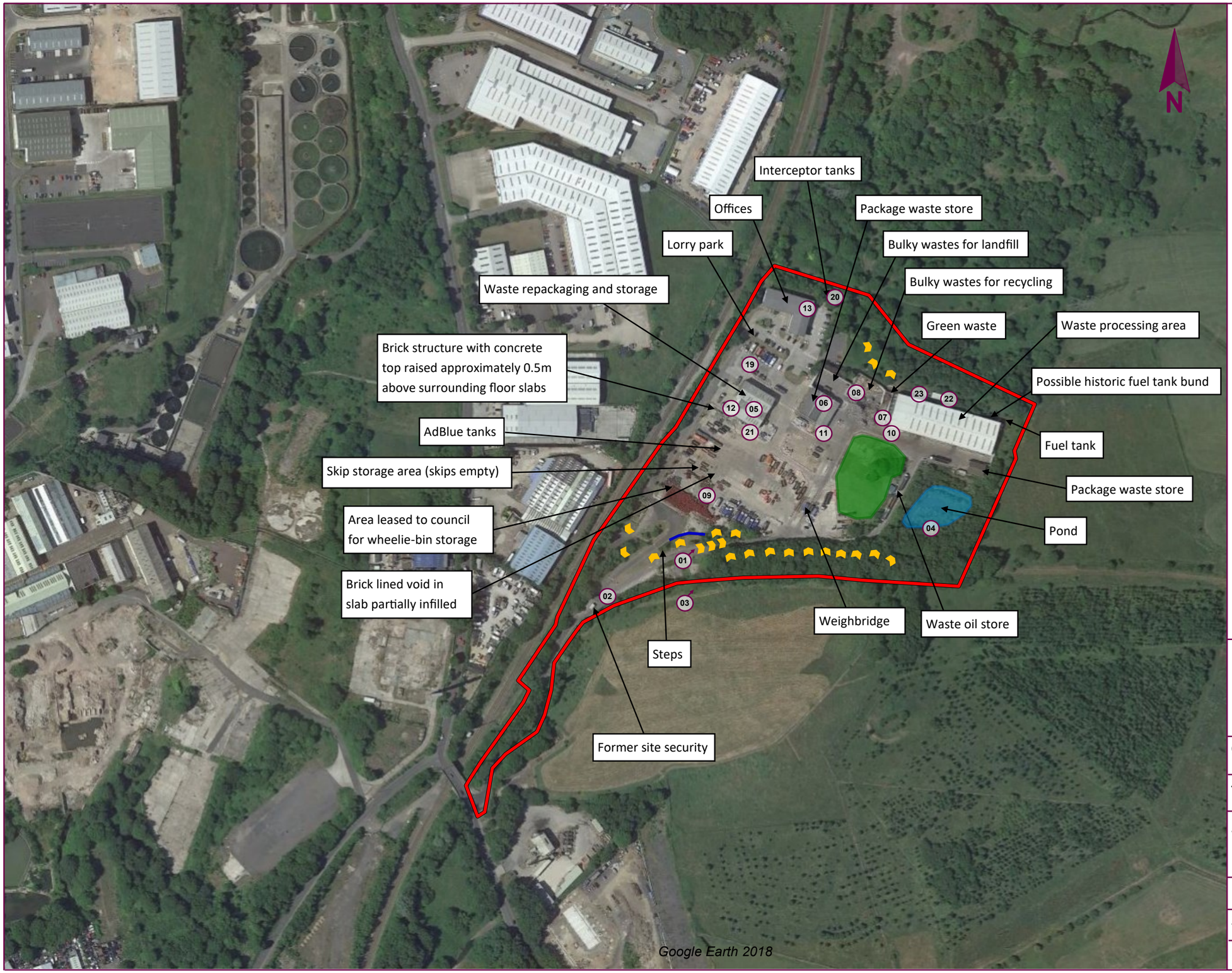
Client: SUEZ	Date: January 2019	Scale: NTS
Project: Darwen Environmental Recycling Facility	Figure: 01	Rev: 00
Title: Site Location Plan	Job Ref: RCEI68589	

FIGURE 2

Site Features Plan



Key

- 00 — Site inspection photo number
- Development boundary
- Vegetated area
- Pond
- Retaining wall
- Location and direction of downward slope

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Client: SUEZ

Title: Site Features Plan

Site: Darwen Environmental Recycling Facility

Date: January 2019

Scale: NTS	Size: A3	
Ref: RCEI68589	Fig: 02	Rev: 00

FIGURE 3

Proposed Development Plan

Notes

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2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
3. This drawing should be read in conjunction with all other relevant drawings and specifications.

Legend

- Landscaped Area
- Existing Native Trees and Shrubs
- Existing Individual Trees
- New Native Trees and Shrubs
- Concrete
- Block Paving - Pedestrian / Personel / Staff / Visitors.
- Aggregate Crushed Stone
- Cycle Path

Rev	Description	By	Ckd	Date
P06	Disabled parking spaces reconfigured as per comments	ET	TFH	11/04/19
P05	Disabled parking spaces adjaent exisitng office revised to allow reverse parking only	PBR	TFH	03/04/19
P04	Drawing revised and reviewed in line with clients comments and requests	PBR	TFH	07/03/19
P03	Drawing revised and updated to reflect clients latest comments	PBR	TFH	01/02/19
P02	Amended as per comments from meeting on 11/01/19	ET	TFH	15/01/19
P01	Initial Issue	PBR	TFH	11/01/19

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Client: suez

Project: DERC

Title: Proposed Site Plan

Status	Scale	Date Created
Preliminary	As indicated@ A1	08/12/18

Task Team Manager	Information Author	Task Information Manager
TFH	PBR	TFH

Document Number
019508-RPS-SI-00-DR-A-5000
Project Code - Originator - Zone - Level - Type - Role - Drawing Number

RPS Project Number	Suitability	Revision
NK019508	S0	P06

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0m 20m 40m 60m 80m 100m

VISUAL SCALE 1:1000 @ A1

1 Proposed Site Plan
1 : 1000

APPENDIX A

Part 2A (The Contaminated Land Regime)

Contaminated Land Definition

Under Section 57 of the Environmental Act 1995, Part 2A was inserted into the Environmental Protection Act 1990 to include provisions for the management of contaminated land.

Subsequent regulations were first implemented in England in April 2000, Scotland in July 2000 and Wales in July 2001[1], providing a definition of 'contaminated land' and setting out the nature of liabilities that can be incurred by owners of contaminated land and groundwater.

According to the Act, contaminated land is defined as 'any land which appears to the local authority in whose area the land is situated to be in such a condition, by reason of substances in, on or under the land that:

a) Significant harm is being caused or there is a significant possibility of such harm being caused; or
b) significant pollution of controlled waters2 is being caused or there is a significant possibility of such pollution being caused3'

The guidance on determining whether a particular possibility is significant is based on the principles of risk assessment and in particular on considerations of the magnitude or consequences of the different types of significant harm caused. The term 'possibility of significant harm being caused' should be taken, as referring to a measure of the probability, or frequency, of the occurrence of circumstances that could lead to significant harm being caused.

The following situations are defined where harm is to be regarded as significant:

i. Chronic or acute toxic effect, serious injury or death to humans
ii. Irreversible or other adverse harm to the ecological system
iii. Substantial damage to, or failure of, buildings
iv. Disease, other physical damage or death of livestock or crops
v. The pollution of controlled waters[4].

With regard to radioactivity, contaminated land is defined as 'any land which appears to be in such a condition, by reason of substances in, on or under the land that harm is being caused, or there is a *significant possibility of such harm being caused*[5]'.

[1] In England by The Contaminated Land (England) Regulations 2000, updated by The Contaminated Land (England) (Amendment) Regulations 2012; in Scotland by The Contaminated Land (Scotland) Regulations 2000, updated by the Contaminated Land (Scotland) Regulations 2005; and in Wales by The Contaminated Land (Wales) Regulations 2001, updated by the Contaminated Land (Wales) Regulations 2006.

[2] In Scotland the term "controlled water" has been updated to "water environment" under the Contaminated Land (Scotland) Regulations 2005 in line with the Water Environment and Water Services (Scotland) Act 2003.

[3] The definition was amended in 2012 by implementation of the Water Act 2003.

[4] Groundwater in this context does not include waters within underground strata but above the saturated zone.

[5] The Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 and Contaminated Land (Wales)

The Risk Assessment Methodology

Risk assessment is the process of collating known information on a hazard or set of hazards in order to estimate actual or potential risks to receptors. The receptor may be humans, a water resource, a sensitive local ecosystem or future construction materials. Receptors can be connected with the hazard via one or several exposure pathways (e.g. the pathway of direct contact). Risks are generally managed by isolating or removing the hazard, isolating the receptor, or by intercepting the exposure pathway. Without the three essential components of a source (hazard), pathway and receptor, there can be no risk. Thus, the mere presence of a hazard at a site does not mean that there will necessarily be attendant risks.

The Risk Assessment

By considering where a viable pathway exists which connects a source with a receptor, this assessment will identify where pollutant linkages may exist. A pollutant linkage is the term used by the DEFRA in their standard procedure on risk assessment. If there is no pollutant linkage, then there is no risk. Therefore, only where a viable pollutant linkage is established does this assessment go on to consider the level of risk. Risk should be based on a consideration of both:

- The likelihood of an event (probability) - takes into account both the presence of the hazard and receptor and the integrity of the pathway.
- The severity of the potential consequence - takes into account both the potential severity of the hazard and the sensitivity of the receptor.

For further information please see the Contaminated Land section on the DEFRA website (www.defra.gov.uk).

Regulations 2006.

APPENDIX B

General Notes

1. A "desk study" means that no site visits have been carried out as any part thereof, unless otherwise specified.
2. This report provides available factual data for the site obtained only from the sources described in the text and related to the site on the basis of the location information provided by the Client.
3. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources.
4. The accuracy of maps cannot be guaranteed and it should be recognised that different conditions on site may have existed between and subsequent to the various map surveys.
5. No sampling or analysis has been undertaken in relation to this desk study.
6. Any borehole data from British Geological Survey sources is included on the basis that: "The British Geological Survey accept no responsibility for omissions or misinterpretation of the data from their Data Bank as this may be old or obtained from non-BGS sources and may not represent current interpretation".
7. Where any data supplied by the Client or from other sources, including that from previous site investigations, have been used it has been assumed that the information is correct. No responsibility can be accepted by RPS for inaccuracies in the data supplied by any other party.
8. This report is prepared and written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information, improved practices and changes in legislation may necessitate a re-interpretation of the report in whole or in part after its original submission.
9. The copyright in the written materials shall remain the property of the RPS Company but with a royalty-free perpetual licence to the Client deemed to be granted on payment in full to the RPS Company by the Client of the outstanding amounts.
10. The report is provided for sole use by the Client and is confidential to them, their professional advisors, no responsibility whatsoever for the contents of the report will be accepted to any person other than the Client. [Unless otherwise agreed]
11. These terms apply in addition to the RPS HSED "Standard Terms & Conditions" (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing. (In the event of a conflict between these terms and the said Standard Terms & Conditions the said Standard Terms & Conditions shall prevail.) In the absence of such a written contract the Standard Terms & Conditions will apply.

APPENDIX C

Site Photographs

Photo 1: Site roadway

Photo 2: Site entrance and former security

Photo 3: Site overview from the south

Photo 4: Pond

Photo 5: Recycling scheme bundles

Photo 6: Shredded waste piles

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Date: January 2019

Project: Darwen Environmental Recycling Facility

Appendix: C

Title: Site Inspection Photographs

Job Ref: RCEI68589

Photo 7: Waste bays, green waste

Photo 8: Waste bays, various waste

Photo 9: Wheelie bin storage

Photo 10: Warehouse in north east of site

Photo 11: Warehouse in centre of site

Photo 12: Warehouse in west of site

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Title: Site Inspection Photographs

Job Ref: RCEI68589

Photo 13: Springfield house in north of site

Photo 14: Hardstanding in poor condition

Photo 15: Hardstanding in poor condition

Photo 16: Standing water in voids

Photo 17: Former machinery runs

Photo 18: Brick lined sub-structure

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Appendix: C

Title: Site Inspection Photographs

Job Ref: RCEI68589

Photo 19: Lorry park hardstanding

Photo 20: Large interceptor tank in north of site

Photo 21: IBC and Adblue container

Photo 22: Building containing diesel tank

Photo 23: Brick bund adjoining north of building

Photo 24: Windblown or fly tipped wastes

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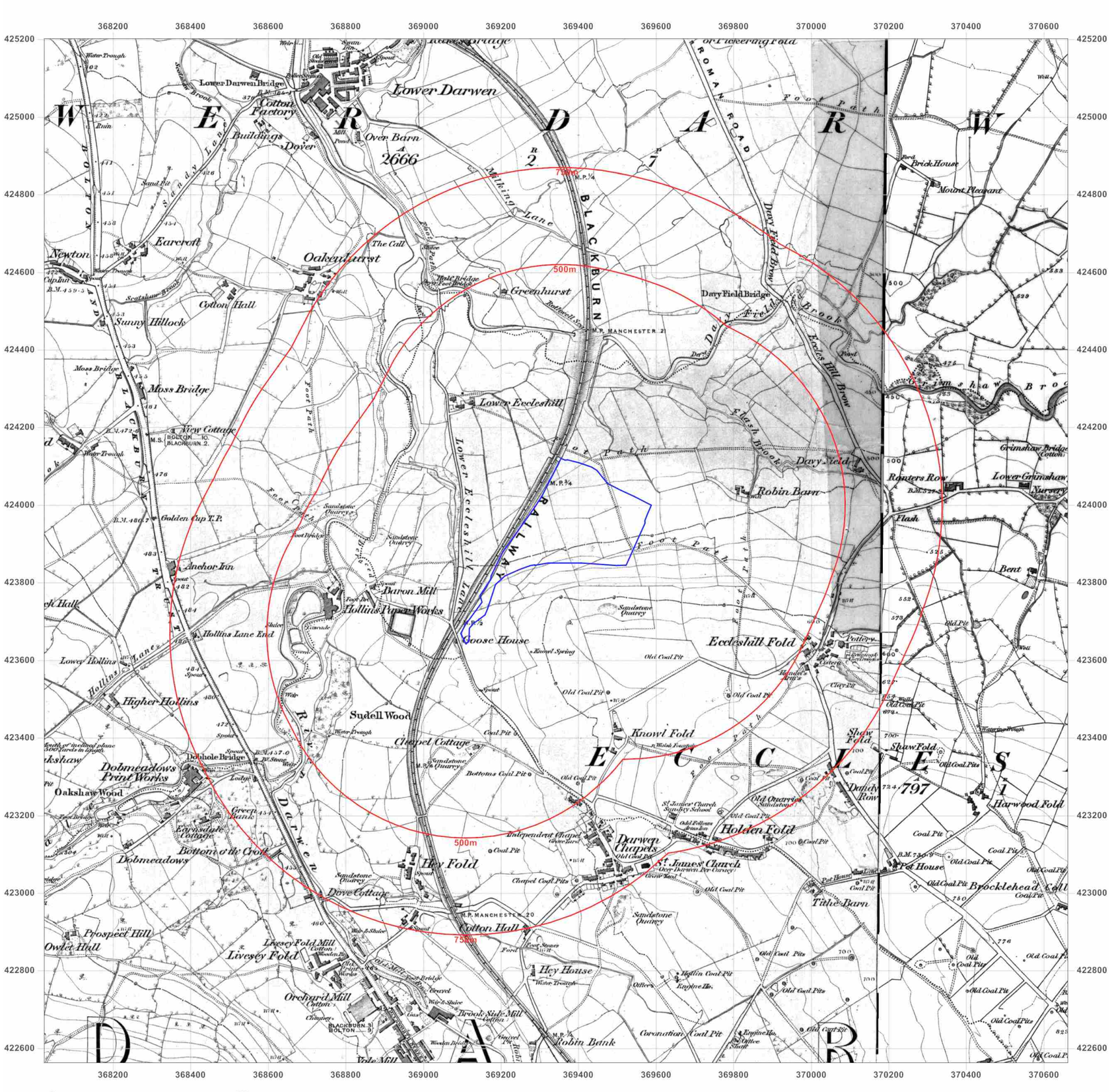
Appendix: C

Title: Site Inspection Photographs

Job Ref: RCEI68589

APPENDIX D

Historical Maps



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Site Details:

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Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: County Series

Map date: **1849**

Scale: 1:10,560

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Surveyed 1847
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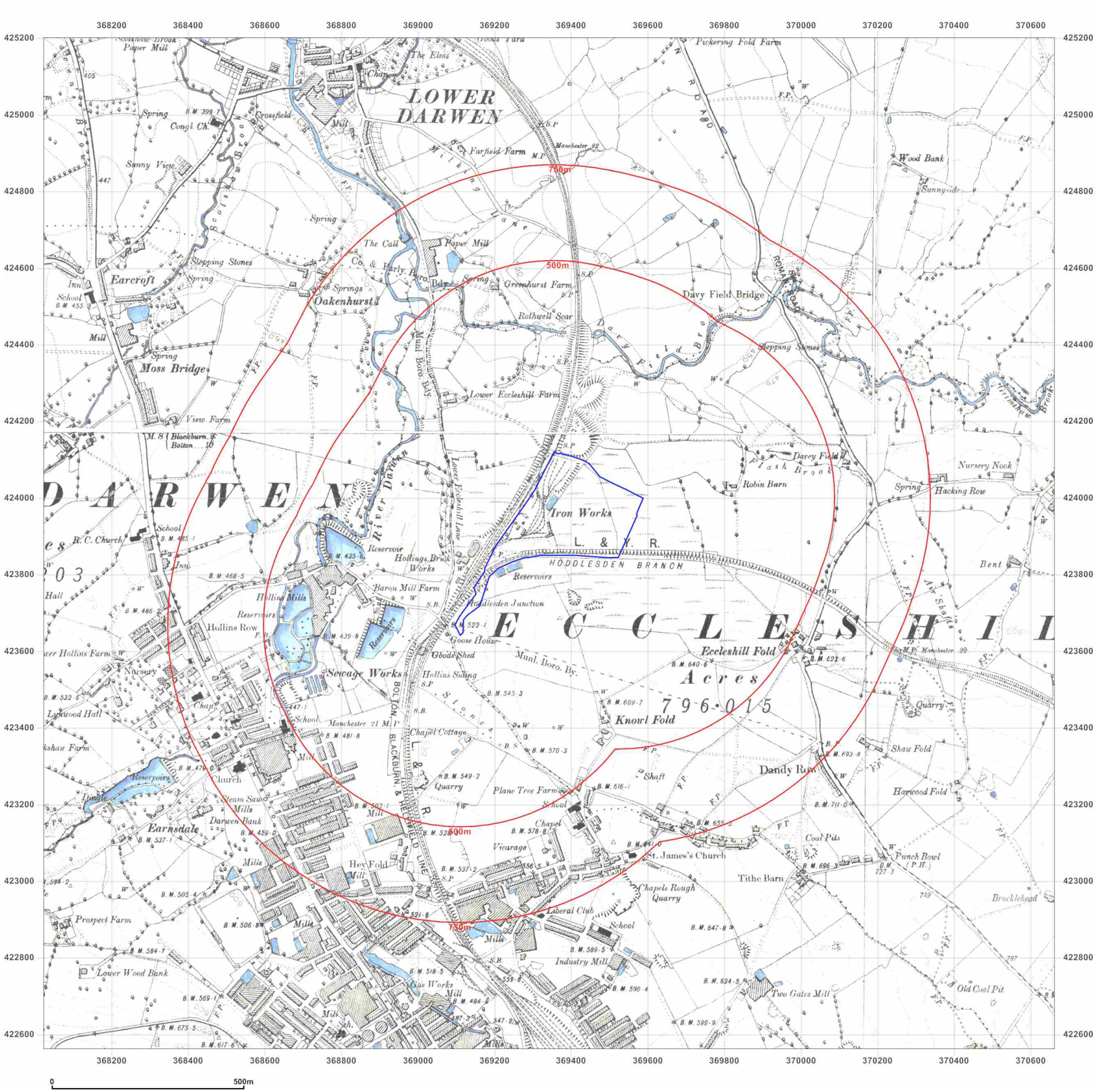

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Map Name: County Series

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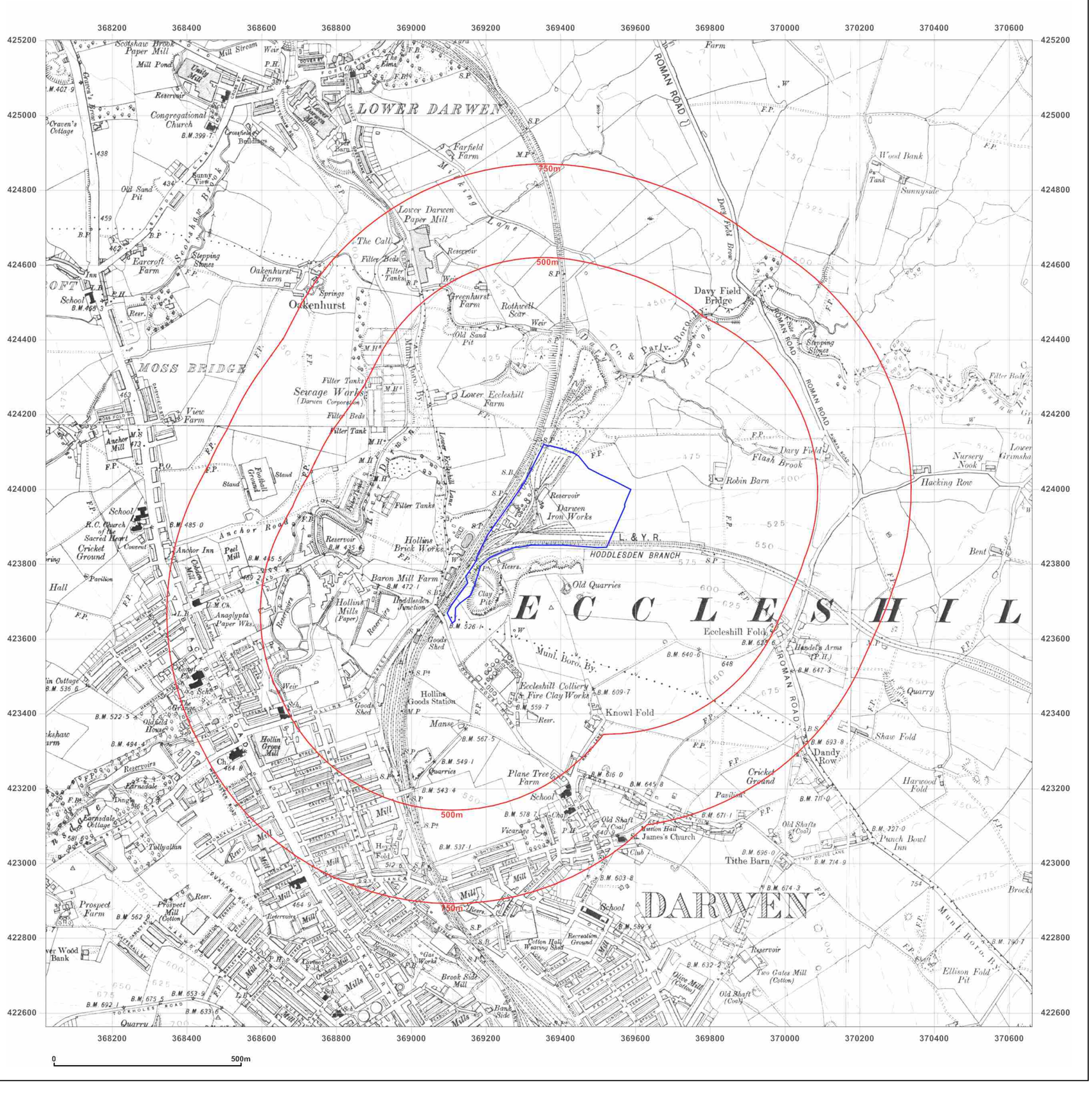

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Site Details:

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Client Ref: RCEI68589
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Grid Ref: 369341, 423881

Map Name: County Series

Map date: **1909-1910**

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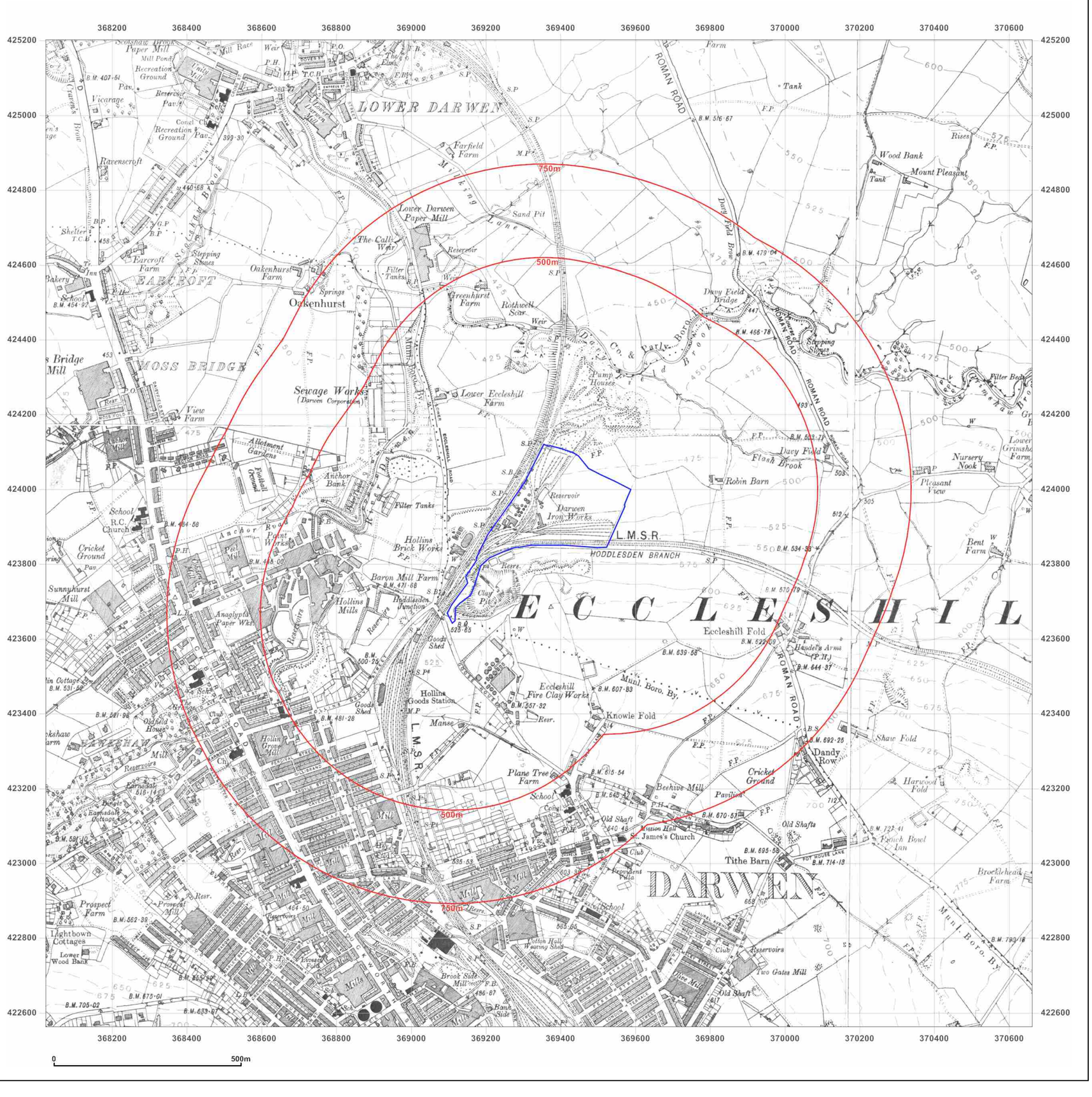

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Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: County Series

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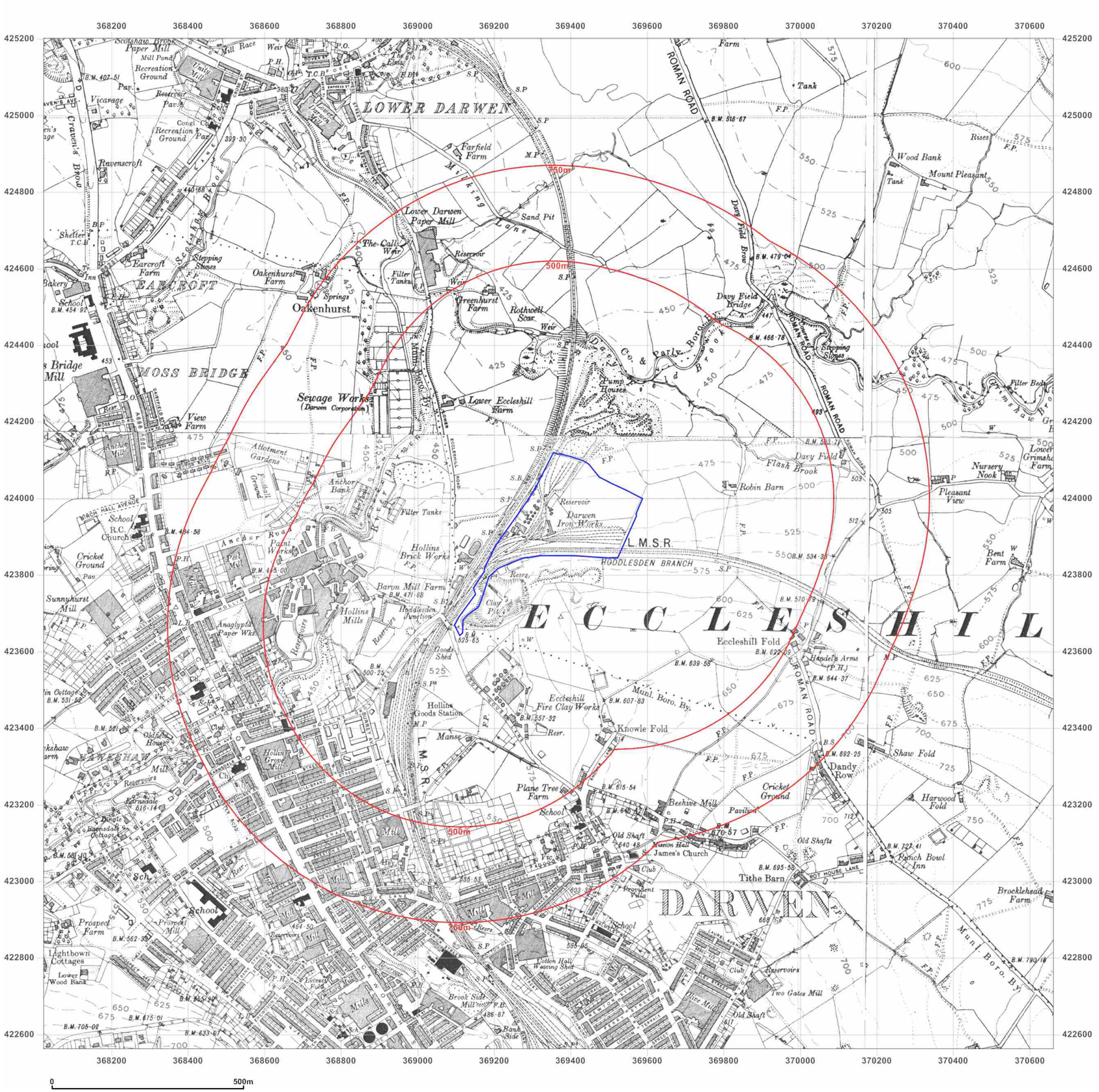

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Site Details:

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Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: County Series

Map date: **1938**

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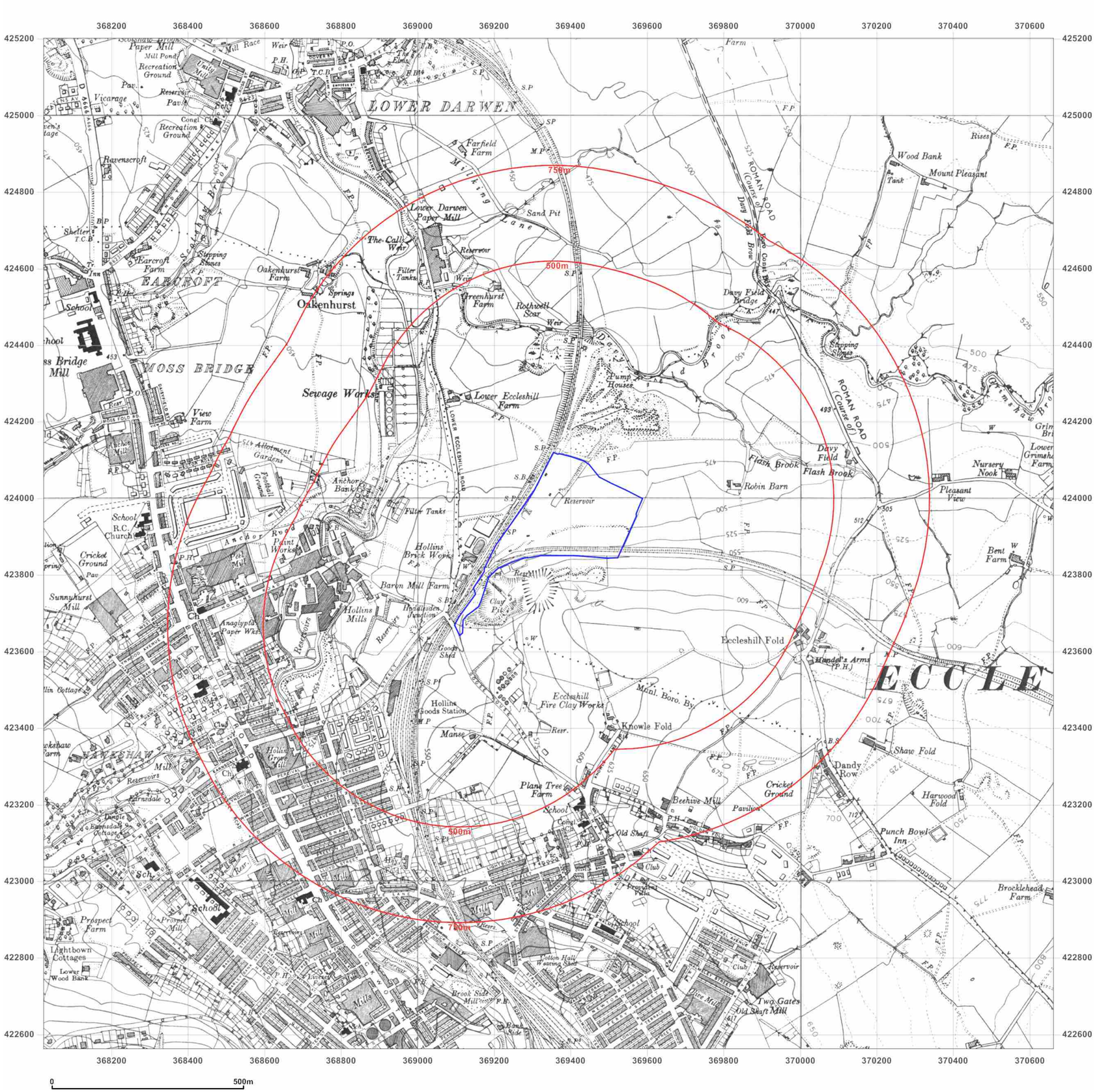

Groundsure INSIGHTS

Site Details:

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Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: Provisional

Map date: **1950-1951**

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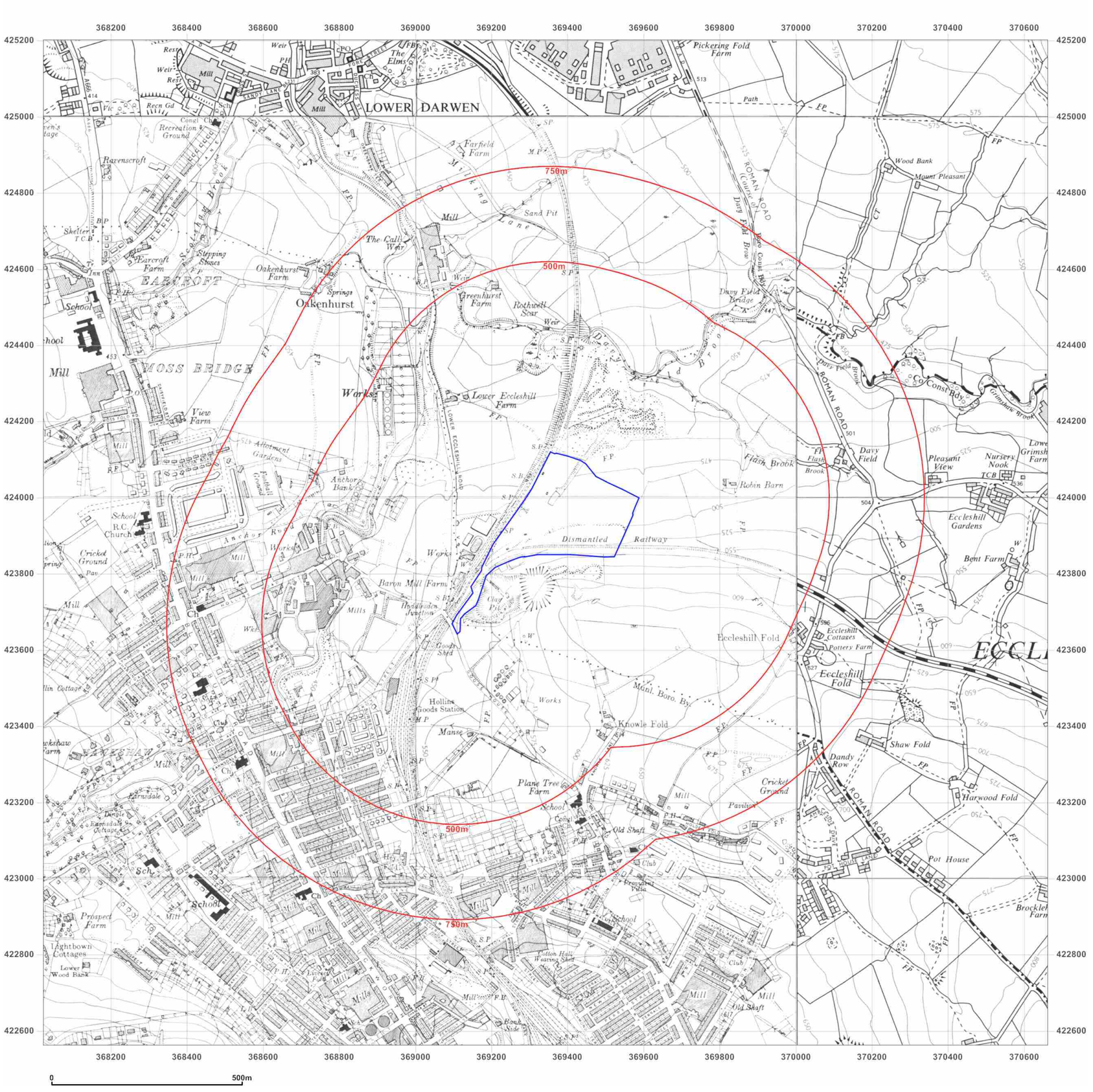

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Site Details:

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Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: Provisional

Map date: **1965-1967**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed N/A
Revised 1966
Edition N/A
Copyright 1956
Levelled N/A

Surveyed 1965
Revised 1965
Edition N/A
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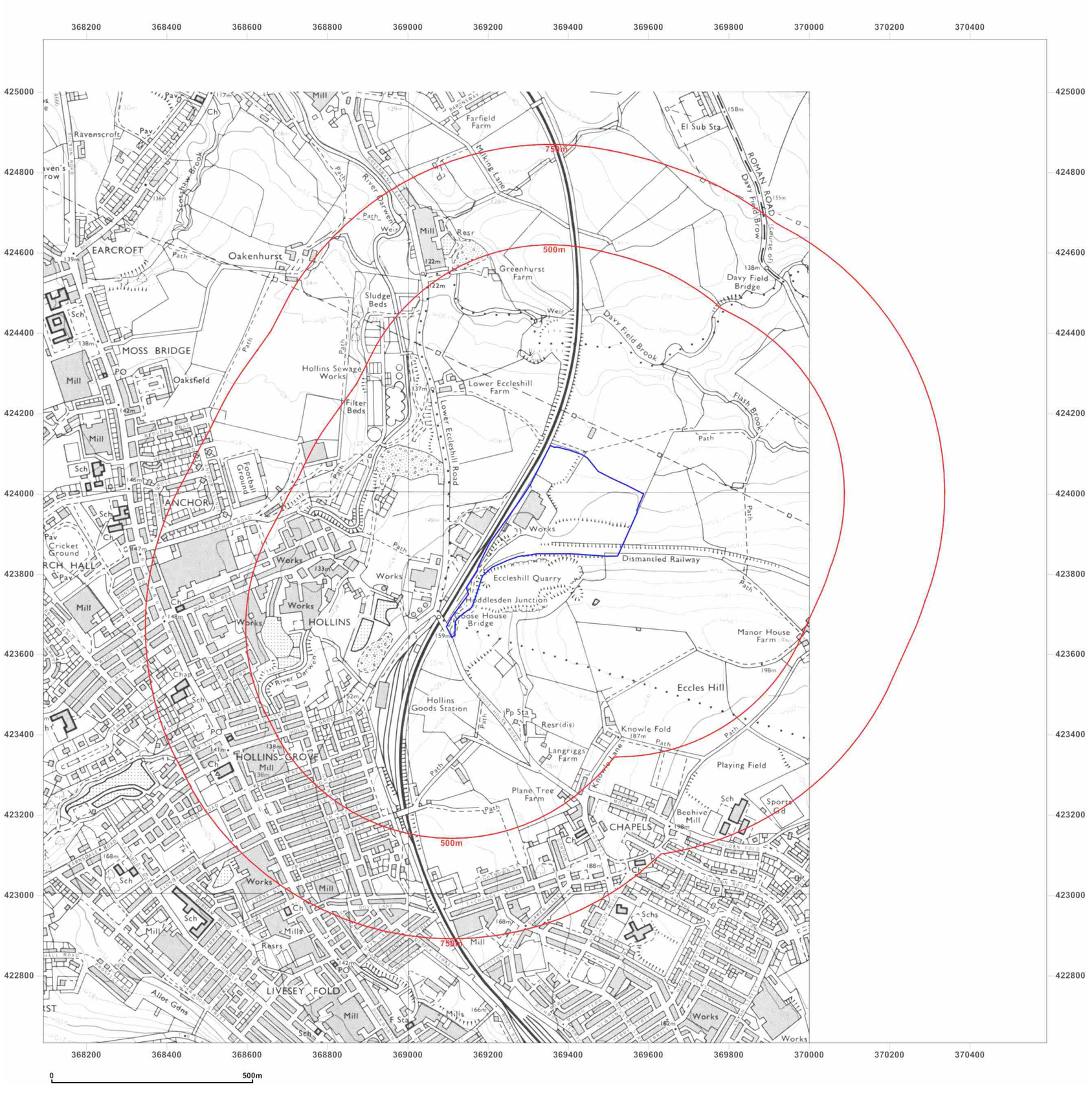

Groundsure INSIGHTS

Site Details:

DERF, Lower Eccleshill Road,
Darwen, BB3 0EH

Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: National Grid

Map date: **1970**

Scale: 1:10,000

Printed at: 1:10,000

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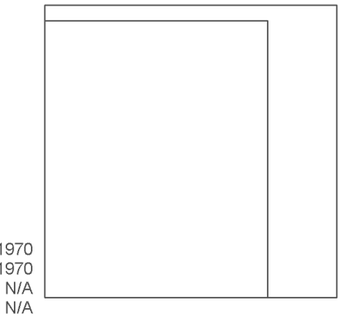
Surveyed 1970
Revised 1970
Edition N/A
Copyright N/A
Levelled N/A



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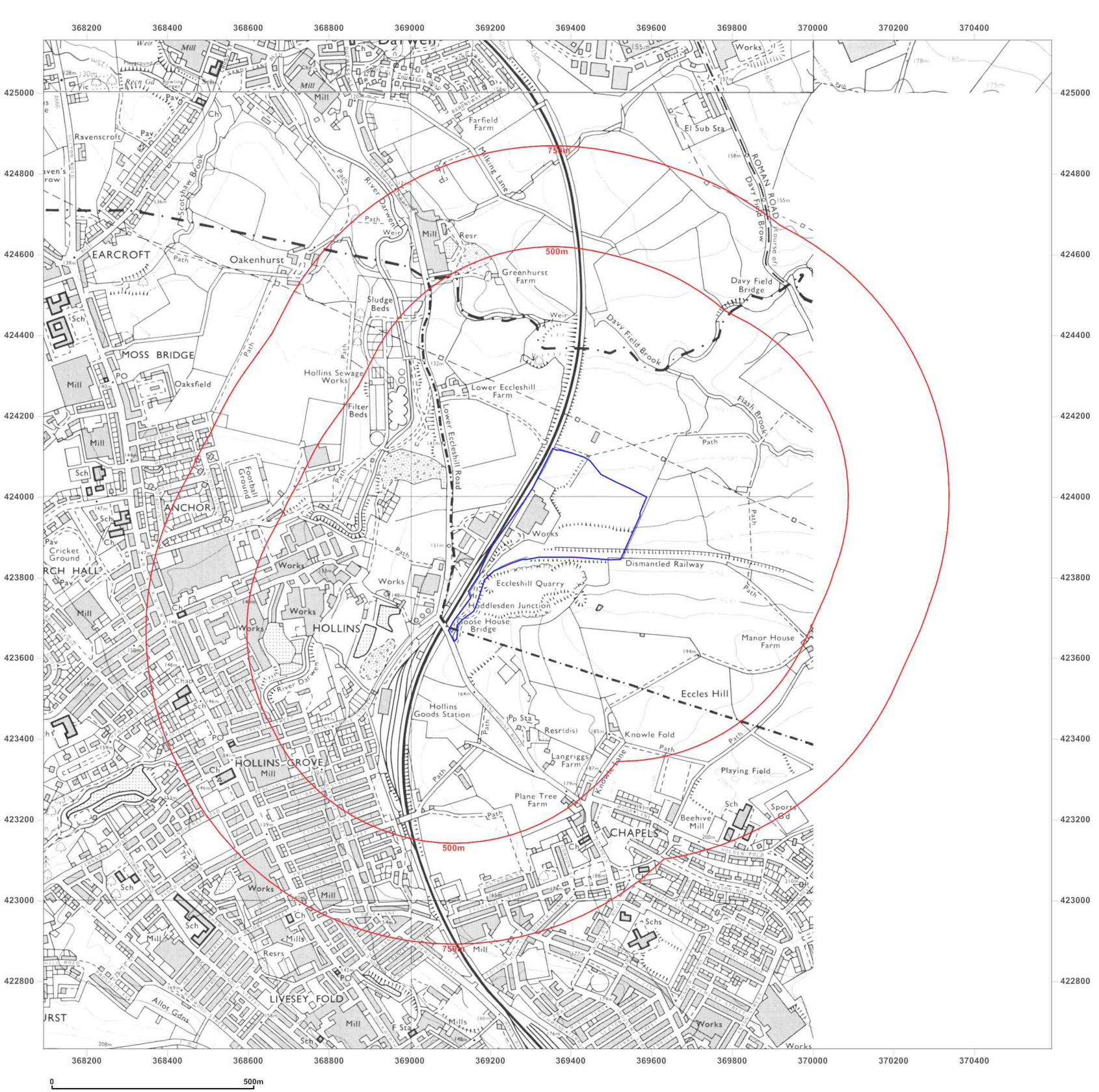

Groundsure INSIGHTS

Site Details:

DERF, Lower Eccleshill Road,
Darwen, BB3 0EH

Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: National Grid

Map date: **1970-1975**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1973
Revised 1974
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1975
Edition N/A
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Surveyed 1970
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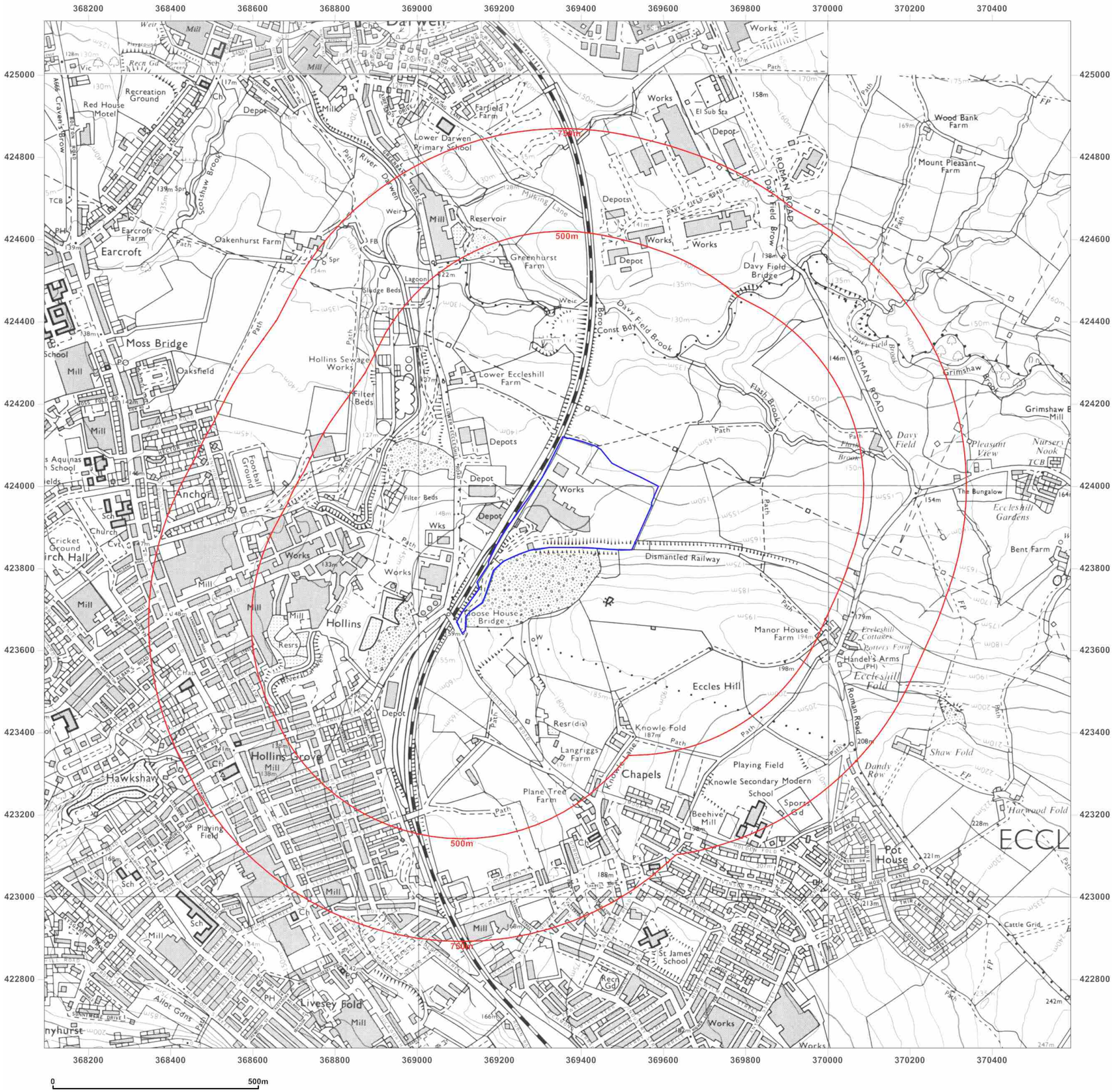

Groundsure INSIGHTS

Site Details:

DERF, Lower Eccleshill Road,
Darwen, BB3 0EH

Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: National Grid

Map date: **1980-1983**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1979
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1983
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1983
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Map legend available at:
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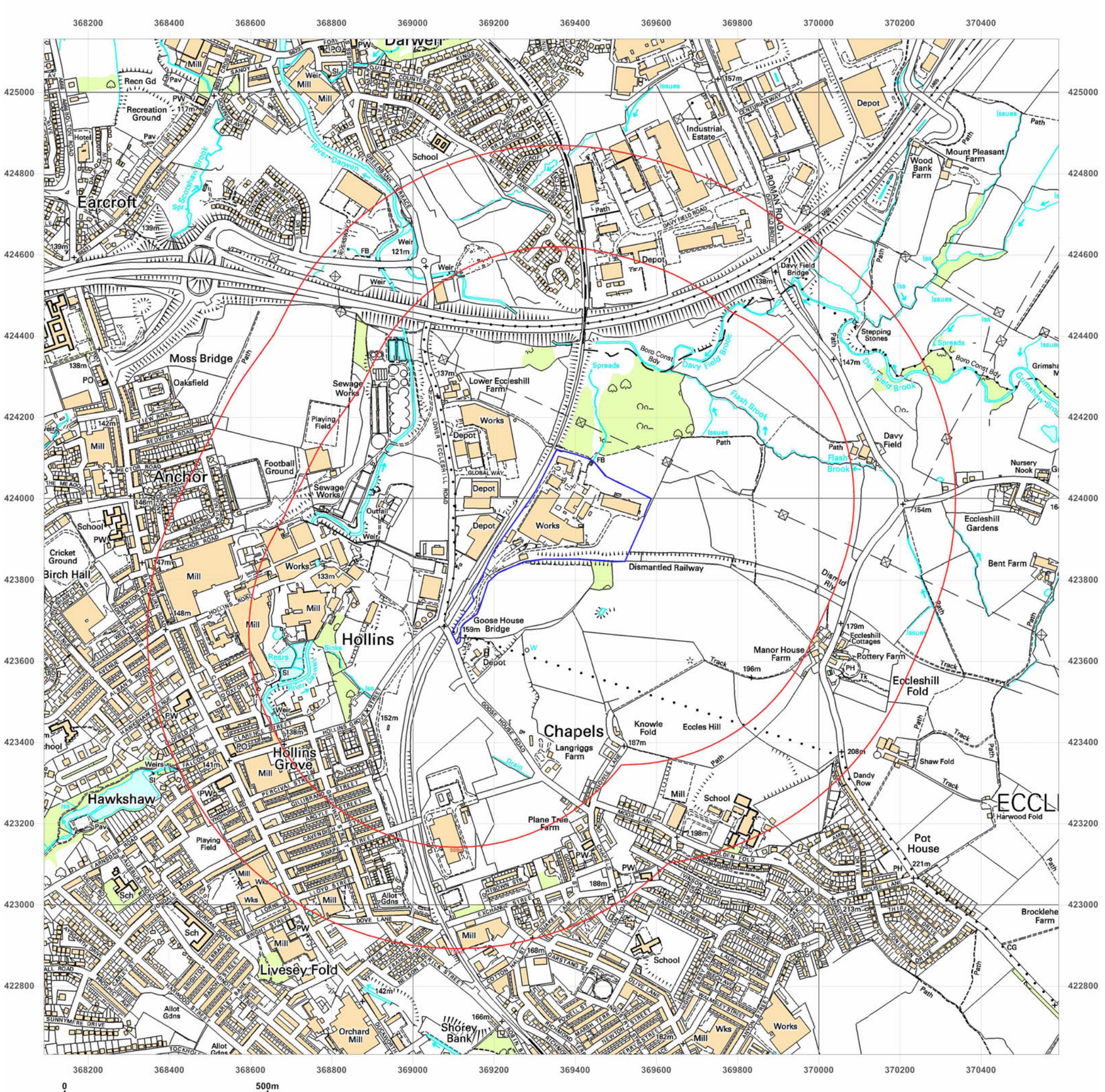

Groundsure INSIGHTS

Site Details:

DERF, Lower Eccleshill Road,
Darwen, BB3 0EH

Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: 1:10,000 Raster
Map date: **2002**
Scale: 1:10,000
Printed at: 1:10,000

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2002

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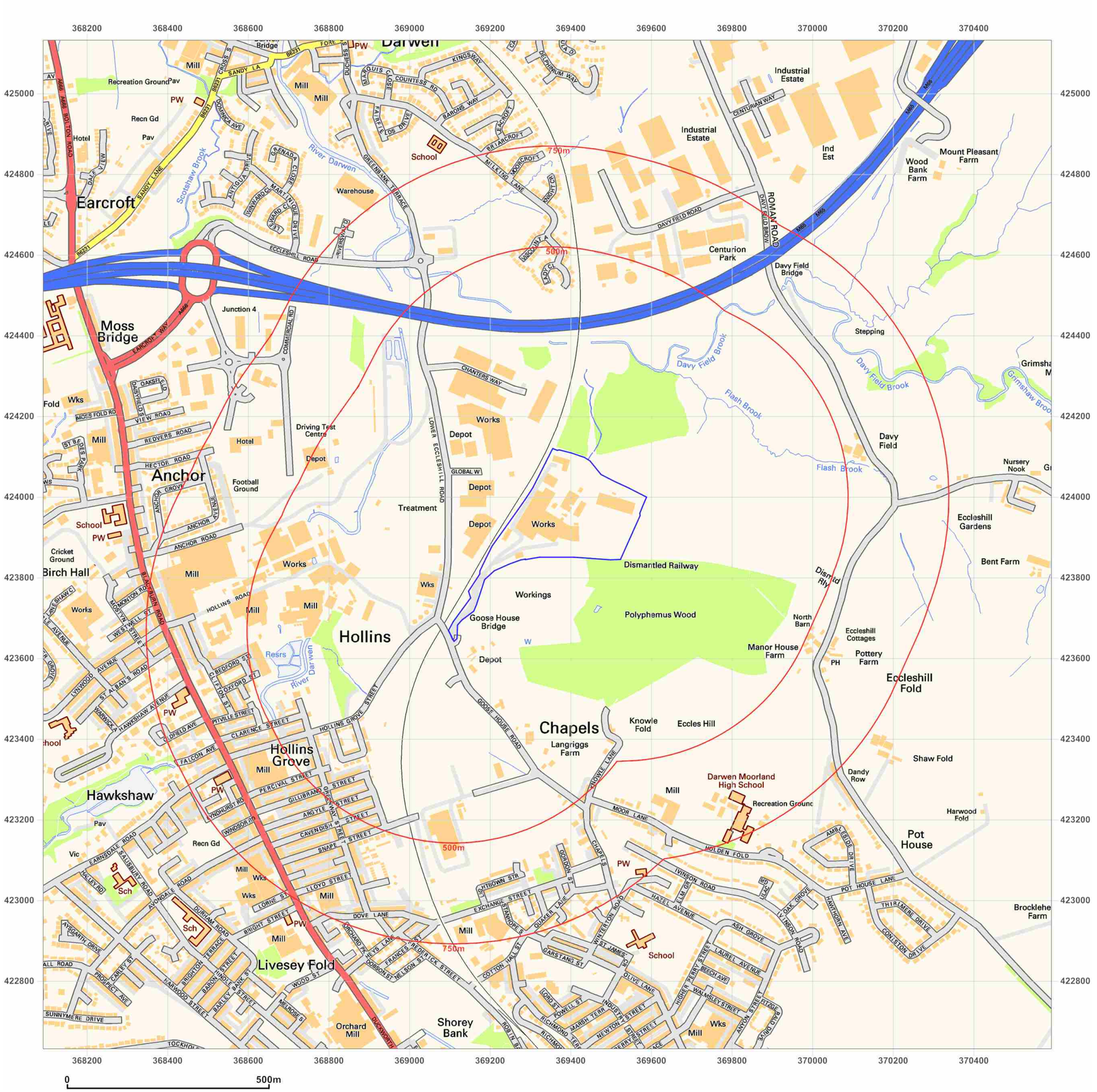

Groundsure INSIGHTS

Site Details:

DERF, Lower Eccleshill Road,
Darwen, BB3 0EH

Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N
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2010

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Production date: 07 January 2019

Map legend available at:
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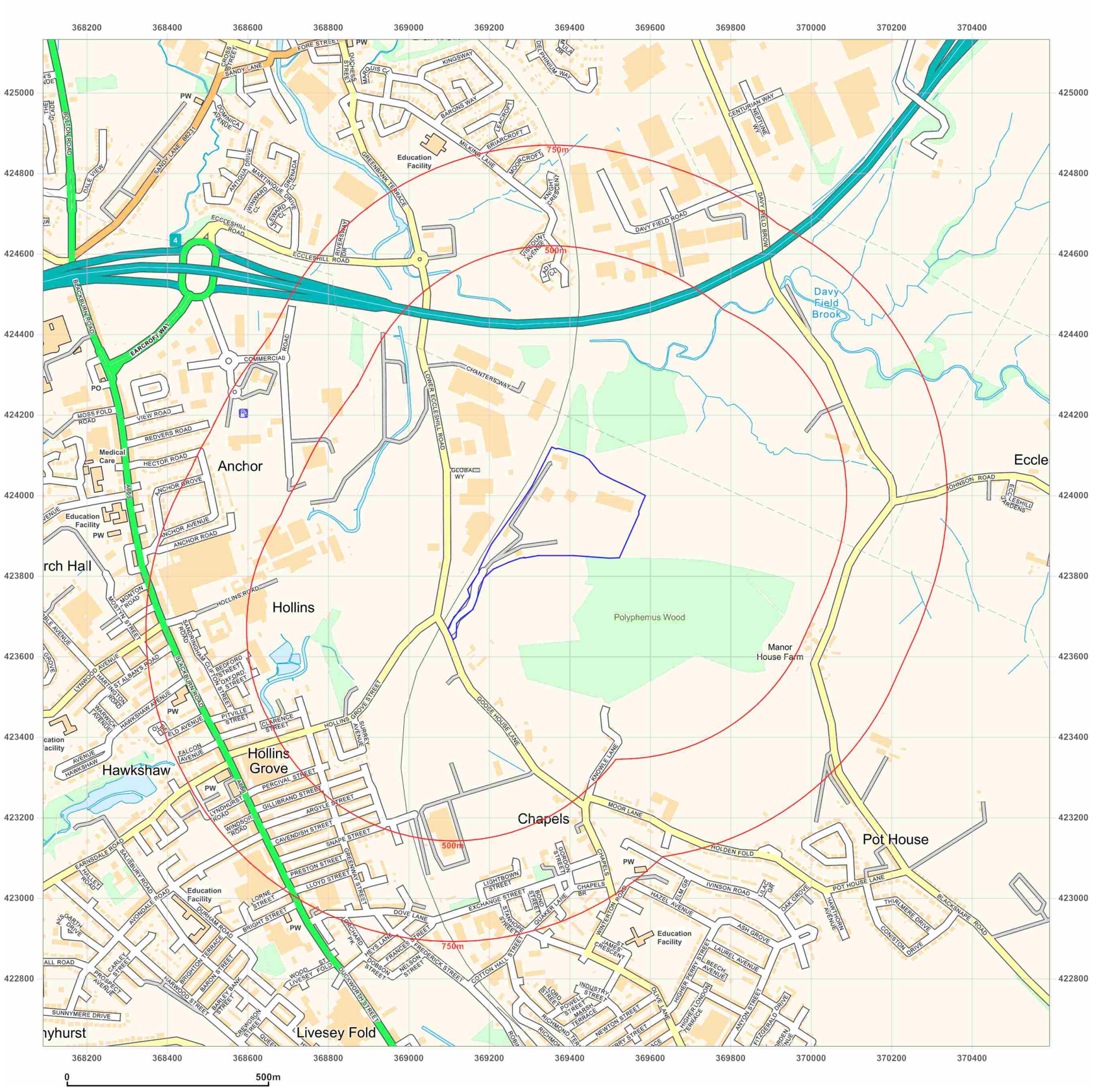

Groundsure INSIGHTS

Site Details:

DERF, Lower Eccleshill Road,
Darwen, BB3 0EH

Client Ref: RCEI68589
Report Ref: RPS-5731191
Grid Ref: 369341, 423881

Map Name: National Grid

Map date: **2014**

Scale: 1:10,000

Printed at: 1:10,000

N W E S

2014

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Production date: 07 January 2019

Map legend available at:
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APPENDIX E

Database Information

RPS Consultants Ltd

UNIT 12 R P S LABORATORIES LTD, MODWEN ROAD,
SALFORD, M5 3EZ

Groundsure Reference:	RPS-5731189
Your Reference:	RCEI68589
Report Date	7 Jan 2019
Report Delivery Method:	Email - pdf

Enviro Insight

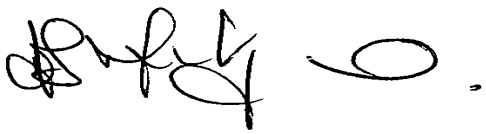
Address: DERF, Lower Eccleshill Road, Darwen, BB3 0EH

Dear Sir/ Madam,

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

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Enviro Insight

Address:	**DERF, Lower Eccleshill Road, Darwen, BB3 0EH**
Date:	**7 Jan 2019**
Reference:	**RPS-5731189**
Client:	**RPS Consultants Ltd**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	26-Mar-2012
Grid Reference:	369364,423949
Site Size:	7.33ha

Report Reference: RPS-5731189
Client Reference: RCEI68589

Contents Page

Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	36	36	77	140
1.2 Additional Information – Historical Tank Database	7	10	49	118
1.3 Additional Information – Historical Energy Features Database	0	4	4	22
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	2
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	16	26	44	112

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	5	3
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	5	2
2.1.3 Records of Red List Discharge Consents	0	1	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	5
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	1	1	3
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	1	0	4	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	1	0	85
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	1
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	3	5
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	1	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	1	0	1	2	2	2
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	3	1	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	1	3	10	14	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	7	0	2	8	8	1

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	4	5	31	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	Identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site	Identified
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site	Identified

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	9	0	6
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	12	3	13
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	7
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	2	1	#250GWV #	#500GWV #	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	Yes	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	6	92	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

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

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	2
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	3
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	1	2
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites

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

Section 9: Natural Hazards

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

Section 10: Mining

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

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

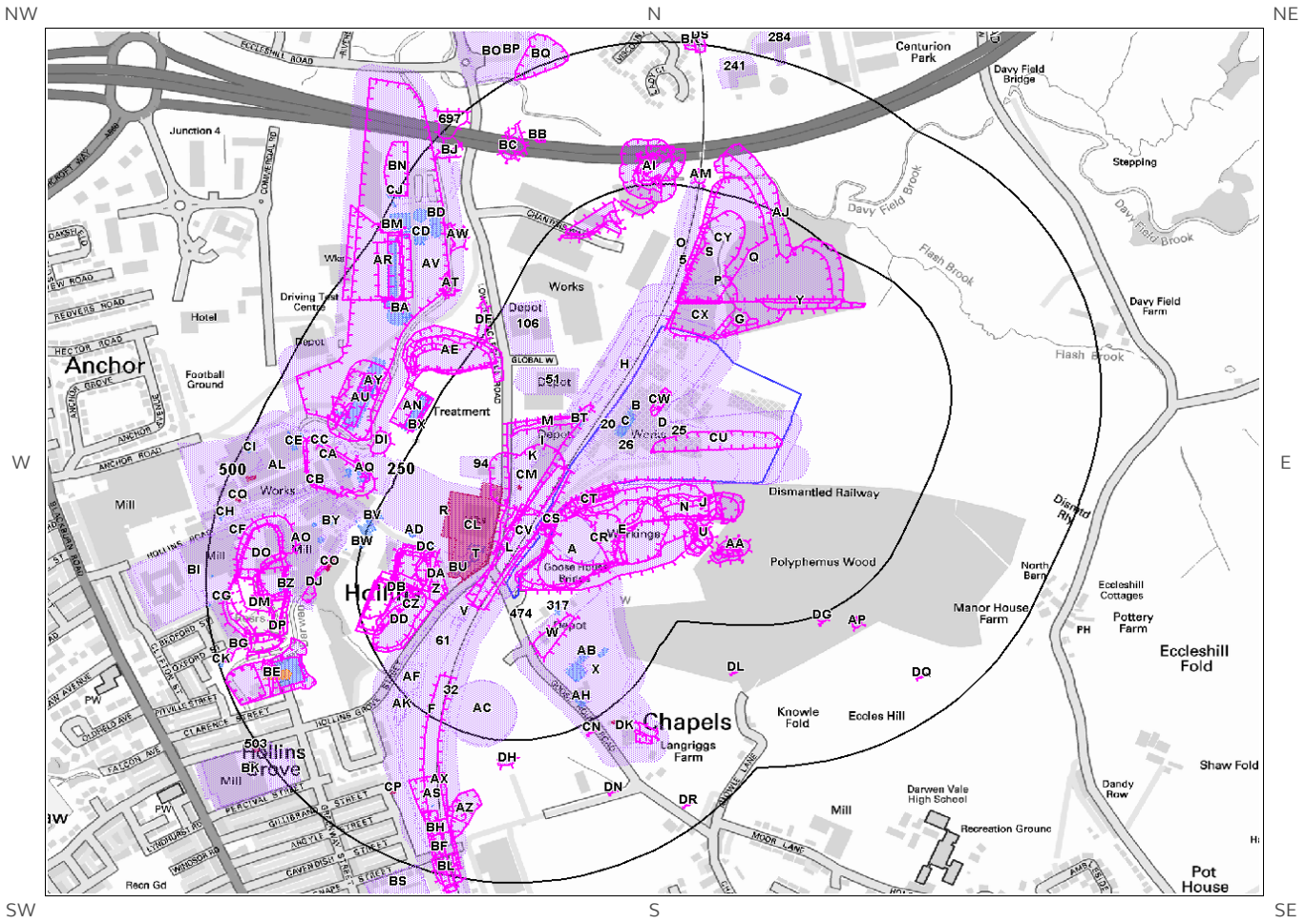
Note: Maps

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

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

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

1. Historical Land Use



Site Outline

250
500
Search Buffers (m)

Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Historical military sites

Tanks

Garages

1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 289

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Clay Pit	1909
2A	0	On Site	Clay Pit	1938
3A	0	On Site	Clay Pit	1928
4	0	On Site	Railway Sidings	1966
5	0	On Site	Railway Sidings	1966
6CX	0	On Site	Unspecified Heap	1891
7B	0	On Site	Unspecified Tanks	1909
8B	0	On Site	Unspecified Tanks	1938
9B	0	On Site	Unspecified Tanks	1928
10B	0	On Site	Unspecified Tank	1909
11B	0	On Site	Unspecified Works	1970
12B	0	On Site	Unspecified Tank	1909
13B	0	On Site	Iron Works	1909
14C	0	On Site	Unspecified Tanks	1928
15C	0	On Site	Unspecified Tanks	1938
16C	0	On Site	Unspecified Tank	1909
17C	0	On Site	Unspecified Tank	1909
18C	0	On Site	Unspecified Tank	1909
19C	0	On Site	Unspecified Tank	1909
20	0	On Site	Railway Sidings	1891
21D	0	On Site	Iron Works	1928
22D	0	On Site	Iron Works	1938
23C	0	On Site	Railway Sidings	1938
24C	0	On Site	Railway Sidings	1928
25	0	On Site	Unspecified Works	1983
26	0	On Site	Railway Sidings	1909
27CU	0	On Site	Refuse Heap	1966
28CS	0	On Site	Unspecified Pit	1891
29E	0	On Site	Refuse Heap	1983
30CR	0	On Site	Unspecified Pit	1966
31	0	On Site	Railway Sidings	1970
32	0	On Site	Railway Sidings	1983
33C	0	On Site	Iron Works	1891
34E	0	On Site	Unspecified Quarry	1970

35L	0	On Site	Cuttings	1891
36CV	0	On Site	Cuttings	1846
37CM	2	NW	Brick Works	1891
38Q	2	N	Refuse Heap	1966
39F	9	SW	Railway Sidings	1928
40F	9	SW	Railway Sidings	1938
41G	17	NE	Refuse Heap	1938
42G	17	NE	Refuse Heap	1928
43H	17	NW	Railway Building	1891
44H	17	NW	Railway Building	1966
45H	19	NW	Railway Building	1966
46J	19	S	Refuse Heap	1966
47I	21	NW	Unspecified Depot	1983
48I	21	NW	Unspecified Works	1966
49J	25	S	Refuse Heap	1928
50N	25	S	Refuse Heap	1938
51	26	NW	Unspecified Depot	1983
52K	28	NW	Brick Works	1928
53K	28	NW	Brick Works	1909
54K	28	NW	Brick Works	1938
55L	31	NW	Railway Building	1970
56F	34	SW	Railway Sidings	1909
57M	34	NW	Refuse Heap	1938
58M	34	NW	Refuse Heap	1909
59M	34	NW	Refuse Heap	1928
60DA	34	NW	Unspecified Work	1846
61	35	W	Railway Sidings	1891
62N	35	S	Refuse Heap	1909
63O	43	N	Railway Sidings	1928
64O	43	N	Railway Sidings	1938
65S	46	N	Railway Sidings	1910
66P	47	N	Railway Sidings	1928
67P	47	N	Railway Sidings	1938
68Q	47	N	Unspecified Heap	1938
69Q	47	N	Unspecified Heap	1928
70CY	47	N	Unspecified Heap	1910
71R	49	NW	Unspecified Works	1983
72R	49	NW	Unspecified Works	1970
73S	52	N	Unspecified Heaps	1892
74T	60	NW	Unspecified Tank	1983
75X	63	SE	Fire Clay Works	1938
76T	64	NW	Unspecified Tanks	1970
77T	67	NW	Unspecified Tank	1983
78U	70	S	Unspecified Pit	1966
79U	74	S	Unspecified Old Quarries	1909
80U	74	S	Unspecified Pit	1928

81U	74	S	Unspecified Pit	1938
82V	77	SW	Goods Shed	1966
83V	77	SW	Railway Building	1970
84U	78	S	Unspecified Pit	1970
85BU	78	W	Unspecified Tank	1983
86W	79	SE	Unspecified Ground Workings	1983
87W	79	SE	Unspecified Ground Workings	1970
88V	88	SW	Goods Shed	1938
89V	88	SW	Goods Shed	1928
90V	88	SW	Goods Shed	1909
91X	88	SE	Fire Clay Works	1928
92X	88	SE	Fire Clay Works	1909
93X	89	SE	Unspecified Works	1966
94	90	W	Unspecified Works	1983
95U	91	S	Unspecified Pit	1891
96V	95	SW	Goods Shed	1891
97AA	99	S	Sandstone Quarry	1846
98CZ	99	W	Refuse Heap	1983
99Y	103	NE	Refuse Heap	1928
100Y	103	NE	Refuse Heap	1938
101Z	104	W	Refuse Heap	1938
102Z	104	W	Refuse Heap	1928
103AA	115	S	Unspecified Old Quarries	1909
104AA	117	S	Unspecified Pit	1891
105DD	137	W	Refuse Heap	1970
106	138	NW	Unspecified Depots	1983
107X	143	SE	Unspecified Tanks	1909
108X	143	SE	Unspecified Tanks	1928
109X	143	SE	Unspecified Tanks	1938
110AB	148	SE	Unspecified Tank	1966
111AB	149	SE	Unspecified Tank	1966
112AB	150	SE	Unspecified Tank	1966
113AC	151	S	Goods Station	1928
114X	151	SE	Unspecified Tank	1966
115AC	152	S	Goods Station	1909
116X	168	SE	Unspecified Tank	1966
117X	169	SE	Unspecified Tank	1966
118AD	172	NW	Unspecified Tank	1983
119AD	173	NW	Unspecified Tank	1970
120AX	174	SW	Cuttings	1846
121AG	176	NW	Unspecified Ground Workings	1910
122AE	178	NW	Refuse Heap	1983
123AE	178	NW	Refuse Heap	1970
124AF	193	SW	Unspecified Depot	1983

125AF	193	SW	Goods Station	1970
126AG	193	N	Unspecified Ground Workings	1892
127AF	194	SW	Goods Station	1966
128AH	197	SE	Unspecified Tanks	1938
129AH	197	SE	Unspecified Tank	1966
130AH	198	SE	Unspecified Tank	1928
131DE	200	N	Unspecified Ground Workings	1983
132AE	203	NW	Refuse Heap	1966
133AF	205	SW	Goods Station	1938
134AE	208	NW	Refuse Heap	1938
135AE	208	NW	Refuse Heap	1928
136AH	210	SE	Unspecified Tank	1909
137AH	210	SE	Unspecified Tank	1928
138AH	210	SE	Unspecified Tank	1966
139AI	218	N	Unspecified Ground Workings	1928
140BV	236	NW	Unspecified Mill	1846
141AI	236	N	Unspecified Ground Workings	1910
142DF	238	NW	Unspecified Ground Workings	1983
143AJ	242	NE	Pump Houses	1928
144AJ	242	NE	Pump Houses	1938
145AI	243	N	Unspecified Ground Workings	1938
146AK	244	SW	Goods Shed	1928
147AK	246	SW	Goods Shed	1909
148AL	249	NW	Unspecified Works	1966
149AO	249	NW	Unspecified Mills	1966
150DG	252	SE	Old Coal Pit	1846
151AI	255	N	Unspecified Ground Workings	1966
152AN	257	NW	Filter Beds	1983
153AL	258	NW	Unspecified Works	1970
154AM	258	N	Unspecified Heap	1938
155AM	258	N	Unspecified Heap	1928
156CN	261	SE	Coal Pit	1846
157AN	263	NW	Filter Tanks	1928
158AN	263	NW	Filter Tanks	1909
159AN	263	NW	Filter Tanks	1938
160AO	265	NW	Unspecified Mills	1891
161AE	268	NW	Refuse Heap	1909
162AO	269	NW	Paper Mills	1909
163AI	269	N	Unspecified Heap	1970
164AI	269	N	Unspecified Heap	1983
165AO	271	NW	Unspecified Mills	1928

166AO	271	NW	Unspecified Mills	1938
167DH	279	S	Sandstone Quarry	1846
168AO	280	NW	Unspecified Works	1970
169AO	280	NW	Unspecified Mill	1983
170DK	281	SE	Pumping Station	1970
171DI	283	NW	Sandstone Quarry	1846
172AR	285	NW	Unspecified Works	1966
173AP	286	SE	Unspecified Heap	1909
174AP	286	SE	Unspecified Heap	1928
175AP	286	SE	Unspecified Heap	1938
176AQ	288	NW	Unspecified Ground Workings	1928
177AQ	288	NW	Unspecified Ground Workings	1938
178AL	298	NW	Paint Works	1938
179AO	311	W	Unspecified Tank	1909
180AO	311	W	Unspecified Tank	1928
181AO	311	W	Unspecified Tank	1938
182AO	315	W	Paper Works	1846
183AR	316	NW	Sewage Works	1983
184AR	316	NW	Sewage Works	1970
185AL	323	NW	Paint Works	1928
186DL	325	S	Old Coal Pit	1846
187AU	325	NW	Filter Tanks	1938
188AT	329	NW	Unspecified Ground Workings	1910
189AS	329	S	Cuttings	1970
190AS	329	S	Cuttings	1983
191AT	332	NW	Unspecified Ground Workings	1928
192AT	332	NW	Unspecified Ground Workings	1938
193AZ	343	S	Unspecified Quarries	1909
194AY	344	NW	Unspecified Ground Workings	1891
195AU	350	NW	Filter Tanks	1909
196AU	350	NW	Filter Tanks	1928
197AV	352	NW	Unspecified Tanks	1970
198AV	352	NW	Unspecified Tanks	1983
199BE	354	W	Sewage Works	1891
200AW	357	NW	Unspecified Ground Workings	1938
201AW	357	NW	Unspecified Ground Workings	1928
202AO	363	W	Railway Sidings	1909
203AX	364	SW	Railway Building	1966
204AY	365	NW	Unspecified Pit	1891
205AZ	369	S	Unspecified Quarry	1891

206AL	370	NW	Unspecified Works	1983
207BA	370	NW	Unspecified Tank	1983
208BA	370	NW	Unspecified Tank	1970
209DN	372	SE	Coal Pit	1846
210AU	372	NW	Unspecified Tanks	1966
211AU	375	NW	Sandstone Quarry	1846
212BB	377	NW	Unspecified Ground Workings	1938
213BB	377	NW	Unspecified Ground Workings	1910
214BB	377	NW	Unspecified Ground Workings	1928
215BC	383	NW	Unspecified Ground Workings	1910
216BC	383	NW	Unspecified Ground Workings	1938
217BC	383	NW	Unspecified Ground Workings	1928
218BA	383	NW	Filter Tank	1909
219BB	384	NW	Unspecified Pit	1966
220BB	384	NW	Unspecified Pit	1892
221AR	384	NW	Unspecified Tanks	1966
222AR	386	NW	Filter Beds	1983
223AR	386	NW	Filter Beds	1970
224AR	394	NW	Sewage Works	1928
225AR	394	NW	Sewage Works	1910
226AR	394	NW	Sewage Works	1938
227BF	396	S	Cuttings	1891
228AR	397	NW	Filter Beds	1928
229AR	397	NW	Filter Beds	1938
230AR	397	NW	Filter Beds	1910
231AW	404	NW	Unspecified Tank	1970
232AW	404	NW	Unspecified Tank	1983
233BD	414	NW	Unspecified Tank	1983
234BD	414	NW	Unspecified Tank	1970
235	414	NW	Railway Sidings	1966
236BE	419	W	Unspecified Ground Workings	1909
237BF	421	S	Cuttings	1970
238BF	421	S	Cuttings	1983
239DQ	426	SE	Old Coal Pit	1846
240BH	426	S	Railway Building	1966
241	429	N	Unspecified Depot	1983
242BG	435	W	Unspecified Ground Workings	1983
243BG	435	W	Unspecified Ground Workings	1970
244BI	436	W	Unspecified Works	1966
245BH	437	S	Railway Building	1928

246BH	437	S	Railway Building	1909
247BH	437	S	Railway Building	1938
248BE	444	W	Unspecified Heap	1891
249BI	446	W	Unspecified Mill	1983
250BI	447	W	Unspecified Works	1970
251AL	449	NW	Unspecified Tanks	1966
252BI	451	W	Paper Works	1938
253BI	451	W	Paper Works	1909
254BI	451	W	Paper Works	1928
255BJ	453	NW	Refuse Heap	1928
256BJ	453	NW	Refuse Heap	1938
257AL	454	NW	Unspecified Tank	1938
258AL	454	NW	Unspecified Tank	1928
259BK	456	SW	Unspecified Mill	1970
260BK	456	SW	Unspecified Mill	1983
261DR	458	SE	Old Coal Pit	1846
262BL	460	S	Cuttings	1928
263BL	460	S	Cuttings	1938
264BL	460	S	Cuttings	1909
265BM	461	NW	Filter Beds	1928
266BM	461	NW	Filter Beds	1938
267BM	461	NW	Filter Tanks	1910
268BK	468	SW	Unspecified Mill	1928
269BK	468	SW	Unspecified Mill	1938
270BK	468	SW	Unspecified Mill	1909
271BK	478	SW	Unspecified Mill	1966
272BN	480	NW	Sludge Beds	1983
273BN	480	NW	Sludge Beds	1970
274DS	485	N	Cuttings	1966
275BO	487	NW	Paper Mill	1928
276BO	487	NW	Paper Mill	1938
277BQ	488	N	Refuse Heap	1983
278BP	488	N	Unspecified Mill	1983
279BP	488	N	Unspecified Mill	1970
280BQ	488	N	Refuse Heap	1970
281BR	489	N	Cuttings	1938
282BR	489	N	Cuttings	1910
283BR	489	N	Cuttings	1928
284	491	N	Unspecified Works	1983
285BO	491	NW	Unspecified Mill	1966
286BS	494	S	Unspecified Mill	1891
287BS	494	S	Unspecified Mill	1938
288BS	494	S	Unspecified Mill	1928
289BS	496	S	Unspecified Mill	1909

1.2 Additional Information – Historical Tank Database

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

Records of historical tanks within 500m of the search boundary: 184

ID	Distance (m)	Direction	Use	Date
290C	0	On Site	Tanks	1930
291C	0	On Site	Tanks	1891
292C	0	On Site	Tanks	1911
293C	0	On Site	Tanks	1911
294C	0	On Site	Tanks	1891
295B	0	On Site	Unspecified Tank	1911
296B	0	On Site	Unspecified Tank	1930
297CT	13	SE	Unspecified Tank	1911
298BT	26	NW	Unspecified Tank	1980
299BT	26	NW	Unspecified Tank	1990
300BT	26	NW	Unspecified Tank	1967
301BT	26	NW	Unspecified Tank	1954
302BT	27	NW	Unspecified Tank	1996
303BT	27	NW	Unspecified Tank	1966
304BT	27	NW	Unspecified Tank	1954
305BT	42	NW	Unspecified Tank	1954
306BT	43	NW	Unspecified Tank	1954
307T	60	NW	Cooling Tank	1967
308T	60	NW	Cooling Tank	1980
309T	60	NW	Cooling Tank	1990
310T	60	NW	Cooling Tank	1996
311T	60	NW	Cooling Tank	1966
312BU	61	NW	Unspecified Tank	1967
313T	62	NW	Unspecified Tank	1980
314T	62	NW	Unspecified Tank	1990
315T	62	NW	Unspecified Tank	1966
316T	62	NW	Unspecified Tank	1996
317	64	E	Tanks	1996
318T	69	NW	Unspecified Tank	1967
319T	69	NW	Unspecified Tank	1996
320T	69	NW	Unspecified Tank	1980
321T	69	NW	Unspecified Tank	1990
322T	70	NW	Unspecified Tank	1966
323T	78	W	Unspecified Tank	1967
324T	79	W	Unspecified Tank	1996
325T	79	W	Unspecified Tank	1980
326T	79	W	Unspecified Tank	1990

327T	79	W	Unspecified Tank	1966
328AD	136	NW	Tanks	1954
329AD	136	NW	Tanks	1962
330AD	136	NW	Tanks	1954
331DC	141	NW	Tanks	1930
332X	148	SE	Tanks	1911
333X	148	SE	Tanks	1930
334AB	169	SE	Tanks	1911
335AD	173	NW	Unspecified Tank	1993
336AD	173	NW	Unspecified Tank	1967
337AD	173	NW	Unspecified Tank	1954
338AD	173	NW	Unspecified Tank	1989
339AD	173	NW	Unspecified Tank	1962
340AD	173	NW	Unspecified Tank	1954
341AD	173	NW	Unspecified Tank	1975
342AD	174	NW	Unspecified Tank	1961
343AD	174	NW	Unspecified Tank	1986
344X	175	SE	Unspecified Tank	1954
345AH	200	SE	Tanks	1930
346AH	212	SE	Unspecified Tank	1911
347BV	235	NW	Unspecified Tank	1993
348BV	235	NW	Unspecified Tank	1989
349BV	236	NW	Tanks	1962
350BV	236	NW	Tanks	1954
351BV	237	NW	Tanks	1954
352BV	237	W	Tanks	1954
353BW	244	W	Unspecified Tank	1989
354BW	245	W	Unspecified Tank	1998
355BW	245	W	Unspecified Tank	1993
356BX	258	NW	Unspecified Tank	1975
357BX	258	NW	Unspecified Tank	1962
358BX	258	NW	Unspecified Tank	1954
359BX	258	NW	Unspecified Tank	1967
360BX	258	NW	Unspecified Tank	1954
361BX	259	NW	Unspecified Tank	1961
362BX	259	NW	Unspecified Tank	1986
363AN	260	NW	Filter Tanks	1975
364AN	260	NW	Filter Tanks	1961
365AN	260	NW	Filter Tanks	1986
366AN	260	NW	Filter Tanks	1954
367AN	260	NW	Filter Tanks	1954
368BX	265	NW	Filter Tanks	1930
369BX	265	NW	Filter Tanks	1911
370BV	270	NW	Unspecified Tank	1998
371BW	273	W	Unspecified Tank	1954
372BW	274	W	Unspecified Tank	1954

373AQ	288	NW	Tanks	1954
374AQ	288	NW	Tanks	1954
375AQ	295	W	Tanks	1954
376AQ	295	W	Tanks	1954
377AQ	298	W	Tanks	1998
378AQ	304	NW	Tanks	1954
379AQ	305	NW	Tanks	1954
380BY	307	W	Unspecified Tank	1930
381AO	313	W	Unspecified Tank	1930
382AQ	317	NW	Tanks	1975
383AQ	319	NW	Tanks	1961
384AQ	319	NW	Tanks	1986
385BY	322	W	Unspecified Tank	1911
386AQ	323	NW	Unspecified Tank	1954
387AQ	324	NW	Unspecified Tank	1954
388BY	332	W	Unspecified Tank	1967
389BY	334	W	Unspecified Tank	1975
390BY	334	W	Unspecified Tank	1962
391BY	334	W	Unspecified Tank	1989
392BY	334	W	Unspecified Tank	1998
393BY	334	W	Unspecified Tank	1993
394AU	346	NW	Sedimentation Tanks	1954
395AU	346	NW	Sedimentation Tank	1975
396AU	347	NW	Sedimentation Tanks	1954
397AU	349	NW	Filter Tanks	1930
398AU	349	NW	Filter Tanks	1911
399AY	351	NW	Sediment Tanks	1954
400AY	351	NW	Sedimentation Tanks	1954
401AY	352	NW	Sedimentation Tanks	1966
402BZ	362	W	Tanks	1967
403BZ	362	W	Tanks	1954
404BZ	362	W	Tanks	1975
405BZ	362	W	Tanks	1989
406BZ	362	W	Tanks	1962
407BZ	362	W	Tanks	1954
408BZ	362	W	Tanks	1998
409BZ	362	W	Tanks	1993
410CB	363	NW	Tanks	1975
411BZ	363	W	Unspecified Tank	1989
412BZ	363	W	Unspecified Tank	1975
413BZ	363	W	Unspecified Tank	1962
414CA	364	NW	Unspecified Tank	1954
415CA	364	NW	Unspecified Tank	1954
416BA	366	NW	Humus Tank	1954
417CB	366	NW	Tanks	1975
418BA	366	NW	Humus Tank	1954

419BE	367	W	Filter Tanks	1891
420BA	368	NW	Unspecified Tank	1999
421AU	371	NW	Sedimentation Tank	1975
422CC	385	W	Tanks	1975
423AS	388	S	Unspecified Tank	1967
424AR	400	NW	Sedimentation Tanks	1954
425AW	401	NW	Tanks	1999
426BA	404	NW	Filter Tank	1930
427BA	404	NW	Filter Tank	1911
428AR	411	NW	Sedimentation Tanks	1954
429CD	418	NW	Unspecified Tank	1999
430CC	419	NW	Tanks	1954
431CD	419	NW	Humus Tank	1966
432CD	419	NW	Humus Tank	1954
433CE	419	NW	Tanks	1954
434CD	420	NW	Humus Tank	1954
435CC	420	W	Tanks	1975
436BD	435	NW	Unspecified Tank	1999
437CE	442	W	Unspecified Tank	1954
438CE	442	W	Unspecified Tank	1954
439CD	445	NW	Humus Tank	1954
440CD	445	NW	Humus Tank	1954
441CD	451	NW	Settling Tank	1954
442CD	451	NW	Settling Tanks	1954
443CD	451	NW	Settling Tanks	1966
444CF	456	W	Unspecified Tank	1954
445CF	456	W	Unspecified Tank	1954
446CH	475	W	Tanks	1975
447CG	475	W	Unspecified Tank	1954
448CG	475	W	Unspecified Tank	1954
449CH	475	W	Tanks	1961
450CH	475	W	Tanks	1986
451CI	483	NW	Tanks	1954
452CI	484	NW	Tanks	1954
453CI	484	NW	Tanks	1954
454CI	485	NW	Tanks	1954
455BG	486	W	Unspecified Tank	1998
456BG	486	W	Unspecified Tank	1993
457BG	487	W	Unspecified Tank	1975
458BG	487	W	Unspecified Tank	1989
459BG	488	W	Unspecified Tank	1986
460BG	488	W	Unspecified Tank	1961
461BI	489	W	Unspecified Tank	1954
462CJ	489	NW	Tanks	1999
463BI	489	W	Unspecified Tank	1954
464CJ	490	NW	Tanks	1999

465CK	491	W	Tanks	1998
466CK	491	W	Tanks	1993
467CK	491	W	Tanks	1989
468CK	491	W	Tanks	1975
469CK	492	W	Tanks	1986
470CK	492	W	Tanks	1961
471CG	493	W	Unspecified Tank	1954
472CG	493	W	Unspecified Tank	1962
473CG	493	W	Unspecified Tank	1954

1.3 Additional Information – Historical Energy Features Database

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

Records of historical energy features within 500m of the search boundary: 30

ID	Distance (m)	Direction	Use	Date
474	34	S	Electricity Substation	1996
475CL	43	NW	Electricity Works	1967
476CL	43	NW	Electricity Works	1980
477CL	49	NW	Electricity Works	1966
478CM	56	W	Electricity Substation	1954
479CM	56	W	Electricity Substation	1954
480CM	57	W	Electricity Substation	1996
481CM	57	W	Electricity Substation	1990
482CN	270	SE	Electricity Substation	1954
483CN	270	SE	Electricity Substation	1954
484CN	270	SE	Electricity Substation	1967
485CN	270	SE	Electricity Substation	1991
486CN	270	SE	Electricity Substation	1991
487CN	270	SE	Electricity Substation	1982
488CN	271	SE	Electricity Substation	1993
489CN	271	SE	Electricity Substation	1994
490CO	289	W	Electricity Substation	1993
491CO	291	W	Electricity Substation	1989
492CO	291	W	Electricity Substation	1975
493CO	291	W	Electricity Substation	1998
494CO	292	W	Electricity Substation	1961
495CO	292	W	Electricity Substation	1986
496CP	387	SW	Electricity Substation	1971
497CP	390	SW	Electricity Substation	1990
498AL	455	NW	Electricity Substation	1954
499AL	456	NW	Electricity Substation	1954

500CH	465	W	Electricity Substation	1989
501CQ	466	W	Electricity Substation	1998
502CQ	466	W	Electricity Substation	1993
503	497	SW	Electricity Substation	1990

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 2

ID	Distance (m)	Direction	Use	Date
504BE	391	SW	Garage	1954
505BE	402	SW	Garage	1954

1.6 Historical military sites

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

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 198

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

ID	Distance(m)	Direction	Use	Date
506L	0	On Site	Cuttings	1891

507CR	0	On Site	Refuse Heap	1983
508A	0	On Site	Clay Pit	1928
509A	0	On Site	Clay Pit	1938
510A	0	On Site	Clay Pit	1909
511CR	0	On Site	Unspecified Pit	1966
512E	0	On Site	Unspecified Quarry	1970
513CS	0	On Site	Unspecified Pit	1891
514CT	0	On Site	Ponds	1966
515CU	0	On Site	Refuse Heap	1966
516CV	0	On Site	Cuttings	1846
517CW	0	On Site	Pond	1891
518CW	0	On Site	Reservoir	1928
519CW	0	On Site	Reservoir	1909
520CW	0	On Site	Reservoir	1938
521CX	0	On Site	Unspecified Heap	1891
522CT	1	SE	Reservoirs	1891
523CM	2	NW	Brick Works	1891
524Q	2	N	Refuse Heap	1966
525CT	3	SE	Reservoirs	1928
526CT	3	SE	Reservoirs	1938
527CT	3	SE	Reservoirs	1909
528CT	3	S	Reservoirs	1909
529CT	3	S	Reservoirs	1928
530G	17	NE	Refuse Heap	1938
531G	17	NE	Refuse Heap	1928
532J	19	S	Refuse Heap	1966
533J	25	S	Refuse Heap	1928
534J	25	S	Refuse Heap	1938
535K	28	NW	Brick Works	1928
536K	28	NW	Brick Works	1909
537K	28	NW	Brick Works	1938
538M	34	NW	Refuse Heap	1928
539M	34	NW	Refuse Heap	1938
540M	34	NW	Refuse Heap	1909
541N	35	S	Refuse Heap	1909
542CV	39	NW	Ponds	1938
543CV	39	NW	Ponds	1928
544CV	39	NW	Ponds	1909
545Q	47	N	Unspecified Heap	1928
546Q	47	N	Unspecified Heap	1938
547CY	47	N	Unspecified Heap	1910
548S	52	N	Unspecified Heaps	1892
549U	70	S	Unspecified Pit	1966
550U	74	S	Unspecified Old Quarries	1909
551U	74	S	Unspecified Pit	1938
552U	74	S	Unspecified Pit	1928

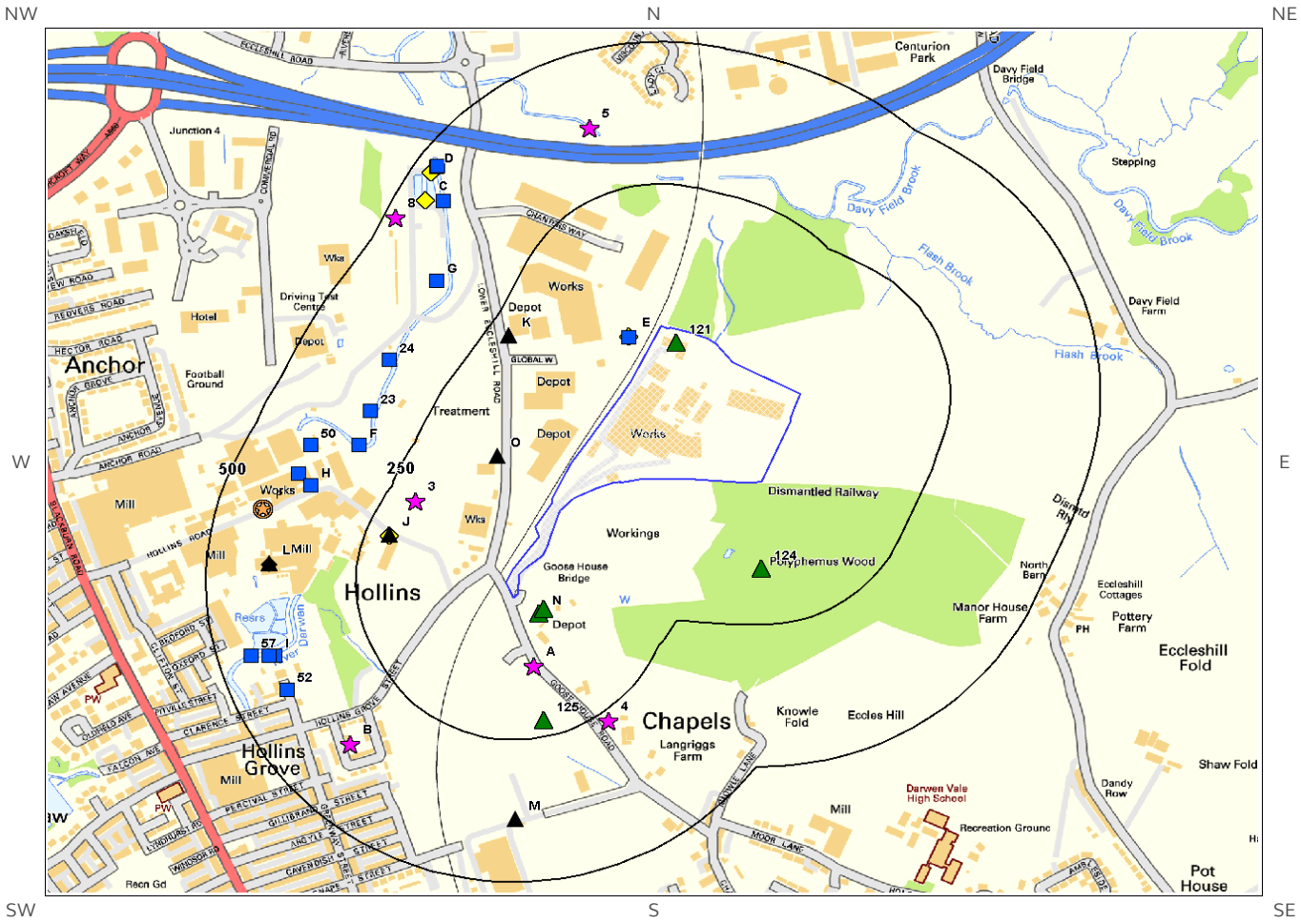
553U	78	S	Unspecified Pit	1970
554W	79	SE	Unspecified Ground Workings	1983
555W	79	SE	Unspecified Ground Workings	1970
556U	91	S	Unspecified Pit	1891
557AA	99	S	Sandstone Quarry	1846
558CZ	99	W	Refuse Heap	1983
559Y	103	NE	Refuse Heap	1928
560Y	103	NE	Refuse Heap	1938
561Z	104	W	Refuse Heap	1938
562Z	104	W	Refuse Heap	1928
563AA	107	S	Pond	1966
564AA	115	S	Pond	1928
565AA	115	S	Pond	1938
566AA	115	S	Unspecified Old Quarries	1909
567AA	117	S	Unspecified Pit	1891
568DA	123	W	Pond	1846
569DB	130	W	Reservoirs	1938
570DB	130	W	Reservoirs	1928
571DA	130	W	Reservoirs	1909
572DC	131	W	Pond	1970
573DC	131	W	Pond	1983
574CZ	133	W	Reservoirs	1891
575DD	137	W	Refuse Heap	1970
576CZ	156	W	Reservoirs	1909
577AX	174	SW	Cuttings	1846
578AG	176	NW	Unspecified Ground Workings	1910
579AE	178	NW	Refuse Heap	1970
580AE	178	NW	Refuse Heap	1983
581DB	182	W	Pond	1983
582DB	182	W	Pond	1970
583AG	193	N	Unspecified Ground Workings	1892
584DE	200	N	Unspecified Ground Workings	1983
585AE	203	NW	Refuse Heap	1966
586AE	208	NW	Refuse Heap	1938
587AE	208	NW	Refuse Heap	1928
588AI	218	N	Unspecified Ground Workings	1928
589AI	236	N	Unspecified Ground Workings	1910
590DF	238	NW	Unspecified Ground Workings	1983
591AI	243	N	Unspecified Ground Workings	1938
592DG	252	SE	Old Coal Pit	1846

593AI	255	N	Unspecified Ground Workings	1966
594AN	257	NW	Filter Beds	1983
595AM	258	N	Unspecified Heap	1938
596AM	258	N	Unspecified Heap	1928
597CN	261	SE	Coal Pit	1846
598AN	263	NW	Filter Tanks	1928
599AN	263	NW	Filter Tanks	1938
600AN	263	NW	Filter Tanks	1909
601AE	268	NW	Refuse Heap	1909
602AI	269	N	Unspecified Heap	1970
603AI	269	N	Unspecified Heap	1983
604CA	274	NW	Reservoir	1909
605DH	279	S	Sandstone Quarry	1846
606DI	283	NW	Sandstone Quarry	1846
607AP	286	SE	Unspecified Heap	1938
608AP	286	SE	Unspecified Heap	1928
609AP	286	SE	Unspecified Heap	1909
610CA	286	NW	Reservoir	1891
611AQ	288	NW	Unspecified Ground Workings	1928
612AQ	288	NW	Unspecified Ground Workings	1938
613DJ	295	W	Pond	1938
614DJ	295	W	Pond	1928
615DK	301	SE	Disused Reservoir	1983
616DK	301	SE	Disused Reservoir	1970
617DK	307	SE	Reservoir	1938
618DK	307	SE	Reservoir	1909
619DK	307	SE	Reservoir	1928
620AR	316	NW	Sewage Works	1983
621AR	316	NW	Sewage Works	1970
622DL	325	S	Old Coal Pit	1846
623AU	325	NW	Filter Tanks	1938
624AT	329	NW	Unspecified Ground Workings	1910
625AS	329	S	Cuttings	1970
626AS	329	S	Cuttings	1983
627AT	332	NW	Unspecified Ground Workings	1938
628AT	332	NW	Unspecified Ground Workings	1928
629AZ	343	S	Unspecified Quarries	1909
630AY	344	NW	Unspecified Ground Workings	1891
631AU	350	NW	Filter Tanks	1928
632AU	350	NW	Filter Tanks	1909
633BE	354	W	Sewage Works	1891

634DO	356	W	Ponds	1846
635AW	357	NW	Unspecified Ground Workings	1928
636AW	357	NW	Unspecified Ground Workings	1938
637DM	360	W	Ponds	1970
638DM	360	W	Reservoirs	1983
639BZ	364	W	Reservoir	1928
640BZ	365	W	Reservoirs	1909
641BZ	365	W	Reservoirs	1938
642AU	365	NW	Unspecified Pit	1891
643AZ	369	S	Unspecified Quarry	1891
644DM	369	W	Reservoirs	1891
645DM	369	W	Reservoirs	1909
646DM	369	W	Reservoirs	1938
647DM	369	W	Reservoirs	1928
648BE	371	W	Ponds	1891
649DN	372	SE	Coal Pit	1846
650AU	375	NW	Sandstone Quarry	1846
651DO	375	W	Reservoir	1909
652BB	377	NW	Unspecified Ground Workings	1938
653BB	377	NW	Unspecified Ground Workings	1910
654BB	377	NW	Unspecified Ground Workings	1928
655DP	380	W	Reservoirs	1938
656DP	380	W	Reservoirs	1909
657DP	380	W	Reservoirs	1928
658BC	383	NW	Unspecified Ground Workings	1910
659BC	383	NW	Unspecified Ground Workings	1938
660BC	383	NW	Unspecified Ground Workings	1928
661BA	383	NW	Filter Tank	1909
662BB	384	NW	Unspecified Pit	1966
663BB	384	NW	Unspecified Pit	1892
664AR	386	NW	Filter Beds	1970
665AR	386	NW	Filter Beds	1983
666DP	386	W	Reservoirs	1938
667DP	386	W	Reservoirs	1909
668DP	386	W	Reservoirs	1928
669DM	393	W	Reservoirs	1938
670DM	393	W	Reservoirs	1909
671DM	393	W	Reservoirs	1928
672AR	394	NW	Sewage Works	1938
673AR	394	NW	Sewage Works	1910

674AR	394	NW	Sewage Works	1928
675BF	396	S	Cuttings	1891
676AR	397	NW	Filter Beds	1938
677AR	397	NW	Filter Beds	1928
678AR	397	NW	Filter Beds	1910
679BE	419	W	Unspecified Ground Workings	1909
680BF	421	S	Cuttings	1970
681BF	421	S	Cuttings	1983
682DQ	426	SE	Old Coal Pit	1846
683BG	435	W	Unspecified Ground Workings	1970
684BG	435	W	Unspecified Ground Workings	1983
685BE	444	W	Unspecified Heap	1891
686BJ	453	NW	Refuse Heap	1928
687BJ	453	NW	Refuse Heap	1938
688DR	458	SE	Old Coal Pit	1846
689BL	460	S	Cuttings	1909
690BL	460	S	Cuttings	1938
691BL	460	S	Cuttings	1928
692BM	461	NW	Filter Beds	1938
693BM	461	NW	Filter Beds	1928
694BM	461	NW	Filter Tanks	1910
695BN	480	NW	Sludge Beds	1983
696BN	480	NW	Sludge Beds	1970
697	483	NW	Pond	1966
698DS	485	N	Cuttings	1966
699BQ	488	N	Refuse Heap	1983
700BQ	488	N	Refuse Heap	1970
701BR	489	N	Cuttings	1928
702BR	489	N	Cuttings	1938
703BR	489	N	Cuttings	1910

2. Environmental Permits, Incidents and Registers Map



2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

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

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

8

The following IPC Authorisations are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
134J	211	W	368900 423750	Operator: St Regis Paper Co Ltd Address: Hollins Paper Mill, PO Box 15, Hollins Road, Darwen, Lancashire, BB3 0BE Process: Paper And Pulp Manufacturing Processes	Permit Number: AU6277 Original Permit Number: IPCAPP Date Approved: 11-2-1999 Effective Date: 1-3-1999 Status: Revoked - Now Ippc
135K	213	NW	369100 424100	Operator: Akzo Nobel Decorative Coatings Ltd Address: Polymer Plant, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Process: Manufacture And Use Of Organic Chemicals	Permit Number: AK4788 Original Permit Number: IPCAPP Date Approved: 7-3-1994 Effective Date: 21-3-1994 Status: Superseded By Variation
136K	213	NW	369100 424100	Operator: Akzo Nobel Decorative Coatings Ltd Address: Polymer Plant, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Process: Manufacture And Use Of Organic Chemicals	Permit Number: BC6608 Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
137K	213	NW	369100 424100	Operator: Akzo Nobel Decorative Coatings Ltd Address: Polymer Plant, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Process: Manufacture And Use Of Organic Chemicals	Permit Number: BS2615 Original Permit Number: IPCMINVAR Date Approved: 24-7-2002 Effective Date: 31-7-2002 Status: Superseded By Variation
138K	213	NW	369100 424100	Operator: Akzo Nobel Decorative Coatings Ltd Address: Polymer Plant, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Process: Manufacture And Use Of Organic Chemicals	Permit Number: BT8422 Original Permit Number: IPCMINVAR Date Approved: 10-12-2002 Effective Date: 16-12-2002 Status: Revoked - Now Ippc
139L	397	W	368700 423700	Operator: St Regis Paper Co Ltd Address: Central Power Services, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Process: Combustion Processes	Permit Number: BC5067 Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
140L	397	W	368700 423700	Operator: St Regis Paper Co Ltd Address: Central Power Services, Lower Eccleshill Road, Darwen, Lancashire, BB3	Permit Number: BH7423 Original Permit Number: IPCMAJVAR

ID	Distance (m)	Direction	NGR	Details	
				0RP Process: Combustion Processes	Date Approved: 22-3-2000 Effective Date: 24-3-2000 Status: Revoked - Now Ippc
141L	397	W	368700 423700	Operator: St Regis Paper Co Ltd Address: Central Power Services, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Process: Combustion Processes	Permit Number: AA2020 Original Permit Number: IPCAPP Date Approved: 7-2-1992 Effective Date: 7-2-1992 Status: Superseded By Variation

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

7

The following Part A(1) and IPPC Authorised Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
127O	116	NW	369080 423890	Operator: CROWN PAINTS LIMITED Installation Name: DARWEN POLYMER PLANT EPR/VP3136GB Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS	Permit Number: VP3136GB Original Permit Number: VP3136GB EPR Reference: EA/EPR/VP3136GB/T001 Issue Date: 02/04/2009 Effective Date: 02/04/2009 Last date noted as effective: 2018-12-03 Status: TRANSFER EFFECTIVE
128J	211	W	368900 423750	Operator: ST REGIS PAPER CO LTD Installation Name: - Process: COMBUSTION; ANY FUEL =>50MW	Permit Number: BK1406 Original Permit Number: BK1406 EPR Reference: - Issue Date: 20/03/2002 Effective Date: 20/03/2002 Last date noted as effective: 2004-10-01 Status: SUPERSEDED BY PAS
129J	211	W	368900 423750	Operator: ST REGIS PAPER CO LTD Installation Name: - Process: PAPER, PULP & BOARD; PRODUCING PAPER/BOARD >20T/D	Permit Number: BK1406 Original Permit Number: BK1406 EPR Reference: - Issue Date: 20/03/2002 Effective Date: 20/03/2002 Last date noted as effective: 2004-10-01 Status: SUPERSEDED BY PAS
130K	213	NW	369100 424100	Operator: AKZO NOBEL DECORATIVE COATINGS LTD Installation Name: DARWEN POLYMER PLANT EPR/BU5445IP Process: ORGANIC CHEMICALS; RECOVERING ETC ACRYLIC ACID ETC	Permit Number: BU5445IP Original Permit Number: BU5445IP EPR Reference: - Issue Date: 13/12/2006 Effective Date: 13/12/2006 Last date noted as effective: 2018-12-03 Status: SUPERCEDED
131K	213	NW	369100 424100	Operator: CROWN PAINTS LIMITED Installation Name: DARWEN POLYMER PLANT Process: ORGANIC CHEMICALS; RECOVERING ETC ACRYLIC ACID ETC	Permit Number: VP3136GB Original Permit Number: VP3136GB EPR Reference: EA/EPR/VP3136GB/T001 Issue Date: 02/04/2009 Effective Date: 02/04/2009 Last date noted as effective: 2010-07-01 Status: TRANSFER EFFECTIVE

ID	Distance (m)	Direction	NGR	Details	
132M	392	S	369110 423250	Operator: LUCITE INTERNATIONAL UK LIMITED Installation Name: LUCITE CHAPELS PARK Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS	Permit Number: QP3636YP Original Permit Number: BL8678IJ EPR Reference: - Issue Date: 16/06/2017 Effective Date: 16/06/2017 Last date noted as effective: 2018-12-03 Status: EFFECTIVE
133M	392	S	369110 423250	Operator: LUCITE INTERNATIONAL UK LIMITED Installation Name: LUCITE CHAPELS PARK Process: ORGANIC CHEMICALS; PLASTIC MATERIALS EG POLYMERS	Permit Number: ZP3733CG Original Permit Number: BL8678IJ EPR Reference: - Issue Date: 09/03/2012 Effective Date: 09/03/2012 Last date noted as effective: 2018-12-03 Status: SUPERCEDED

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

1

The following Red List Discharge Consent records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
19E	39	NW	369300 424100	Address: WOLSTENHOLME INTERNATIONAL LTD, INTERCEPTOR PIT, LOWER ECCLESHILL RD, DARWEN, LANCASHIRE Permit Number: 017180566 Permit Version: 1 Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY)	Discharge Type: Undefined or Other Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Catchment: - Approval Date: 15-Jul-1996

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

5

The following List 1 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
9L	397	W	368700 423700	Name: St Regis Paper Co Ltd Status: Not Active Receiving Water: River Darwen	Authorised Substances: Mercury (other)
10C	451	NW	368960 424340	Name: Darwen Secondary Stw Status: Active Receiving Water: -	Authorised Substances: -
11C	451	NW	368960 424340	Name: Darwen Secondary Stw Status: Not Active Receiving Water: -	Authorised Substances: Mercury (other)
12D	469	NW	368970	Name: Darwen Tertiary Stw	Authorised Substances: -

ID	Distance (m)	Direction	NGR	Details	
			424390	Status: Active Receiving Water: -	
13D	469	NW	368970 424390	Name: Darwen Tertiary Stw Status: Not Active Receiving Water: -	Authorised Substances: Mercury (other)

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

5

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
14E	39	NW	369300 424100	Name: Wolstenholme International Ltd, Darwen Status: Not Active Receiving Water: River Darwen	Authorised Substances: Copper, pH, Zinc
15J	211	W	368900 423750	Name: St Regis Paper Co Ltd, Darwen, Lancashire - Outlet W1 Status: Active Receiving Water: -	Authorised Substances: Tributyltin, Triphenyltin, Pentachlorophenol - ARCHIVE (List 1)
16C	451	NW	368960 424340	Name: Darwen Wwtw (north West Water Ltd) - Secondary Outfall Status: Not Active Receiving Water: -	Authorised Substances: Tributyltin, Triphenyltin
17C	451	NW	368960 424340	Name: St Regis Paper Co Ltd Status: Not Active Receiving Water: River Darwen	Authorised Substances: Tributyltin, Triphenyltin
18D	469	NW	368970 424390	Name: Darwen Wwtw (north West Water Ltd) - Tertiary Outfall Status: Not Active Receiving Water: -	Authorised Substances: Tributyltin, Triphenyltin

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

5

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

ID	Distance (m)	Direction	NGR	Details	
121	0	On Site	369379 424088	Address: Wolstenholme International Ltd, Lower Eccleshill Road, Darwen, BB3 0RP Process: Non-ferrous Metal Foundry Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
122N	51	SE	369150	Address: Express Asphalt, Goose House	Enforcement: No Enforcements Notified

ID	Distance (m)	Direction	NGR	Details	
			423611	Lane, Darwen, BB3 0EH Process: Other Mineral Processes Status: Current Permit Permit Type: Part B	Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
123N	51	SE	369158 423619	Address: Darwen Roadstone Ltd, Goose House Lane, Darwen, BB3 0EH Process: Roadstone Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
124	155	S	369521 423690	Address: Crown Paints (Formerly Akzo Nobel), Hollins Road, Darwen, BB3 2LT Process: Coating Processes Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
125	224	S	369158 423424	Address: Darwen Roadstone Ltd, Goosehouse Lane, Darwen, BB3 0EH Process: Roadstone Coating Processes Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

86

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

ID	Distance (m)	Direction	NGR	Details	
20E	39	NW	369300 424100	Address: INTERCEPTOR PIT, LOWER ECCLESHILL RD, DARWEN, LANCASHIRE Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: 017180566 Permit Version: 1	Receiving Water: DAVY FIELD BROOK Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: Effective Date: 15-Jul-1996 Revocation Date: 10/09/2009
21F	328	NW	368850 423910	Address: HOLLINS PAPER MILL, DARWEN, LANCASHIRE Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 017190055 Permit Version: 2	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Jan-1981 Revocation Date: 06/04/1990
22F	328	NW	368850 423910	Address: HOLLINS PAPER MILL, DARWEN, LANCASHIRE Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 017190055 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Sep-1979 Revocation Date: 31/12/1980

ID	Distance (m)	Direction	NGR	Details	
23	340	NW	368870 423970	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 11	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: 07/04/1998 Effective Date: 07-Apr-1998 Revocation Date: 19/12/2000
24	354	NW	368900 424060	Address: BBN0165 CSO, ANCHOR LANE, DARWEN, LANCASHIRE, ENGLAND, BB3 0RR Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: NPSWQD002980 Permit Version: 1	Receiving Water: RIVER DARWEN Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 07/10/2008 Effective Date: 15-Dec-2008 Revocation Date:
25H	367	NW	368770 423840	Address: CROWN DECORATIVE PRODUCTS, WALPAMUR WORKS, HOLLINS ROAD, DARWEN, LANCASHIRE Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: 017190112 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 13-Dec-1973 Revocation Date: 23/08/1995
26G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 4	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 25-Mar-1991 Revocation Date: 03/03/1993
27G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 6	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 06-Jul-1993 Revocation Date: 31/03/1994
28G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 4	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 25-Mar-1991 Revocation Date: 03/03/1993
29G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 3	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 09-Apr-1987 Revocation Date: 24/03/1991
30G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 7	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1994 Revocation Date: 31/08/1994
31G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 8	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Sep-1994 Revocation Date: 28/02/1995

ID	Distance (m)	Direction	NGR	Details	
32G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 7	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1994 Revocation Date: 31/08/1994
33G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 9	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Mar-1995 Revocation Date: 29/02/1996
34G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 19-Oct-1979 Revocation Date: 30/01/1985
35G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 12	Receiving Water: RIVER DARWEN Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 20/12/2000 Effective Date: 20-Dec-2000 Revocation Date: 31/12/2009
36G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 2	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 31-Jan-1985 Revocation Date: 08/04/1987
37G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 5	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 04-Mar-1993 Revocation Date: 05/07/1993
38G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 6	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 06-Jul-1993 Revocation Date: 31/03/1994
39G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 8	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Sep-1994 Revocation Date: 28/02/1995
40G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 10	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Mar-1996 Revocation Date: 06/04/1998
41G	368	NW	368980	Address: DARWEN STW, ANCHOR LANE,	Receiving Water: RIVER DARWEN

ID	Distance (m)	Direction	NGR	Details	
			424200	DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 9	Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Mar-1995 Revocation Date: 29/02/1996
42G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 5	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 04-Mar-1993 Revocation Date: 05/07/1993
43G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 13	Receiving Water: RIVER DARWEN Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2008 Effective Date: 01-Jan-2010 Revocation Date:
44G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 3	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 09-Apr-1987 Revocation Date: 24/03/1991
45G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 19-Oct-1979 Revocation Date: 30/01/1985
46G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 2	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 31-Jan-1985 Revocation Date: 08/04/1987
47G	368	NW	368980 424200	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 017160025 Permit Version: 10	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Mar-1996 Revocation Date: 06/04/1998
48H	394	NW	368750 423860	Address: LODGE AT REAR OF AKZO NOBEL DARWEN, HOLLINS ROAD, DARWEN, LANCASHIRE Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: 017190570 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: Effective Date: 23-Jul-1996 Revocation Date: 29/09/1996
49H	394	NW	368750 423860	Address: LODGE AT REAR OF AKZO NOBEL DARWEN, HOLLINS ROAD, DARWEN, LANCASHIRE Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: 017190504 Permit Version: 1	Receiving Water: RIVER DARWEN Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: Effective Date: 05-Sep-1994 Revocation Date:
50	401	W	368770	Address: CROWN DECORATIVE PRODUCTS,	Receiving Water: RIVER DARWEN

ID	Distance (m)	Direction	NGR	Details	
			423910	WALPAMUR WORKS, HOLLINS ROAD, DARWEN, LANCASHIRE Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: 017190113 Permit Version: 1	Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 13-Dec-1973 Revocation Date: 13/02/1991
51I	407	W	368710 423540	Address: DARWEN SSO, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 017160092 Permit Version: 1	Receiving Water: RIVER DARWEN Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: Effective Date: 23-Nov-1982 Revocation Date:
52	412	SW	368730 423480	Address: CLARENCE ST, BLACKBURN DC, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01BBN0101 Permit Version: 3	Receiving Water: RIVER DARWEN Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 06/11/2008 Effective Date: 06-Nov-2008 Revocation Date:
53I	416	W	368700 423540	Address: CLARENCE ST, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01LA1915 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 03-May-1973 Revocation Date: 03/05/1973
54I	416	W	368700 423540	Address: CLARENCE ST, BLACKBURN DC, LANCASHIRE Effluent Type: MISCELLANEOUS DISCHARGES - EMERGENCY DISCHARGES Permit Number: 01BBN0101 Permit Version: 1	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Apr-1991 Revocation Date: 29/06/2004
55I	416	W	368700 423540	Address: CLARENCE ST, BLACKBURN DC, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01BBN0101 Permit Version: 2	Receiving Water: RIVER DARWEN Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: Effective Date: 30-Jun-2004 Revocation Date: 05/11/2008
56C	425	NW	368990 424340	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 11	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: 07/04/1998 Effective Date: 07-Apr-1998 Revocation Date: 19/12/2000
57	445	W	368670 423540	Address: HOLLINS PAPER MILL, DARWEN, LANCASHIRE Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 011191/6/DN Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1991 Revocation Date: 01/04/1991
58D	467	NW	368982 424402	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 6	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 06-Jul-1993 Revocation Date: 31/03/1994
59D	467	NW	368982 424402	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES -	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1))

ID	Distance (m)	Direction	NGR	Details	
				FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 10	Issue date: Effective Date: 01-Mar-1996 Revocation Date: 06/04/1998
60D	467	NW	368982 424402	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 12	Receiving Water: RIVER DARWEN Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 20/12/2000 Effective Date: 20-Dec-2000 Revocation Date: 31/12/2009
61D	467	NW	368982 424402	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 7	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1994 Revocation Date: 31/08/1994
62D	467	NW	368982 424402	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 13	Receiving Water: RIVER DARWEN Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2008 Effective Date: 01-Jan-2010 Revocation Date:
63D	467	NW	368982 424402	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 9	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Mar-1995 Revocation Date: 29/02/1996
64D	467	NW	368982 424402	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 8	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Sep-1994 Revocation Date: 28/02/1995
65D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 8	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Sep-1994 Revocation Date: 28/02/1995
66D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 2	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 31-Jan-1985 Revocation Date: 08/04/1987
67D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 8	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Sep-1994 Revocation Date: 28/02/1995
68D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Mar-1995

ID	Distance (m)	Direction	NGR	Details	
				COMPANY Permit Number: 017160025 Permit Version: 9	Revocation Date: 29/02/1996
69D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 2	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 31-Jan-1985 Revocation Date: 08/04/1987
70D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 6	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 06-Jul-1993 Revocation Date: 31/03/1994
71D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 9	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Mar-1995 Revocation Date: 29/02/1996
72D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 5	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 04-Mar-1993 Revocation Date: 05/07/1993
73D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 4	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 25-Mar-1991 Revocation Date: 03/03/1993
74D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 13	Receiving Water: RIVER DARWEN Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2008 Effective Date: 01-Jan-2010 Revocation Date:
75D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 7	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1994 Revocation Date: 31/08/1994
76D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 9	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Mar-1995 Revocation Date: 29/02/1996
77D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Sep-1994 Revocation Date: 28/02/1995

ID	Distance (m)	Direction	NGR	Details	
				Permit Number: 017160025 Permit Version: 8	
78D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 4	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 25-Mar-1991 Revocation Date: 03/03/1993
79D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 3	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 09-Apr-1987 Revocation Date: 24/03/1991
80D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 19-Oct-1979 Revocation Date: 30/01/1985
81D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 3	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 09-Apr-1987 Revocation Date: 24/03/1991
82D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 7	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1994 Revocation Date: 31/08/1994
83D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 4	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 25-Mar-1991 Revocation Date: 03/03/1993
84D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 2	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 31-Jan-1985 Revocation Date: 08/04/1987
85D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 3	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 09-Apr-1987 Revocation Date: 24/03/1991
86D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 06-Jul-1993 Revocation Date: 31/03/1994

ID	Distance (m)	Direction	NGR	Details	
				Permit Version: 6	
87D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 5	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 04-Mar-1993 Revocation Date: 05/07/1993
88D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 19-Oct-1979 Revocation Date: 30/01/1985
89D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 5	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 04-Mar-1993 Revocation Date: 05/07/1993
90D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 19-Oct-1979 Revocation Date: 30/01/1985
91D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 10	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Mar-1996 Revocation Date: 06/04/1998
92D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 10	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Mar-1996 Revocation Date: 06/04/1998
93D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 5	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 04-Mar-1993 Revocation Date: 05/07/1993
94D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 2	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 31-Jan-1985 Revocation Date: 08/04/1987
95D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 8	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Sep-1994 Revocation Date: 28/02/1995

ID	Distance (m)	Direction	NGR	Details	
96D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 7	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1994 Revocation Date: 31/08/1994
97D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 6	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 06-Jul-1993 Revocation Date: 31/03/1994
98D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 3	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 09-Apr-1987 Revocation Date: 24/03/1991
99D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 1	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 19-Oct-1979 Revocation Date: 30/01/1985
100D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 9	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Mar-1995 Revocation Date: 29/02/1996
101D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 4	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 25-Mar-1991 Revocation Date: 03/03/1993
102D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 7	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1994 Revocation Date: 31/08/1994
103D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 10	Receiving Water: RIVER DARWEN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Mar-1996 Revocation Date: 06/04/1998
104D	467	NW	368980 424400	Address: DARWEN STW, ANCHOR LANE, DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 6	Receiving Water: RIVER DARWEN Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 06-Jul-1993 Revocation Date: 31/03/1994
105D	467	NW	368980	Address: DARWEN STW, ANCHOR LANE,	Receiving Water: RIVER DARWEN

ID	Distance (m)	Direction	NGR	Details	
			424400	DARWEN, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 017160025 Permit Version: 10	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Mar-1996 Revocation Date: 06/04/1998

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
142P	425	W	10/02/0819	368690 423797	Withdrawn	28/10/2002	Queens Mill, Hollins Road, Darwen, BB3 0BG	Storage in part of hazardous materials	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

8

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

ID	Distance (m)	Direction	NGR	Details	
1A	125	S	369141 423521	Incident Date: 06-Apr-2001 Incident Identification: 1750 Pollutant: Specific Waste Materials Pollutant Description: Tarry Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2A	125	S	369141 423521	Incident Date: 06-Apr-2001 Incident Identification: 1750 Pollutant: Specific Waste Materials Pollutant Description: Tarry Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3	203	NW	368944 423812	Incident Date: 26-Jul-2002 Incident Identification: 94733 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
4	268	SE	369266 423425	Incident Date: 27-Aug-2004 Incident Identification: 262813 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)
5	369	N	369234 424469	Incident Date: 10-Mar-2004 Incident Identification: 222033 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6B	377	SW	368834 423385	Incident Date: 08-Aug-2002 Incident Identification: 98716 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
7B	377	SW	368834 423385	Incident Date: 24-Jul-2002 Incident Identification: 94091 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
8	482	NW	368910 424310	Incident Date: 18-Apr-2001 Incident Identification: 2624 Pollutant: Organic Chemicals/Products Pollutant Description: Solvents	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

0

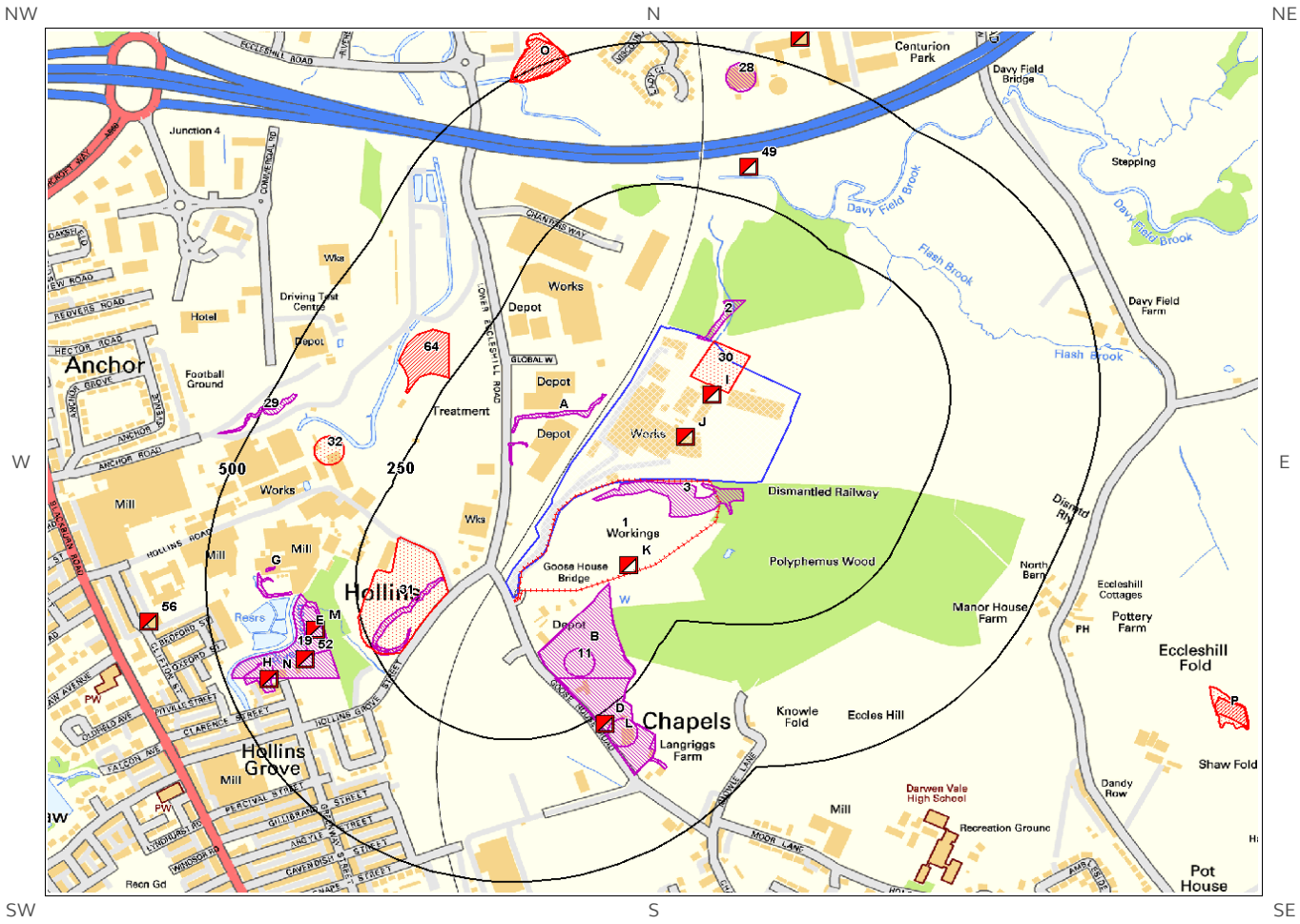
Database searched and no data found.

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

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

Database searched and no data found.

3. Landfill and Other Waste Sites Map



Site Outline

250
500
Search Buffers (m)

EA/NRW Active Landfill

EA/NRW Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

EA/NRW Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

3. Landfill and Other Waste Sites

3.1 Landfill Sites

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

1

The following Environment Agency/Natural Resources Wales landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
1	0	On Site	369300 423700	Address: Land/ Premises At, Goosehouse Lane, Darwen, Blackburn, Lancashire, BB3 0EH Landfill Reference: 54008.0 Environmental Permitting Regulations (Waste) Reference: GOO001 Landfill Type: A04: Household, Commercial & Industrial Waste Landfill	Operator: Infinis (Re - Gen) Limited Status: Modified IPPC Reference: EPR Reference:

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

8

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

ID	Distance (m)	Direction	NGR	Details	
30	0	On Site		Site Address: Wolstenholme Bronze Powders, Lower Eccleshill Road, Lower Darwen, Darwen, Lancashire Waste Licence: Yes Site Reference: L1/10/065, K1/10/020 Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 22-Jul-1977 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Wolstenholme Bronze Products First Recorded: 31-Dec-1977 Last Recorded: -
31	98	W		Site Address: Hollins Paper Mill, Hollins Grove Street, Darwen, Lancashire Waste Licence: Yes Site Reference: WD/100/64, L1/10/064, K1/10/023, Licence No 18 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 02-May-1977 Licence Surrendered: 01-Feb-1991 Licence Holder Address: - Operator: - Licence Holder: Reed Paper and Board (UK) Limited First Recorded: 31-May-1947 Last Recorded: 31-Jan-1991
32	344	W		Site Address: Anchor Road, Off Anchor Road, Darwen, Blackburn, Lancashire	Licence Issue: Licence Surrendered:

ID	Distance (m)	Direction	NGR	Details	
				Waste Licence: - Site Reference: K1/10/035 Waste Type: Waste unknown Environmental Permitting Regulations (Waste) Reference: -	Licence Holder Address: - Operator: - Licence Holder: Blackburn Borough Council First Recorded: - Last Recorded: -
33O	479	NW		Site Address: Lower Darwen Paper Mill, Greenbank Terrace, Lower Darwen, Lancashire Waste Licence: Yes Site Reference: L1/10/014, WD/100/14, K1/10/018, Licence No 24 Waste Type: Inert, Industrial, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 03-Jun-1977 Licence Surrendered: 29-Apr-1994 Licence Holder Address: Lower Darwen Paper Mill, Darwen Operator: - Licence Holder: Reed Paper and Board (UK) Limited First Recorded: 31-Dec-1977 Last Recorded: 31-Dec-1994
Not shown	638	N		Site Address: Milking Lane, Milking Lane, Lower Darwen, Lancashire Waste Licence: Yes Site Reference: L1/10/054, K1/10/042, Licence No 112 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 31-May-1979 Licence Surrendered: Licence Holder Address: Lower Darwen Paper Mill, Darwen, Lancashire Operator: - Licence Holder: Reed Paper and Board (UK) Limited First Recorded: 31-May-1979 Last Recorded: 31-Aug-1980
35P	829	SE		Site Address: Shaw Fold Farm, Off Roman Road, Eccleshill, Darwen, Lancashire Waste Licence: - Site Reference: K1/10/039 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Blackburn Borough Council First Recorded: 31-Dec-1982 Last Recorded: 31-Dec-1982
Not shown	1317	E		Site Address: New Waterside Paper Mill, Off Johnson Road, Darwen, Lancashire Waste Licence: Yes Site Reference: WD/100/11, L1/10/011, K1/10/041, Licence No 13 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 23-Mar-1977 Licence Surrendered: 13-Apr-1994 Licence Holder Address: Darwen, Lancashire Operator: - Licence Holder: New Waterside Paper Mills Limited First Recorded: 24-Mar-1977 Last Recorded: 25-Mar-1994
Not shown	1484	SE		Site Address: Shaws Of Darwen, Higher Waterside, Darwen, Waterside, Lancashire Waste Licence: Yes Site Reference: WD20 B1000, NE4240 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: YQ1/L/MES008	Licence Issue: 08-Sep-1977 Licence Surrendered: 13-Aug-2010 Licence Holder Address: Darwen, Higher Waterside, Lancs Operator: Shaws Of Darwen Licence Holder: Shaws Of Darwen First Recorded: 08-Sep-1994 Last Recorded: -

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

0

Database searched and no data found.

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

4

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

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
64	252	NW	368959 424058	Refuse Tip	1966 mapping	Polygon
65O	482	NW	369152 424587	Refuse Tip	1971 mapping	Polygon
66O	482	N	369152 424587	Refuse Tip	1997 mapping	Polygon
67P	851	SE	370306 423440	Refuse Tip	1965 mapping	Polygon

3.2 Other Waste Sites

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

28

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

ID	Distance (m)	Direction	NGR	Details		
2	0	On Site	369454 424129	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1930	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
3	3	S	369248 423815	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1954	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
4A	21	NW	369185 423966	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1967	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
5A	21	NW	369185 423966	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1954	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
6	78	NW	369103 423896	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1954	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
7B	96	SE	369229	Type of Site: Scrap	Planning Application Reference:	Further Details: N/A

ID	Distance (m)	Direction	NGR	Details		
			423583	Yard Site Address: N/A	N/A Date: 1990	Data Source: Historic Mapping Data Type: Polygon
8B	97	SE	369230 423583	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1996	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
9C	104	W	368910 423610	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1967	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
10C	104	W	368910 423610	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1954	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
11	133	SE	369218 423528	Type of Site: Waste Treatment Plant Site Address: Goosehouse Lane, Chapels, DARWEN, Lancashire, BB3 0EH	Planning Application Reference: 10/05/0318 Date: -	Further Details: Scheme comprises proposed development of a waste management facility including a residual waste transfer building, a materials recycling facility, composting plant and offices. An application (ref: 10/05/0318) for detailed planning permission was withdrawn from Blackburn B.C. Planning decision obtained Data Source: Historic Planning Application Data Type: Point
12D	158	SE	369270 423415	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
13D	158	SE	369270 423415	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1993	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
14D	160	SE	369263 423415	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
15D	160	SE	369263 423415	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1991	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
16L	274	SE	369290 423405	Type of Site: Recycling Facility Building Site Address: Former Wolstenholme Internatio, Goose House Lane, DARWEN, Lancashire, BB3 0EH	Planning Application Reference: 10/11/0930 Date: 25/04/2012	Further Details: Scheme comprises change of use with external building works of two buildings to a materials recycling facility. An application (ref: 10/11/0930) for detailed planning permission was submitted to Blackburn B.C. A detailed planning application has been submitted. Data Source: Historic Planning Application Data Type: Point
17E	314	W	368777	Type of Site:	Planning Application Reference:	Further Details: N/A

ID	Distance (m)	Direction	NGR	Details		
			423588	Breaker's Yard Site Address: N/A	N/A Date: 1998	Data Source: Historic Mapping Data Type: Polygon
18E	314	W	368777 423588	Type of Site: Breaker's Yard Site Address: N/A	Planning Application Reference: N/A Date: 1993	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
19	314	W	368770 423574	Type of Site: Breaker's Yard Site Address: N/A	Planning Application Reference: N/A Date: 1989	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
20F	356	W	368685 423663	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1954	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
21F	356	W	368685 423663	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1967	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
22G	385	W	368703 423691	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1967	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
23G	385	W	368703 423691	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1954	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
24H	416	W	368682 423515	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1993	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
25H	416	W	368682 423515	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1998	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
26H	416	W	368682 423515	Type of Site: Breaker's Yard Site Address: N/A	Planning Application Reference: N/A Date: 1989	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
27H	428	SW	368697 423487	Type of Site: Breakers Yard Site Address: N/A	Planning Application Reference: N/A Date: 1990	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
28	431	N	369487 424557	Type of Site: Waste Recycling Centre Site Address: Roman Road, BLACKBURN, Lancashire, BB1 2LX	Planning Application Reference: 1095/0585 Date: 01/10/1995	Further Details: Industrial waste recycling centre. Waste collection vehicle parking area. Scheme comprises the provision of an industrial waste recycling centre and an area for vehicle parking. Includes surfacing, kerbing and drainage works. An application (ref: 1095/0585) for Detailed Planning permission was submitted to Blackburn B.C. on 26th May 1995. Data Source: Historic Planning Application Data Type: Point

ID	Distance (m)	Direction	NGR	Details		
29	462	NW	368680 423965	Type of Site: Ground Workings and Refuse Heap Site Address: N/A	Planning Application Reference: N/A Date: 1954	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

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

26

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

ID	Distance (m)	Direction	NGR	Details	
38I	0	On Site	369439 423999	Site Address: Darwen Materials Recycling Facility, Lower Eccleshill Road, Darwen, Blackburn, Lancashire, BB3 0RP Type: 75kte Materials Recycling Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT739 EPR reference: EA/EPR/BB3931AB/V003 Operator: Suez Recycling And Recovery Uk Ltd Waste Management licence No: 103327 Annual Tonnage: 74999.0	Issue Date: 13/03/2012 Effective Date: - Modified: 26/06/2015 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Darwen Materials Recycling Facility Correspondence Address: -
39I	0	On Site	369439 423999	Site Address: Darwen Materials Recycling Facility, Lower Eccleshill Road, Darwen, Blackburn, Lancashire, BB3 0RP Type: 75kte Materials Recycling Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT739 EPR reference: EA/EPR/BB3931AB/V002 Operator: Sita U K Limited Waste Management licence No: 103327 Annual Tonnage: 74999.0	Issue Date: 13/03/2012 Effective Date: - Modified: 25/07/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Darwen Materials Recycling Facility Correspondence Address: -
40I	0	On Site	369439 423999	Site Address: Darwen Materials Recycling Facility, Lower Eccleshill Road, Darwen, Blackburn, Lancashire, BB3 0RP Type: 75kte Materials Recycling Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT739 EPR reference: EA/EPR/BB3931AB/V003 Operator: Sita U K Ltd Waste Management licence No: 103327 Annual Tonnage: 74999.0	Issue Date: 13/03/2012 Effective Date: - Modified: 26/06/2015 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Darwen Materials Recycling Facility Correspondence Address: -
41J	0	On Site	369394 423926	Site Address: Darwen Resource Recovery Centre, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Type: Special Waste Transfer Station Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT794 EPR reference: EA/EPR/BB3609KA/V004 Operator: Suez Recycling And Recovery U K Ltd Waste Management licence No: 401488	Issue Date: 19/11/2014 Effective Date: - Modified: 30/06/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Darwen Resource Recovery Centre Correspondence Address: -

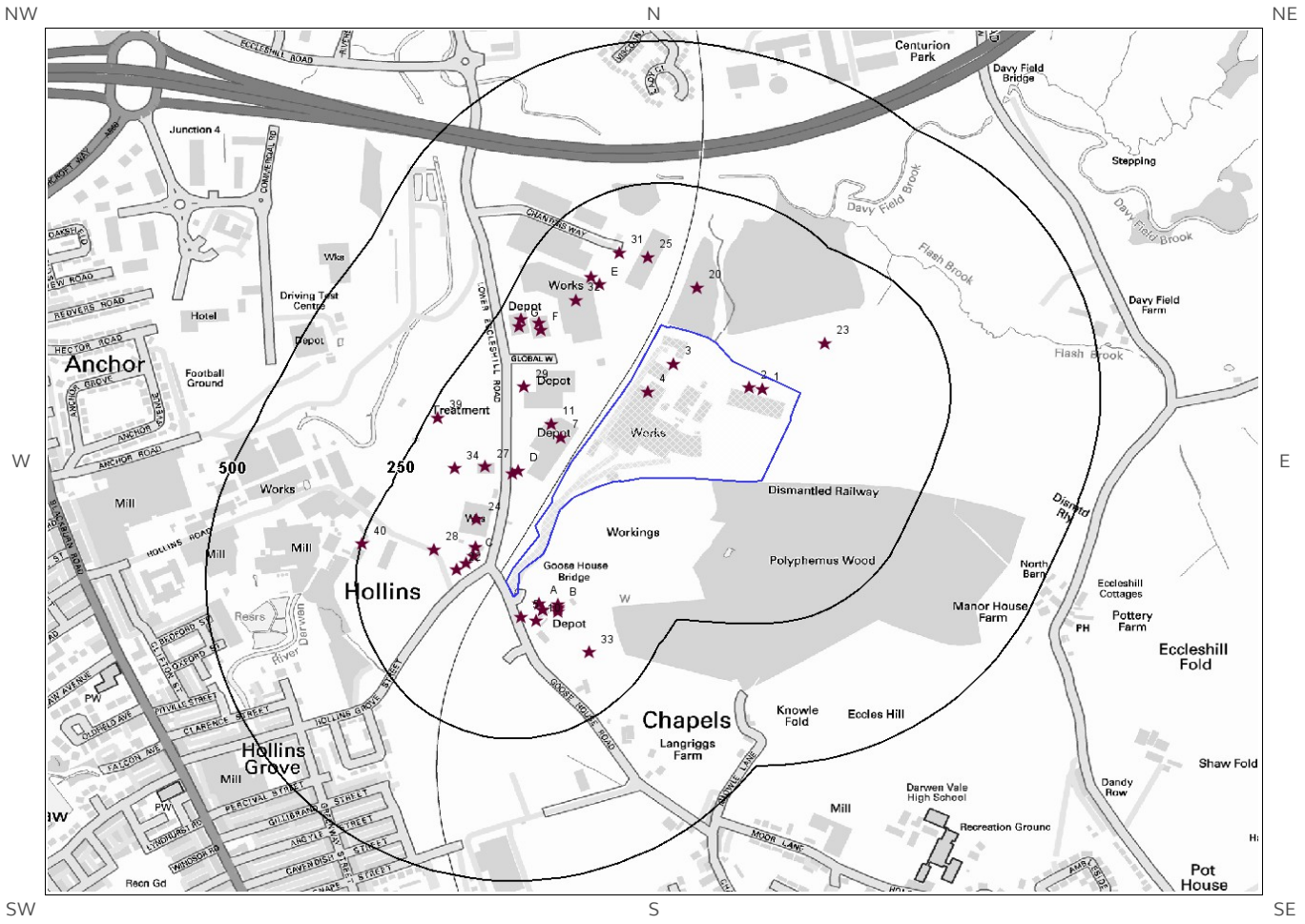
ID	Distance (m)	Direction	NGR	Details	
				Annual Tonnage: 110000.0	
42J	0	On Site	369394 423926	Site Address: Darwen Resource Recovery Centre, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Type: Special Waste Transfer Station Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT794 EPR reference: EA/EPR/BB3609KA/V004 Operator: Suez Recycling And Recovery U K Limited Waste Management licence No: 401488 Annual Tonnage: 110000.0	Issue Date: 19/11/2014 Effective Date: - Modified: 30/06/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Darwen Resource Recovery Centre Correspondence Address: -
43J	0	On Site	369394 423926	Site Address: Darwen Resource Recovery Centre, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Type: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT794 EPR reference: EA/EPR/BB3609KA/V002 Operator: Sita U K Limited Waste Management licence No: 401488 Annual Tonnage: 110000.0	Issue Date: 19/11/2014 Effective Date: - Modified: 16/01/2015 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Darwen Resource Recovery Centre Correspondence Address: -
44J	0	On Site	369394 423926	Site Address: Darwen Resource Recovery Centre, Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP Type: Special Waste Transfer Station Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT794 EPR reference: EA/EPR/BB3609KA/V003 Operator: Sita U K Limited Waste Management licence No: 401488 Annual Tonnage: 110000.0	Issue Date: 19/11/2014 Effective Date: - Modified: 26/06/2015 Surrendered Date: 0 Expiry Date: - Cancelled Date: - Status: Modified Site Name: Darwen Resource Recovery Centre Correspondence Address: -
45K	139	E	369300 423700	Site Address: Land/ Premises At, Goosehouse Lane, Darwen, Blackburn, Lancashire, BB3 0EH Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GOO001 EPR reference: EA/EPR/TP3091CZ/V002 Operator: Summerleaze Re-generation Ltd Waste Management licence No: 54008 Annual Tonnage: 15000.0	Issue Date: 18/03/1977 Effective Date: - Modified: 21/06/2000 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Goosehouse Quarry Correspondence Address: -
46K	139	E	369300 423700	Site Address: Land/ Premises At, Goosehouse Lane, Darwen, Blackburn, Lancashire, BB3 0EH Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GOO001 EPR reference: EA/EPR/TP3091CZ/V002 Operator: Infinis (Re - Gen) Limited Waste Management licence No: 54008 Annual Tonnage: 15000.0	Issue Date: 18/03/1977 Effective Date: - Modified: 21/06/2000 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Goosehouse Quarry Correspondence Address: -
47L	269	SE	369260 423420	Site Address: Land / Premises At, Goose House Road, Darwen, Lancashire, BB3 0EH Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations	Issue Date: 26/05/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: -

ID	Distance (m)	Direction	NGR	Details	
				(Waste) Licence Number: BRO019 EPR reference: EA/EPR/JP3497CQ/A001 Operator: Broadbent Autos Ltd Waste Management licence No: 54427 Annual Tonnage: 2500.0	Cancelled Date: - Status: Issued Site Name: Broadbent Autos Correspondence Address: -
48L	269	SE	369260 423420	Site Address: Land / Premises At, Goose House Road, Darwen, Lancashire, BB3 0EH Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MOT032 EPR reference: EA/EPR/CB3506SR/T001 Operator: Motorhog Ltd Waste Management licence No: 54427 Annual Tonnage: 2500.0	Issue Date: 26/05/2005 Effective Date: 26/01/2015 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Broadbent Autos Correspondence Address: -
49	307	N	369500 424400	Site Address: Davyfield Road, Blackburn, Lancashire, BB1 2LX Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BLA003 EPR reference: - Operator: Blackburn Borough Council Waste Management licence No: 54095 Annual Tonnage: 11520.0	Issue Date: 04/05/1993 Effective Date: - Modified: 04/06/2001 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Blackburn Borough Council T S Correspondence Address: Operations Depot, Davyfield Road, Blackburn, Lancashire, BB1 2LX
50M	329	W	368777 423586	Site Address: Plot 21, Clarence Street, Darwen, Nr Blackburn, Lancashire, BB3 1HQ Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HOL002 EPR reference: - Operator: Geoffrey Holt (date Of Birth 17/1/1958) Waste Management licence No: 54207 Annual Tonnage: 720.0	Issue Date: 19/03/1996 Effective Date: 29/09/2001 Modified: 28/09/2001 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: A B Car Spares Correspondence Address: 20, Heath Avenue, Ramsbottom, Bury, BL0 9UN
51M	329	W	368777 423586	Site Address: Plot 21, Clarence Street, Darwen, Blackburn, Lancashire, BB3 1LA Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LIV011 EPR reference: EA/EPR/LP3797CG/T004 Operator: Livsey Jean Lorraine & Scott Liam Stuart Waste Management licence No: 54207 Annual Tonnage: 720.0	Issue Date: 19/03/1996 Effective Date: 15/03/2005 Modified: 05/12/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: A B Car Spares Correspondence Address: -
52	362	W	368760 423534	Site Address: Higher Clarence St Ind Est, Unit 2, Higher Clarence Street, Darwen, Lancashire, BB3 1HQ Type: Vehicle Depollution Facility <5000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ANT037 EPR reference: EA/EPR/DB3200XG/A001 Operator: Berry Antony Waste Management licence No: 402583 Annual Tonnage: 4999.0	Issue Date: 07/08/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Berrys Auto Salvage Correspondence Address: -
53N	430	SW	368700 423500	Site Address: Clarence Street Car Breakers, Clarence Street, Darwen, Blackburn,	Issue Date: 20/03/1996 Effective Date: -

ID	Distance (m)	Direction	NGR	Details	
				Lancashire, BB3 1HQ Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CLA003 EPR reference: EA/EPR/MP3397CP/V003 Operator: Fitzsimmons Paul Waste Management licence No: 54208 Annual Tonnage: 240.0	Modified: 13/09/2018 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Clarence Street Car Breakers Correspondence Address: -
54N	430	SW	368700 423500	Site Address: Land/premises At, Clarence Street, Darwen, Blackburn, Lancashire, BB3 1HQ Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CLA003 EPR reference: EA/EPR/MP3397CP/A001 Operator: John Patrick Fitzsimmons Waste Management licence No: 54208 Annual Tonnage: 240.0	Issue Date: 20/03/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Clarence Street Car Breakers Correspondence Address: -
55	550	N	369586 424627	Site Address: Land/premises At, Davyfield Road, Blackburn, Lancashire, BB1 2LX Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BLA003 EPR reference: EA/EPR/WP3291CD/V002 Operator: Blackburn With Darwen Borough Council Waste Management licence No: 54095 Annual Tonnage: 11520.0	Issue Date: 04/05/1993 Effective Date: - Modified: 04/06/2001 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Davyfield Depot (Blackburn Borough Council T S) Correspondence Address: -
56	599	W	368500 423600	Site Address: Crown House, Hollins Road, Darwen, Lancs, BB3 0BG Type: In-House Storage Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AKZ002 EPR reference: - Operator: Akzo Nobel Decorative Coatings Ltd Waste Management licence No: 54333 Annual Tonnage: 1000.0	Issue Date: 26/06/2001 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Akzo Nobel Decorative Coatings Ltd Correspondence Address: Crown House, Hollins Road, Darwen, Lancs, BB3 0BG
Not shown	843	NE	369900 424800	Site Address: Roman Road, Blackburn, Lancashire, BB1 2LD Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT035 EPR reference: - Operator: Sita U K Ltd Waste Management licence No: 54200 Annual Tonnage: 24999.0	Issue Date: 02/10/1995 Effective Date: - Modified: 02/09/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Roman Road Recycling Centre Correspondence Address: Tustin Court, Portway, Preston, Lancashire, PR2 2YQ
Not shown	843	NE	369900 424800	Site Address: Roman Road, Blackburn, Lancashire, BB1 2LD Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT035 EPR reference: - Operator: Sita (Lancashire) Ltd Waste Management licence No: 54200	Issue Date: 02/10/1995 Effective Date: - Modified: 02/09/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Roman Road Recycling Centre Correspondence Address: Tustin Court, Portway, Preston, Lancashire, PR2 2YQ

ID	Distance (m)	Direction	NGR	Details	
				Annual Tonnage: 24999.0	
Not shown	843	NE	369900 424800	Site Address: Roman Road, Blackburn, Lancashire, BB1 Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT035 EPR reference: - Operator: Sita (Lancashire) Ltd Waste Management licence No: 54200 Annual Tonnage: 24999.0	Issue Date: 02/10/1995 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Roman Road Recycling Centre Correspondence Address: Tustin Court, Portway, Preston, Lancashire, PR2 2YQ
Not shown	843	NE	369900 424800	Site Address: Land/premises At, Roman Road, Blackburn, Lancashire, BB1 2LD Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT035 EPR reference: EA/EPR/LP3997CF/V002 Operator: Sita (Lancashire) Ltd Waste Management licence No: 54200 Annual Tonnage: 24999.0	Issue Date: 02/10/1995 Effective Date: - Modified: 02/09/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Roman Road Recycling Centre Correspondence Address: -
Not shown	843	NE	369900 424800	Site Address: Roman Road Transfer Station, Roman Road Industrial Estate, Blackburn, Lancashire, BB1 2LD Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT035 EPR reference: EA/EPR/LP3997CF/V004 Operator: Sita (Lancashire) Ltd Waste Management licence No: 54200 Annual Tonnage: 74999.0	Issue Date: 02/10/1995 Effective Date: - Modified: 08/09/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Roman Road Transfer Station Correspondence Address: -
Not shown	843	NE	369900 424800	Site Address: Roman Road Transfer Station, Roman Road Industrial Estate, Blackburn, Lancashire, BB1 2LD Type: Clinical Waste Transfer Station Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT035 EPR reference: EA/EPR/LP3997CF/S005 Operator: Sita (Lancashire) Ltd Waste Management licence No: 54200 Annual Tonnage: 0.0	Issue Date: 02/10/1995 Effective Date: - Modified: 08/09/2011 Surrendered Date: 02/03/2015 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Roman Road Transfer Station Correspondence Address: -
Not shown	1479	S	369182 422165	Site Address: P O Box 37, Hollins Road, Darwen, Lancashire, BB3 0GD Type: In-House Storage Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CRO073 EPR reference: EA/EPR/AP3597EA/T001 Operator: Crown Paints Ltd Waste Management licence No: 54333 Annual Tonnage: 1000.0	Issue Date: 26/06/2001 Effective Date: 17/03/2009 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Akzo Nobel Decorative Coatings Ltd Correspondence Address: -

4. Current Land Use Map



Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 40

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Works	369523 424008	Lancashire, BB3	Unspecified Works Or Factories	Industrial Features
2	0	On Site	Electricity Sub Station	369501 424011	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
3	0	On Site	Works	369374 424053	Lancashire, BB3	Unspecified Works Or Factories	Industrial Features
4	0	On Site	Punjab Paper Converters	369332 424004	Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP	Bathroom Fixtures, Fittings and Sanitary Equipment	Consumer Products
5	37	S	Electricity Sub Station	369120 423607	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
6A	38	SE	Depot	369150 423632	Lancashire, BB3	Container and Storage	Transport, Storage and Delivery
7	41	NW	Depot	369186 423924	Lancashire, BB3	Container and Storage	Transport, Storage and Delivery
8A	50	SE	Raw2k - Scrap My Car	369157 423620	Goose House Lane, Darwen, Lancashire, BB3 0EH	Scrap Metal Merchants	Recycling Services
9A	50	SE	Aggregate Industries	369157 423620	Goose House Lane, Darwen, Lancashire, BB3 0EH	Road Maintenance Equipment	Industrial Products
10	55	SE	Chimney	369146 423601	Lancashire, BB3	Chimneys	Industrial Features
11	67	NW	Printer Spares UK Ltd	369170 423947	Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP	Printing Related Machinery	Industrial Products
12C	69	NW	Tank	369042 423715	Lancashire, BB3	Tanks (Generic)	Industrial Features
13B	69	E	Tank	369182 423629	Lancashire, BB3	Tanks (Generic)	Industrial Features
14B	69	E	Tank	369181 423625	Lancashire, BB3	Tanks (Generic)	Industrial Features
15B	70	SE	Tank	369181 423622	Lancashire, BB3	Tanks (Generic)	Industrial Features
16B	72	SE	Tank	369181 423617	Lancashire, BB3	Tanks (Generic)	Industrial Features
17D	73	NW	Electricity Sub Station	369115 423865	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
18C	74	NW	Cooling Tank	369045 423731	Lancashire, BB3	Unspecified Works Or Factories	Industrial Features

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
19C	75	NW	Tank	369028 423702	Lancashire, BB3	Tanks (Generic)	Industrial Features
20	78	N	Pylon	369413 424187	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
21D	79	NW	Electricity Sub Station	369106 423860	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
22	85	W	Tank	369013 423691	Lancashire, BB3	Tanks (Generic)	Industrial Features
23	97	NE	Pylon	369626 424089	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
24	100	W	Works	369046 423779	Lancashire, BB3	Unspecified Works Or Factories	Industrial Features
25	123	N	Wheelbase Engineering Ltd	369332 424241	Lower Eccleshill Road, Darwen, Lancashire, BB3 0RP	Industrial Engineers	Engineering Services
26E	126	NW	Tank	369251 424193	Lancashire, BB3	Tanks (Generic)	Industrial Features
27	126	NW	Works	369060 423872	Lancashire, BB3	Unspecified Works Or Factories	Industrial Features
28	133	NW	Pipe Bridge	368975 423726	Lancashire, BB3	Pipelines	Industrial Features
29	142	NW	Depot	369125 424013	Lancashire, BB3	Container and Storage	Transport, Storage and Delivery
30E	144	NW	Electricity Sub Station	369237 424205	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
31	146	NW	Electricity Sub Station	369285 424249	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
32	147	NW	Works	369212 424165	Lancashire, BB3	Unspecified Works Or Factories	Industrial Features
33	156	SE	Scrap Yard	369234 423546	Lancashire, BB3	Scrap Metal Merchants	Recycling Services
34	170	NW	Electricity Sub Station	369009 423869	Lancashire, BB3	Electrical Features	Infrastructure and Facilities
35F	176	NW	Depot	369153 424113	Lancashire, BB3	Container and Storage	Transport, Storage and Delivery
36F	184	NW	Teknion UK Ltd	369150 424125	Unit 2, Global Way, Darwen, Lancashire, BB3 0RP	Container and Storage	Transport, Storage and Delivery
37G	210	NW	Depot	369117 424119	Lancashire, BB3	Container and Storage	Transport, Storage and Delivery
38G	214	NW	Wilkinson Mobile Catering	369120 424132	Unit 1, Global Way, Darwen, Lancashire, BB3 0RW	Lifting and Handling Equipment	Industrial Products
39	235	NW	Works	368981 423958	Lancashire, BB3	Unspecified Works Or Factories	Industrial Features
40	250	W	Tank	368855 423737	Lancashire, BB3	Tanks (Generic)	Industrial Features

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

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5. Geology

5.1 Artificial Ground and Made Ground

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

Lex Code	Description	Rock Type
MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

5.3 Bedrock and Solid Geology

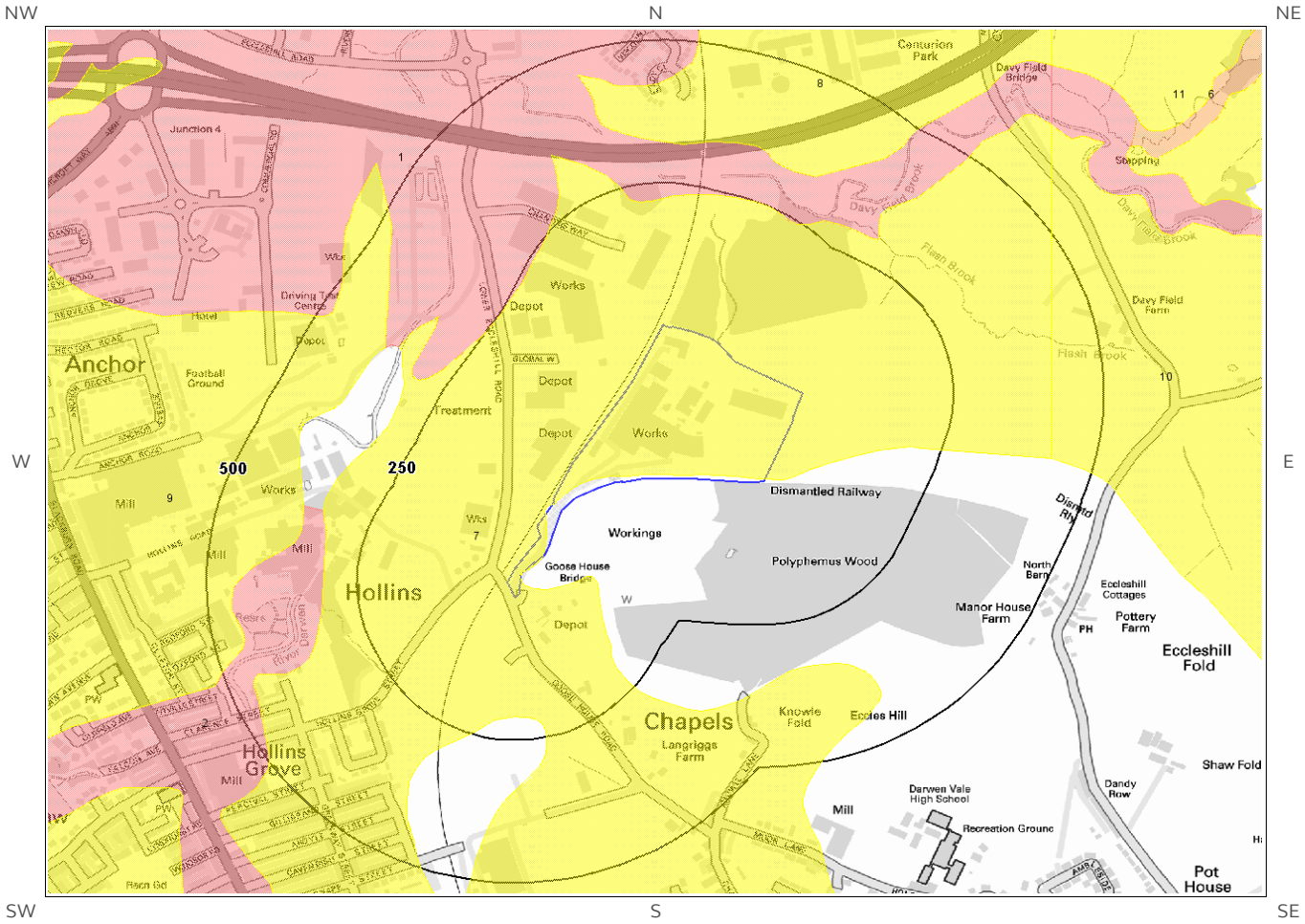
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
OL-SDST	OLD LAWRENCE ROCK	SANDSTONE
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE

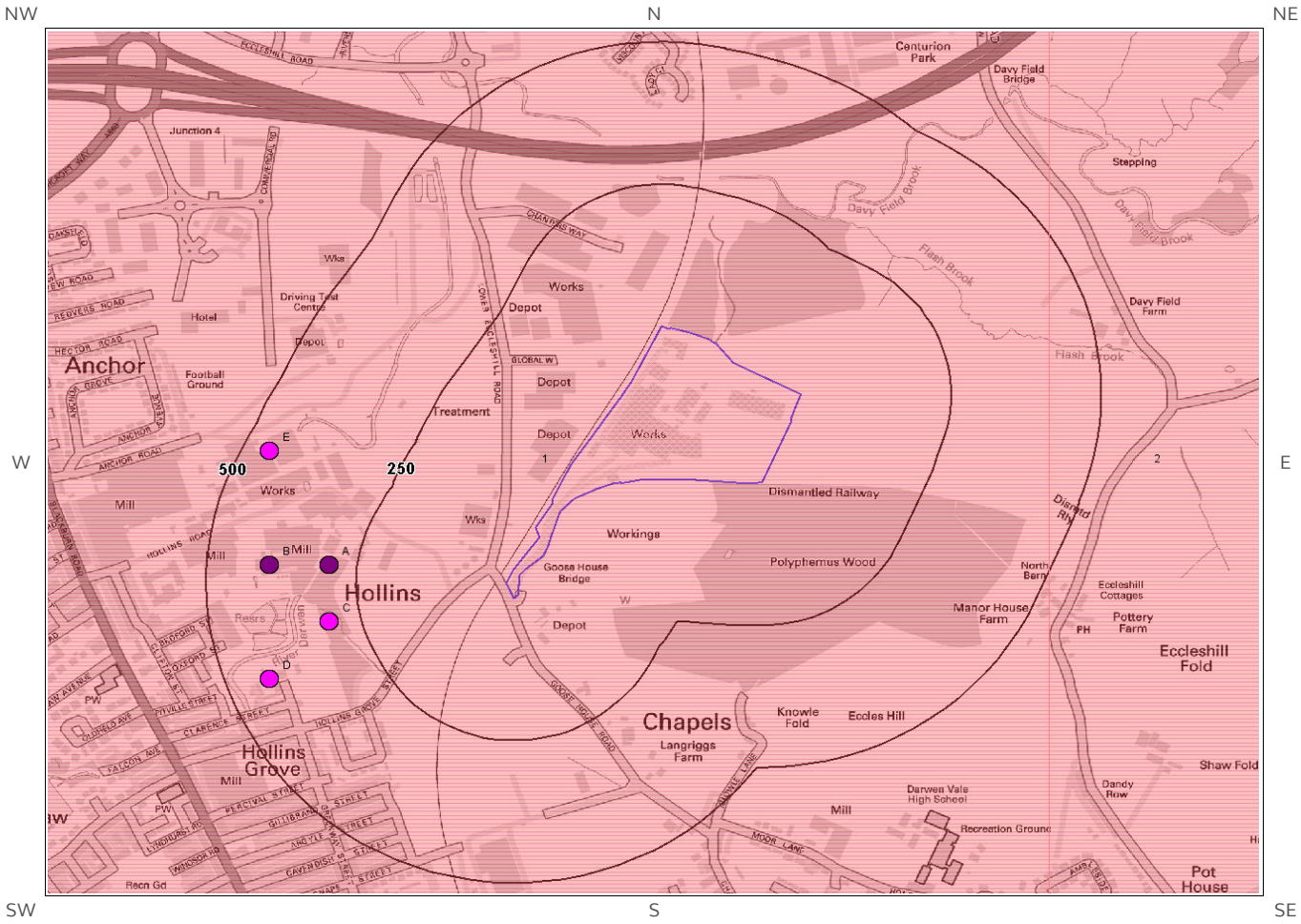
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



6b. Aquifer Within Bedrock Geology and Abstraction Licences



Site Outline

250 / 500 Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

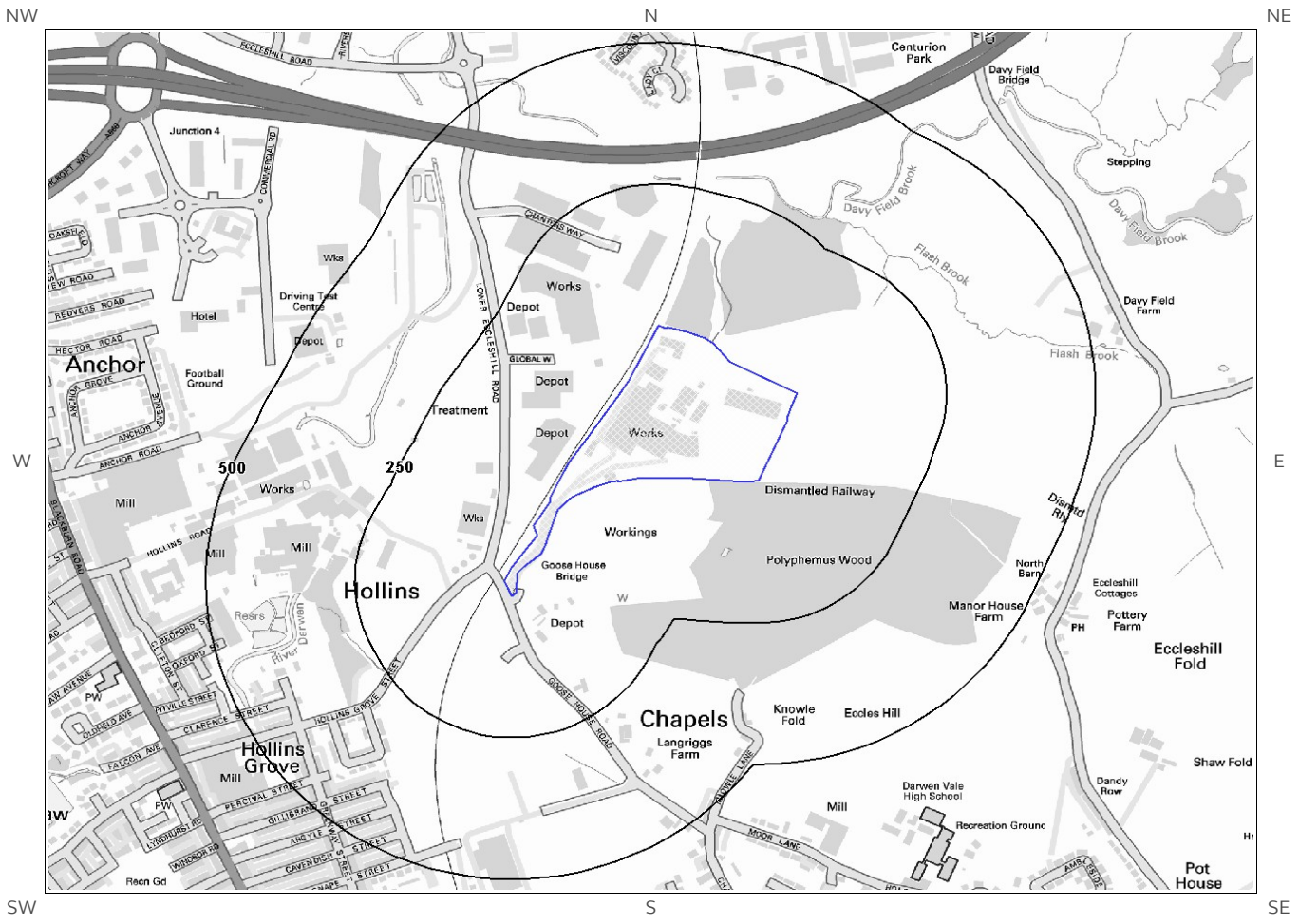
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

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



Site Outline

250 / 500 Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

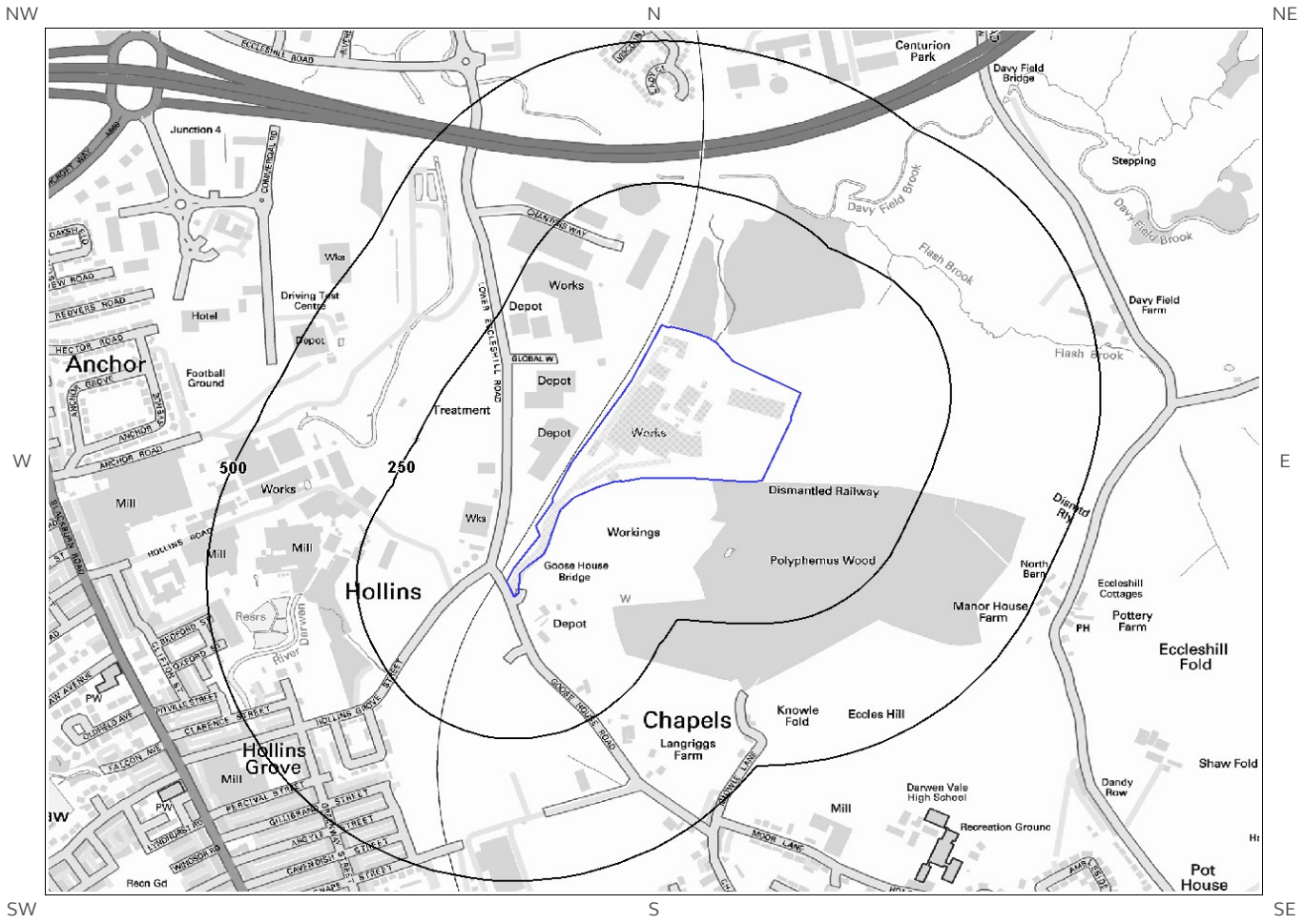
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

Source Protection Zone 3C - Total Catchment within Confined Aquifer

Site Outline

250 / 500 Search Buffers (m)

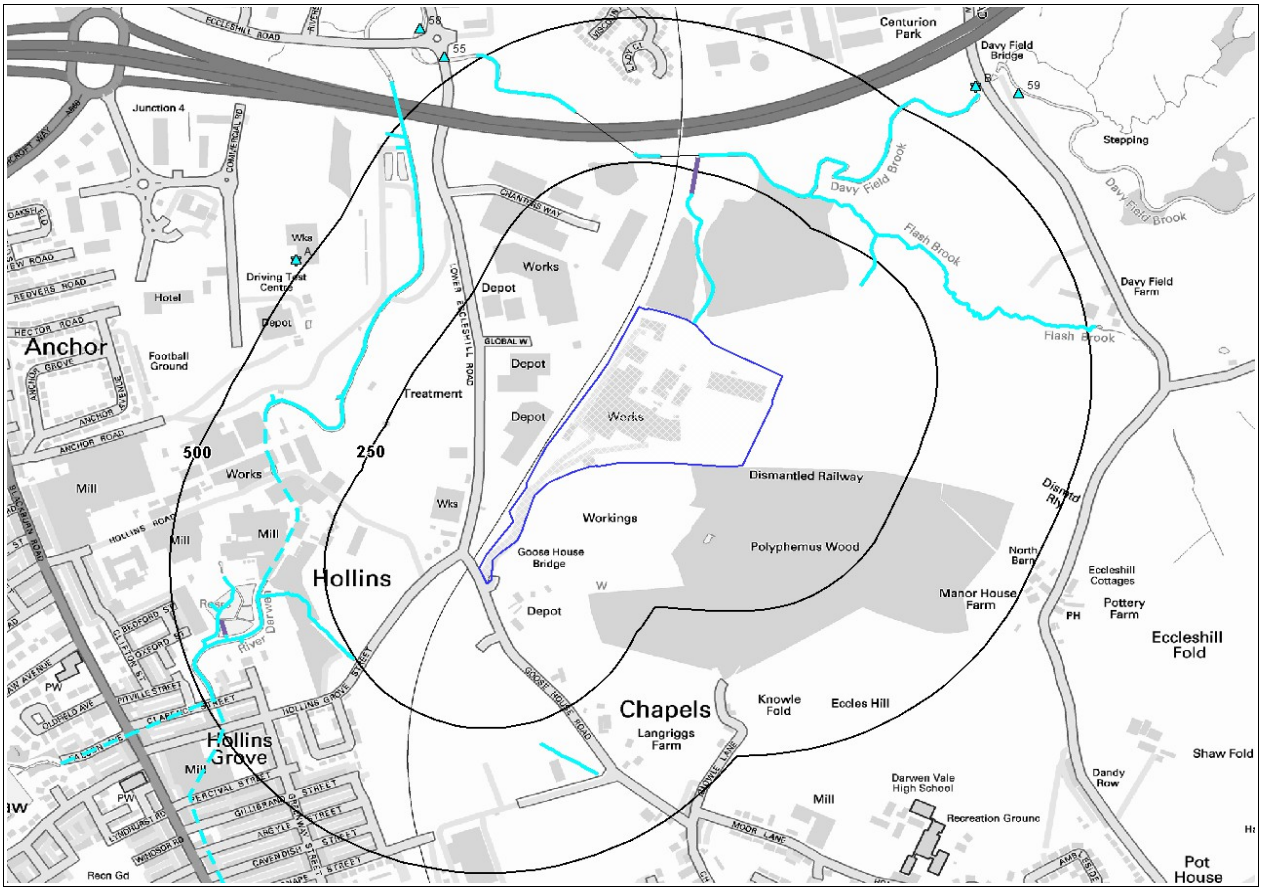
Potable Water Abstraction Licence

6e. Hydrology – Watercourse Network and River Quality

NW N NE

W E

SW S SE



Tidal River
Inland River
Underground or Elevated Tidal River
Underground or Elevated Inland River
Foreshore
General Quality Assessment: Chemistry
Canal
Underground or Elevated Canal
Lock or Flight of Locks
Lake, Reservoir, or Marsh
Drain or Transfer
General Quality Assessment: Biology
Site Outline
250
500
Search Buffers (m)

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
7	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
1	219	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
2	306	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
8	319	N	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
9	355	W	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
10	413	E	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

6.2 Aquifer within Bedrock Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	413	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site — Identified

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

ID	Distance (m)	Direction	NGR	Details	
4A	297	W	368800 423700	Status: Historical Licence No: 2671340038 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: ECCLESHILL MINESHAFT OVERFLOW AT INTAKE TO HOLLINS P/ MILL Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): 2.87727e+006 Max Daily Volume (m^3): 3773.26 Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
5A	297	W	368800 423700	Status: Historical Licence No: 2671340038 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: ECCLESHILL MINESHAFT OVERFLOW AT INTAKE TO HOLLINS P/ MILL Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): 2.87727e+006 Max Daily Volume (m^3): 3773.26 Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
6A	297	W	368800 423700	Status: Historical Licence No: 2671340038 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: ECCLESHILL MINESHAFT OVERFLOW AT INTAKE TO HOLLINS P/ MILL Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): 2.87727e+006 Max Daily Volume (m^3): 3773.26 Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
7B	397	W	368700 423700	Status: Historical Licence No: 2671340038 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLLINS PAPER MILL, DARWIN" Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
8B	397	W	368700 423700	Status: Historical Licence No: 2671340038 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLLINS PAPER MILL, DARWIN" Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
9B	397	W	368700 423700	Status: Historical Licence No: 2671340038 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLLINS PAPER MILL, DARWIN" Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
10B	397	W	368700 423700	Status: Historical Licence No: 2671340038 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLLINS PAPER MILL, DARWIN Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): 2.87727e+006 Max Daily Volume (m^3): 3773.26 Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
11B	397	W	368700 423700	Status: Historical Licence No: 2671340038 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLLINS PAPER MILL, DARWIN Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): 2.87727e+006 Max Daily Volume (m^3): 3773.26 Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
12B	397	W	368700 423700	Status: Historical Licence No: 2671340038 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLLINS PAPER MILL, DARWIN Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): 2.87727e+006 Max Daily Volume (m^3): 3773.26 Original Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
Not shown	1018	E	370600 424100	Status: Historical Licence No: 2671340034 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: B/HOLE SITUATED OFF JOHNSON RD, ECCLESHILL,NR NURSERY BROOK Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/05/2002 Version End Date:
Not shown	1018	E	370600 424100	Status: Historical Licence No: 2671340034 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "B/HOLE SITUATED OFF JOHNSON RD, ECCLESHILL,NR NURSERY BROOK" Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/05/2002 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1018	E	370600 424100	Status: Historical Licence No: 2671340034 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "B/HOLE SITUATED OFF JOHNSON RD, ECCLESHILL,NR NURSERY BROOK" Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/05/2002 Version End Date:
Not shown	1018	E	370600 424100	Status: Historical Licence No: 2671340034 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: B/HOLE SITUATED OFF JOHNSON RD, ECCLESHILL,NR NURSERY BROOK Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/05/2002 Version End Date:
Not shown	1018	E	370600 424100	Status: Active Licence No: 2671340034 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: B/HOLE SITUATED OFF JOHNSON RD, ECCLESHILL, NR NURSERY BROOK Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m^3): 26185 Max Daily Volume (m^3): 72.74 Original Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/05/2002 Version End Date:
Not shown	1018	E	370600 424100	Status: Active Licence No: 2671340034 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: B/HOLE SITUATED OFF JOHNSON RD, ECCLESHILL, NR NURSERY BROOK Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m^3): 26185 Max Daily Volume (m^3): 72.74 Original Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/05/2002 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site — Identified

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

ID	Distance (m)	Direction	NGR	Details	
19C	303	W	368800 423600	Status: Historical Licence No: 2671340037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "NAG BENT STREAM, DARWEN" Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
20C	303	W	368800 423600	Status: Historical Licence No: 2671340037	Annual Volume (m^3): - Max Daily Volume (m^3): -

ID	Distance (m)	Direction	NGR	Details	
				Details: Boiler Feed Direct Source: "Surface, Non-Tidal - North West Region" Point: "NAG BENT STREAM, DARWEN" Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
21C	303	W	368800 423600	Status: Historical Licence No: 2671340037 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "NAG BENT STREAM, DARWEN" Data Type: Point Name: ST REGIS PAPER COMPANY U K LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/08/1987 Version End Date:
22C	303	W	368800 423600	Status: Historical Licence No: 2671340037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: NAG BENT STREAM, DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
23C	303	W	368800 423600	Status: Historical Licence No: 2671340037 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: NAG BENT STREAM, DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
24C	303	W	368800 423600	Status: Historical Licence No: 2671340037 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: NAG BENT STREAM, DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
25D	430	SW	368700 423500	Status: Historical Licence No: 2671340037 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: R DARWEN IN DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
26D	430	SW	368700 423500	Status: Historical Licence No: 2671340037 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: R DARWEN IN DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
27D	430	SW	368700 423500	Status: Historical Licence No: 2671340037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R DARWEN IN DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
28E	457	NW	368700	Status: Historical	Annual Volume (m³): -

ID	Distance (m)	Direction	NGR	Details	
			423900	Licence No: 2671340036 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Surface, Non-Tidal - North West Region Point: RECIRCULATING TANK WITHIN LIC. HOLDER'S WORKS AT DARWEN Data Type: Point Name: CROWN BERGER LTD	Max Daily Volume (m³): - Application No: - Original Start Date: 09/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/10/1993 Version End Date:
29E	457	NW	368700 423900	Status: Historical Licence No: 2671340036 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RECIRCULATING TANK WITHIN LIC. HOLDER'S WORKS AT DARWEN Data Type: Point Name: CROWN BERGER LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 09/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/10/1993 Version End Date:
30E	457	NW	368700 423900	Status: Historical Licence No: 2671340036 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Surface, Non-Tidal - North West Region Point: RECIRCULATING TANK WITHIN LIC. HOLDER'S WORKS AT DARWEN Data Type: Point Name: CROWN BERGER LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 09/12/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/10/1993 Version End Date:
Not shown	877	SW	368300 423300	Status: Historical Licence No: 2671340037 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: SUNNYHURST BRK IN DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
Not shown	877	SW	368300 423300	Status: Historical Licence No: 2671340037 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: SUNNYHURST BRK IN DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
Not shown	877	SW	368300 423300	Status: Historical Licence No: 2671340037 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: SUNNYHURST BRK IN DARWEN Data Type: Point Name: D S Smith Paper Limited	Annual Volume (m³): 1.4e+006 Max Daily Volume (m³): 9183.07 Application No: - Original Start Date: 16/12/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/04/2012 Version End Date:
Not shown	1328	E	370900 423800	Status: Historical Licence No: 2671340033 Details: General use relating to Secondary Category (Medium Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "GRIMSHAW BROOK,DARWEN AND POND AND FIELDS DRAINS,ECCLESHILL" Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/05/2002 Version End Date:
Not shown	1328	E	370900 423800	Status: Historical Licence No: 2671340033 Details: Lake & Pond Throughflow	Annual Volume (m³): - Max Daily Volume (m³): - Application No: -

ID	Distance (m)	Direction	NGR	Details	
				Direct Source: Surface, Non-Tidal - North West Region Point: GRIMSHAW BROOK,DARWEN AND POND AND FIELDS DRAINS,ECCLESHILL Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Original Start Date: 11/11/1966 Expiry Date: - Issue No: 103 Version Start Date: 31/03/2004 Version End Date:
Not shown	1328	E	370900 423800	Status: Historical Licence No: 2671340033 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Surface, Non-Tidal - North West Region Point: GRIMSHAW BROOK,DARWEN AND POND AND FIELDS DRAINS,ECCLESHILL Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 102 Version Start Date: 24/05/2002 Version End Date:
Not shown	1328	E	370900 423800	Status: Historical Licence No: 2671340033 Details: Lake & Pond Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: GRIMSHAW BROOK DARWEN AND POND AND FIELDS DRAINS ECCLESHILL Data Type: Point Name: DARWEN DEVELOPMENTS LTD	Annual Volume (m^3): 772820 Max Daily Volume (m^3): 3409.5 Application No: - Original Start Date: 11/11/1966 Expiry Date: - Issue No: 103 Version Start Date: 31/03/2004 Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340043 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED STORAGE TANK , DARWEN Data Type: Point Name: IKIN	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 17/10/1990 Expiry Date: - Issue No: 100 Version Start Date: 31/10/1996 Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340044 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: "Surface, Non-Tidal - North West Region" Point: "SPRING FED STORAGE TANK , DARWEN" Data Type: Point Name: EDGAR	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 17/10/1990 Expiry Date: - Issue No: 100 Version Start Date: 17/10/1990 Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340045 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED STORAGE TANK AT DARWEN Data Type: Point Name: GRIME	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 28/09/1990 Expiry Date: - Issue No: 100 Version Start Date: 24/02/1997 Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340044 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED STORAGE TANK , DARWEN Data Type: Point Name: EDGAR	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 17/10/1990 Expiry Date: - Issue No: 100 Version Start Date: 17/10/1990 Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340043 Details: "Drinking, Cooking, Sanitary, Washing,	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: -

ID	Distance (m)	Direction	NGR	Details	
				(Small Garden) - Household" Direct Source: "Surface, Non-Tidal - North West Region" Point: "SPRING FED STORAGE TANK , DARWEN" Data Type: Point Name: IKIN	Original Start Date: 17/10/1990 Expiry Date: - Issue No: 100 Version Start Date: 31/10/1996 Version End Date:
Not shown	1735	W	367400 423300	Status: Historical Licence No: 2671340042 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED COLLECTING TANK AT DARWEN GOLF COURSE,DARWEN. Data Type: Point Name: DARWEN GOLF CLUB LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 04/10/1985 Expiry Date: - Issue No: 100 Version Start Date: 04/10/1985 Version End Date:
Not shown	1735	W	367400 423300	Status: Historical Licence No: 2671340042 Details: Spray Irrigation - Direct Direct Source: "Surface, Non-Tidal - North West Region" Point: "SPRING FED COLLECTING TANK AT DARWEN GOLF COURSE,DARWEN." Data Type: Point Name: DARWEN GOLF CLUB LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 04/10/1985 Expiry Date: - Issue No: 100 Version Start Date: 04/10/1985 Version End Date:
Not shown	1875	SW	367800 422300	Status: Historical Licence No: 2671340031 Details: Potable Water Supply - Direct Direct Source: "Surface, Non-Tidal - North West Region" Point: "SUNNYHURST & EARNSDALE RESERVOIRS ONSTEPBACK BRK,DARWEN /TRI" Data Type: Point Name: UNITED UTILITIES WATER PLC	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 17/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1995 Version End Date:
Not shown	1875	SW	367800 422300	Status: Historical Licence No: 2671340031 Details: Potable Water Supply - Direct Direct Source: Surface, Non-Tidal - North West Region Point: SUNNYHURST & EARNSDALE RESERVOIRS ONSTEPBACK BRK,DARWEN /TRI Data Type: Point Name: UNITED UTILITIES WATER PLC	Annual Volume (m^3): 2.9549e+006 Max Daily Volume (m^3): 9092 Application No: - Original Start Date: 17/06/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/02/2003 Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site — Identified

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340044 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: "Surface, Non-Tidal - North West Region" Point: "SPRING FED STORAGE TANK ,	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/10/1990 Expiry Date: - Issue No: 100 Version Start Date:

ID	Distance (m)	Direction	NGR	Details	
				DARWEN" Data Type: Point Name: EDGAR	Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340045 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED STORAGE TANK AT DARWEN Data Type: Point Name: GRIME	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 28/09/1990 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340044 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED STORAGE TANK , DARWEN Data Type: Point Name: EDGAR	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/10/1990 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340043 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: "Surface, Non-Tidal - North West Region" Point: "SPRING FED STORAGE TANK , DARWEN" Data Type: Point Name: IKIN	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/10/1990 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1618	W	367500 423400	Status: Historical Licence No: 2671340043 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED STORAGE TANK , DARWEN Data Type: Point Name: IKIN	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/10/1990 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1875	SW	367800 422300	Status: Historical Licence No: 2671340031 Details: Potable Water Supply - Direct Direct Source: "Surface, Non-Tidal - North West Region" Point: "SUNNYHURST & EARNSDALE RESERVOIRS ONSTEPBACK BRK,DARWEN /TRI" Data Type: Point Name: UNITED UTILITIES WATER PLC	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/06/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1875	SW	367800 422300	Status: Historical Licence No: 2671340031 Details: Potable Water Supply - Direct Direct Source: Surface, Non-Tidal - North West Region Point: SUNNYHURST & EARNSDALE RESERVOIRS ONSTEPBACK BRK,DARWEN /TRI Data Type: Point Name: UNITED UTILITIES WATER PLC	Annual Volume (m^3): 2.9549e+006 Max Daily Volume (m^3): 9092 Original Application No: - Original Start Date: 17/06/1966 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:

6.6 Source Protection Zones

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

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

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

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
0	On Site	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.
26	NW	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
413	E	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.

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

6.9.1 Biological Quality:

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

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
51A	515	NW	368800 424200	River Name: Darwen Reach: Hardman Way To Darwen Stw Storm Tanks End/Start of Stretch: End of Stretch NGR	E	E	E	C	C
52A	515	NW	368800 424200	River Name: Darwen Reach: Darwen Stw Storm Tanks To Roddlesworth End/Start of Stretch: Start of Stretch NGR	E	E	E	E	C
53B	590	NE	369900 424500	River Name: Davyfield Brook Reach: Qsl At Hoddlesden Res To Roman Rd End/Start of Stretch: End of Stretch NGR	B	B	B	A	A

6.9.2 Chemical Quality:

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

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

					Chemical Quality Grade				
ID	Distance (m)	Direction	NGR	River Quality Grade	2005	2006	2007	2008	2009
54A	515	NW	368800 424200	River Name: Darwen Reach: Darwen Stw Storm Tanks To Roddlesworth End/Start of Stretch: Start of Stretch NGR	B	B	B	B	B
55	532	NW	369040 424550	River Name: Davyfield Brook Reach: Roman Rd To Darwen End/Start of Stretch: Sample Point NGR	A	A	A	A	A
56B	590	NE	369900 424500	River Name: Davyfield Brook Reach: Roman Rd To Darwen End/Start of Stretch: Start of Stretch NGR	A	A	A	A	A
57B	590	NE	369900 424500	River Name: Davyfield Brook Reach: Qsl At Hoddlesden Res To Roman Rd End/Start of Stretch: End of Stretch NGR	B	B	A	A	A
58	596	NW	369000 424600	River Name: Davyfield Brook Reach: Roman Rd To Darwen End/Start of Stretch: End of Stretch NGR	A	A	A	A	A
59	620	NE	369969 424488	River Name: Davyfield Brook Reach: Qsl At Hoddlesden Res To Roman Rd End/Start of Stretch: Sample Point NGR	B	B	A	A	A

6.10 Ordnance Survey MasterMap Water Network

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

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

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

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	1	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NE			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.1
43	1 NE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.1
2	197 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
44	197 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
3	201 NE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
45	201 NE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	210 N	Not Specified	Marsh. An area that is predominantly waterlogged by freshwater.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
46	210 N	Not Specified	Marsh. An area that is predominantly waterlogged by freshwater.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	253 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.3
47	253 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.3
6	260 N	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
48	260 N	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
7	263 N	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
49	263 N	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	265 N	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	265 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	265 N	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
51	265 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	273 NE	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.7
52	273 NE	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.7
11	289 NE	Flash Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
12	289 NE	Flash Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
53	289 NE	Flash Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
54	289 NE	Flash Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
13	290 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
14	290 NE	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.4
Not shown	290 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
56	290 NE	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.4
15	305 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
57	305 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
16	306 NE	Flash Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
58	306 NE	Flash Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	312 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.7
59	312 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.7
18	333 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
19	333 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
60	333 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
61	333	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NW			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
20	348 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.5
62	348 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.5
21	352 N	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
Not shown	352 N	Davy Field Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
22	361 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.5
64	361 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.5
23	369 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.8
65	369 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.8
24	379 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
66	379 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
25	398 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 9.6
67	398 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): 9.6
26	403 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.9
27	403 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.5
68	403 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.9
69	403 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.5
28	426 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.5
29	426 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
30	426 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.9
31	426 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.9
32	426 W	Not Specified	Reservoir. An area of non-tidal water used for storing water.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 16.4
70	426 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.5
71	426 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
72	426 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.9

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
73	426 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.9
74	426 W	Not Specified	Reservoir. An area of non-tidal water used for storing water.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 16.4
33	427 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
34	427 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 23.3
75	427 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
76	427 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 23.3
35	430 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
77	430 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
36	432 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
78	432 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
37	463 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
38	463 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
39	463	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	W			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.7
Not shown	463 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
Not shown	463 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
Not shown	463 W	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.7
40	465 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
41	465 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
Not shown	465 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.3
Not shown	465 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
42	478 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.4
43	478 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.4
Not shown	478 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.4
Not shown	478 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.4
44	481 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
45	481 E	Flash Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
46	481 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	481 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	481 E	Flash Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	481 NW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
47	485 SW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
48	485 SW	Sunnyhurst Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
89	485 SW	River Darwen	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	485 SW	Sunnyhurst Brook	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
49	487 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	487 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
50	490 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
Not shown	490 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ribble Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

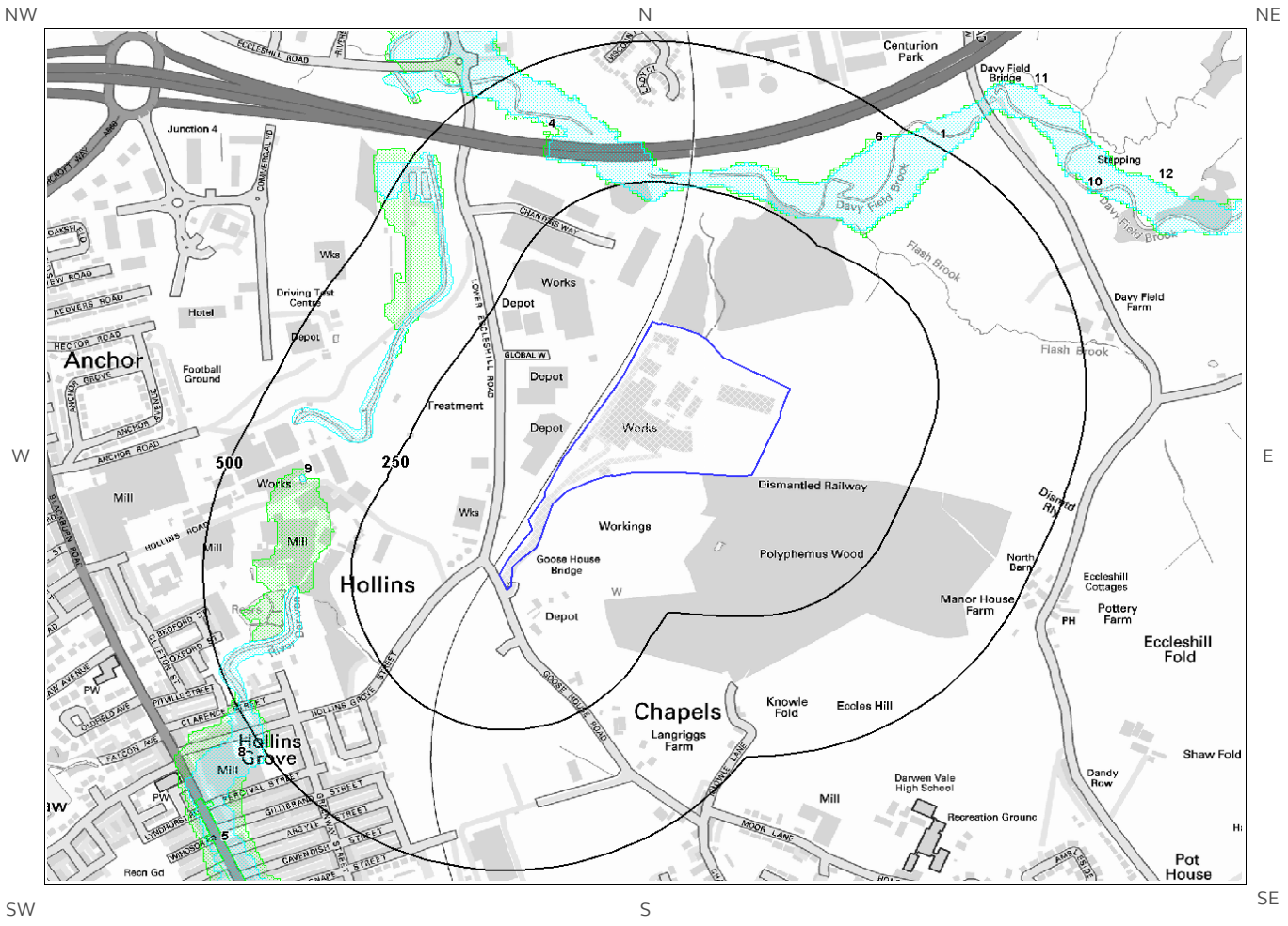
6.11 Surface Water Features

Surface water features within 250m of the study site Identified

The following surface water records are not represented on mapping:

Distance (m)	Direction
201	NE
205	N

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



Site Outline

Search Buffers (m)

Zone 2 Floodplain

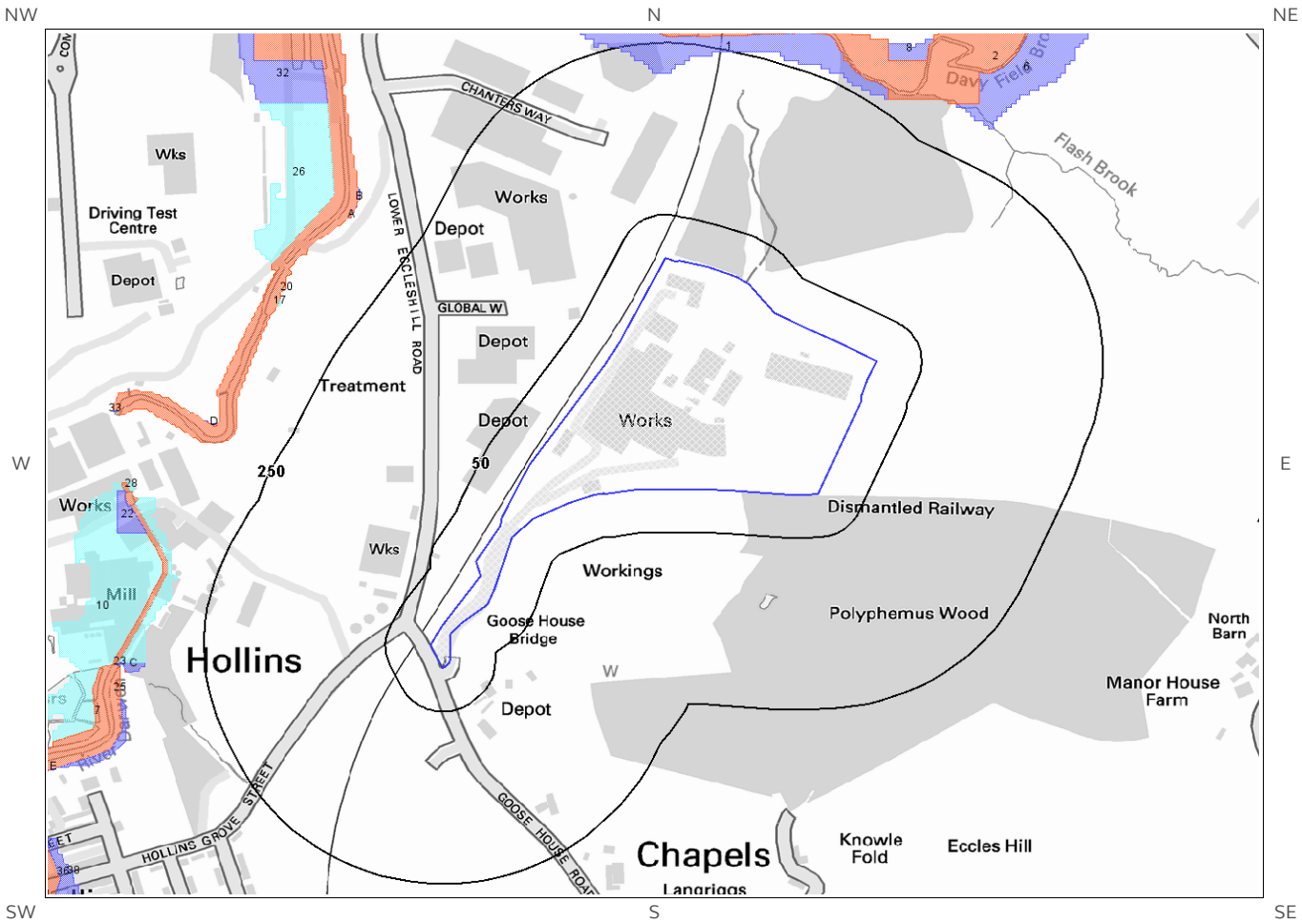
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

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



Site Outline

100
250
Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

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

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

ID	Distance (m)	Direction	Update	Type
1	214	N	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

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

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

ID	Distance (m)	Direction	Update	Type
1	214	N	12-Oct-2018	Zone 3 - (Fluvial Models)

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

Highest risk of flooding onsite — Very Low

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

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Flood Defences within 250m of the study site — None identified

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site — None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site — None identified

7.7 Groundwater Flooding Susceptibility Areas

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

Clearwater Flooding or Superficial Deposits Flooding — Superficial Deposits Flooding

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

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

Potential at Surface

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

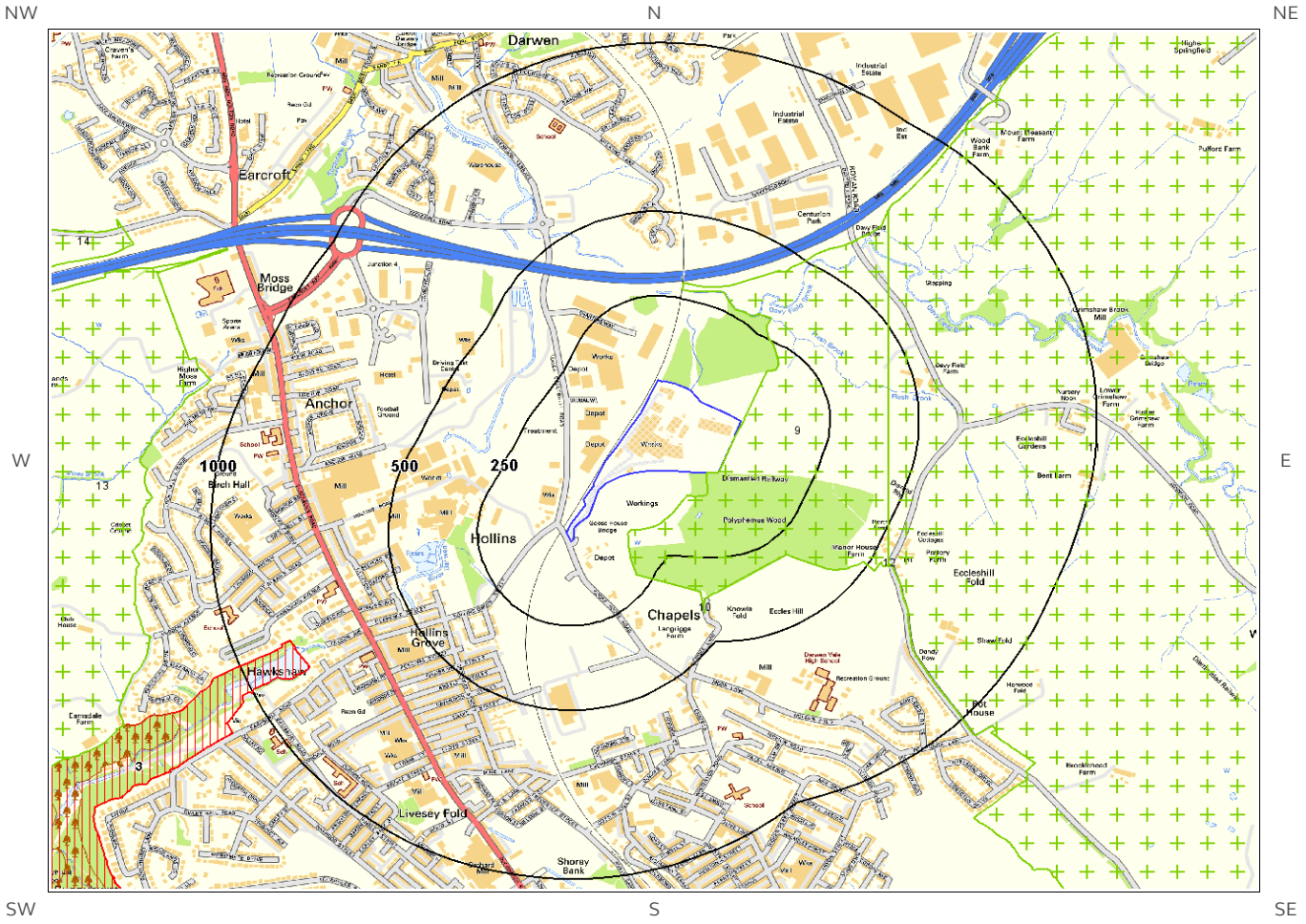
7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result — Low

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

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

8. Designated Environmentally Sensitive Sites Map



- Site Outline
- 100 / 250 Search Buffers (m)
- AONB
- National Park
- SSSI
- Special Protection Areas
- Nitrate Vulnerable Zones
- Green Belt
- Environmentally Sensitive Areas
- Special Areas of Conservation
- World Heritage Sites
- Nitrate Sensitive Areas
- Ancient Woodland
- National Nature Reserve
- Local Nature Reserves
- Ramsar Sites

8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site | Identified

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

2

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

ID	Distance (m)	Direction	SSSI Name	Data Source
Not shown	1684	SW	West Pennine Moors	Natural England
Not shown	1749	SW	West Pennine Moors	Natural England

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

3

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

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
6	1229	SW	SUNNYHURST WOOD	Ancient and Semi-Natural Woodland
Not shown	1343	SW	KNOWL HEIGHTS WOOD	Ancient and Semi-Natural Woodland
Not shown	1802	NW	FERNHURST WOOD	Ancient and Semi-Natural Woodland

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

3

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

ID	Distance (m)	Direction	LNR Name	Data Source
3	824	SW	Sunnyhurst Woods	Natural England
Not shown	1144	NW	River Darwen Parkway	Natural England
Not shown	1253	NW	River Darwen Parkway	Natural England

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

6

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

ID	Distance	Direction	Green Belt Name	Local Authority Name
9	0	On Site	Liverpool, Manchester and West Yorks Greenbelt	Blackburn with Darwen
10	400	S	Liverpool, Manchester and West Yorks Greenbelt	Blackburn with Darwen
11	413	E	Liverpool, Manchester and West Yorks Greenbelt	Blackburn with Darwen
12	550	SE	Liverpool, Manchester and West Yorks Greenbelt	Blackburn with Darwen

13	1096	NW	Liverpool, Manchester and West Yorks Greenbelt	Blackburn with Darwen
14	1473	NW	Liverpool, Manchester and West Yorks Greenbelt	Blackburn with Darwen

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

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

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

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

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site — Moderate

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

Hazard
Significant potential for slope instability with relatively small changes in ground conditions. Avoid large amounts of water entering the ground through pipe leakage or soak-aways. Do not undercut or place large amounts of material on slopes without technical advice. For new build consider the potential and consequences of ground movement during excavations, or consequence of changes to loading or drainage. For existing property probable increase in insurance risk is likely due to potential natural slope instability after changes to ground conditions such as a very long, excessively wet winter.

9.1.3 Soluble Rocks

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

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

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

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site — Moderate

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

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

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site — Very Low

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

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

9.1.6 Running Sand

Maximum Running Sand*[*] hazard rating identified on the study site — Very Low

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

Hazard
Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

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

9.2 Radon

9.2.1 Radon Affected Areas

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

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

9.2.2 Radon Protection

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

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site — Identified

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

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

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary — None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site — None identified
Guidance: No Guidance Required.

Contact Details

RPS Group
Telephone: 0207 280 3200
thomas.stokes@rpsgroup.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: **www.environment-agency.gov.uk**
Email: enquiries@environment-agency.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Blackburn with Darwen Borough Council
Phone: 01254 585 585
Web: http://www.blackburn.gov.uk/
Address: King William Street, Town Hall, Blackburn, Lancashire, BB1

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:

https://www.groundsure.com/terms-and-conditions-may25-2018

RPS Consultants Ltd

UNIT 12 R P S LABORATORIES LTD, MODWEN ROAD,
SALFORD, M5 3EZ

Report Reference: RPS-5731190

Your Reference: RCEI68589

Report Date 7 Jan 2019

Report Delivery Method: Email - pdf

Geo Insight

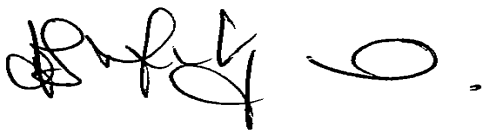
Address: DERF, Lower Eccleshill Road, Darwen, BB3 0EH

Dear Sir/ Madam,

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

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Geo Insight

Address:	**DERF, Lower Eccleshill Road, Darwen, BB3 0EH**
Date:	**7 Jan 2019**
Reference:	**RPS-5731190**
Client:	**RPS Consultants Ltd**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	26-Mar-2012
Grid Reference:	369364,423949
Site Size:	7.33ha

Contents Page

Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	Yes
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale		
2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	Yes
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	Yes
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features	2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?	Yes
	2.3.3 Are there any records of linear features within 500m of the study site boundary?	Yes

Section 3: Radon

3. Radon	3.1Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
	3.2Radon Protection	No radon protective measures are necessary.

Section 4: Ground Workings	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	16	26	44	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	12
4.3 Current Ground Workings	0	1	1	4	6

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	12
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	2	0	2	0	4
5.4 Non-Coal Mining*	0	0	0	0	2
5.5 Non–Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0

Section 6: Natural Ground Subsidence	On-site
6.1 Shrink-Swell Clay	Very Low
6.2 Landslides	Moderate
6.3 Ground Dissolution of Soluble Rocks	Negligible
6.4 Compressible Deposits	Moderate
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Very Low

Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	0	5	23

Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	11	1	0

Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500
9.1 Tunnels	0	0	0	Not Searched
9.2 Historical Railway and Tunnel Features	21	27	8	Not Searched
9.3 Historical Railways	1	0	0	Not Searched
9.4 Active Railways	0	6	0	Not Searched
9.5 Railway Projects	0	0	0	0

1:10,000 Scale Availability

1_10,000 Availability Legend

Site Outline

Full Coverage

Partial Coverage

No Coverage

50
250
Search Buffers (m)

Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
2	413.0	Some deposits are mapped	Full	Full	Some deposits are mapped
3	880.0	Some deposits are mapped	Full	Full	No coverage
4	1065.0	Some deposits are mapped	Full	Full	Some deposits are mapped

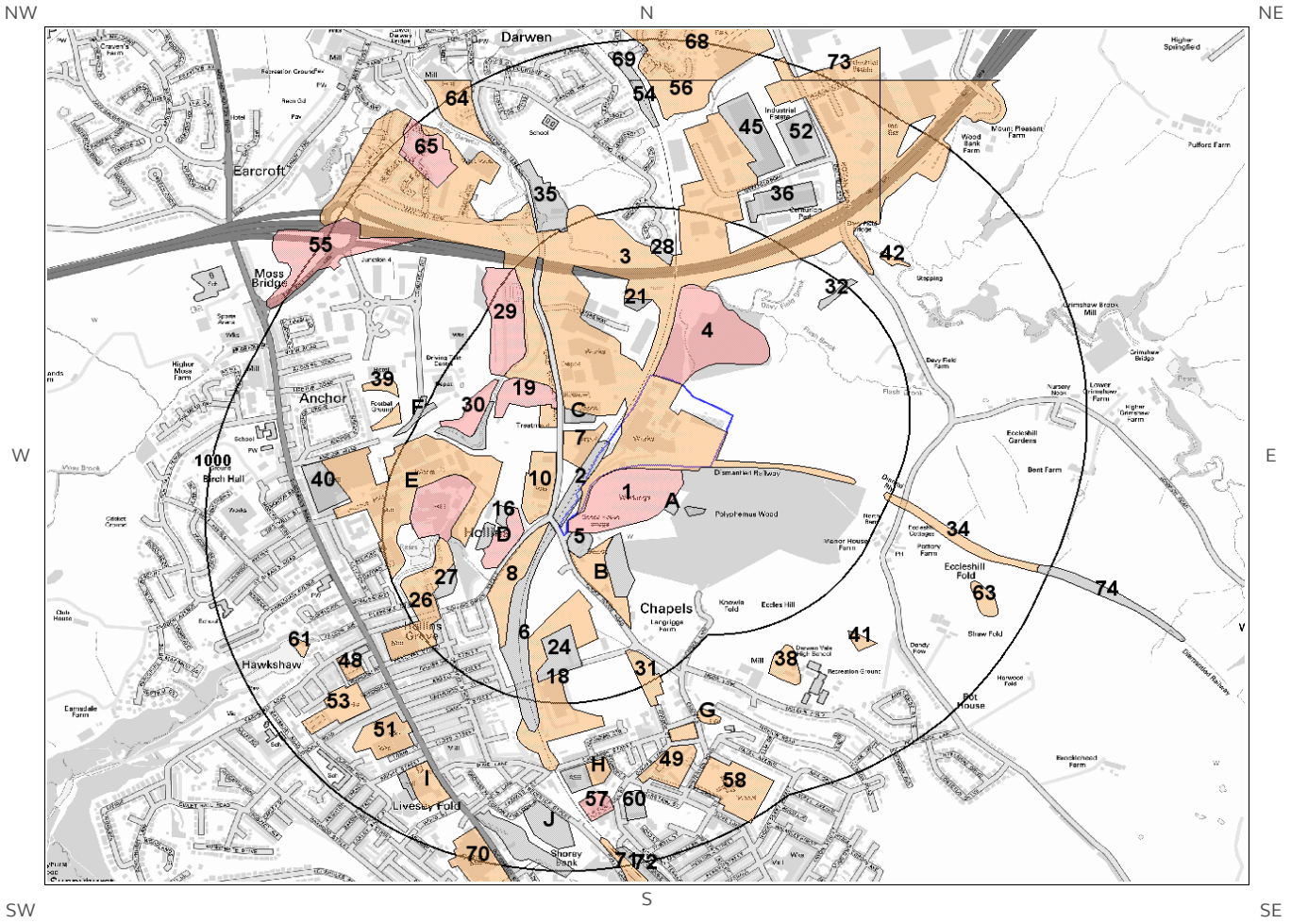
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

1 Geology (1:10,000 scale).

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



Artificial Ground Legend

Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Disturbed Ground (undivided)

Worked Ground (undivided)

Landscaped Ground (undivided)

Infilled Ground

Reclaimed Ground

1. Geology 1:10,000 scale

1.1 Artificial Ground

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

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

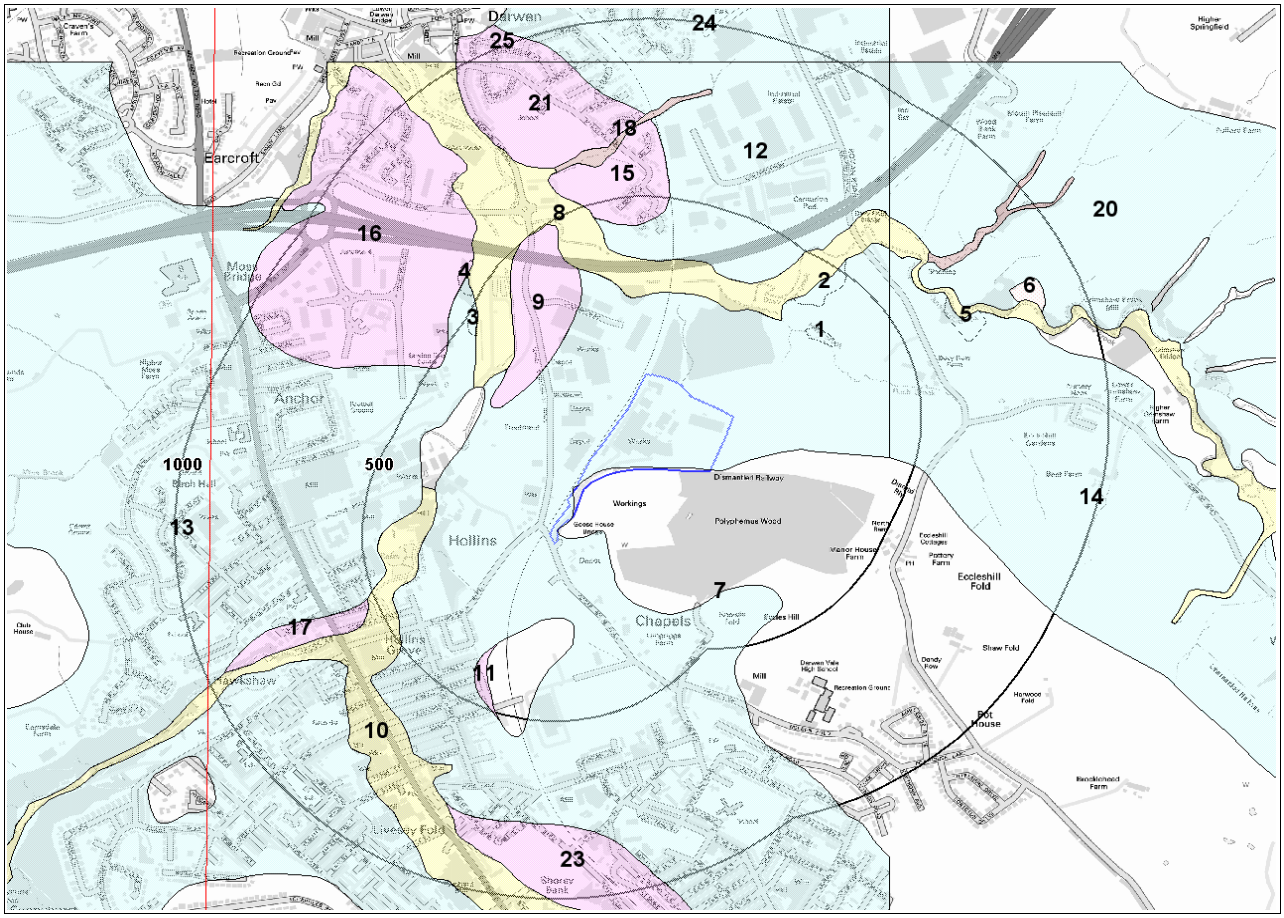
ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
3	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
5	11.0	SE	WGR-VOID	Worked Ground (Undivided)	Void
6	17.0	SW	WGR-VOID	Worked Ground (Undivided)	Void
7	23.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	30.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
9B	45.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10	48.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
11C	66.0	NW	WGR-VOID	Worked Ground (Undivided)	Void
12A	99.0	S	WGR-VOID	Worked Ground (Undivided)	Void
13D	100.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
14A	116.0	S	WGR-VOID	Worked Ground (Undivided)	Void
15B	119.0	SE	WGR-VOID	Worked Ground (Undivided)	Void
16	143.0	NW	WGR-VOID	Worked Ground (Undivided)	Void
17C	143.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
18	166.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
19	175.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
20D	182.0	W	WGR-VOID	Worked Ground (Undivided)	Void
21	196.0	N	WGR-VOID	Worked Ground (Undivided)	Void
22E	208.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
23E	265.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
24	265.0	S	WGR-VOID	Worked Ground (Undivided)	Void
25	291.0	NW	WGR-VOID	Worked Ground (Undivided)	Void
26	314.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
27	317.0	W	WGR-VOID	Worked Ground (Undivided)	Void
28	331.0	N	WGR-VOID	Worked Ground (Undivided)	Void
29	340.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
30	341.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
31	385.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
32	400.0	NE	WGR-VOID	Worked Ground (Undivided)	Void
33F	473.0	NW	WGR-VOID	Worked Ground (Undivided)	Void
34	481.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
35	490.0	NW	WGR-VOID	Worked Ground (Undivided)	Void

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

NW N NE

W E

SW S SE



Artificial Ground Legend

Site Outline

500
1000
Search Buffers (m)

1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
7	0.0	On Site	TILLD-CSVZ	Till, Devensian - Clay, Sandy, Gravelly, Silty (unlithified Deposits Coding Scheme)	Clay, Sandy, Gravelly, Silty
8	219.0	N	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
9	244.0	NW	GFDUD-XSVZ	Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt	Sand, Gravel And Silt
10	309.0	W	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
11	318.0	SW	GFDUD-XSVZ	Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt	Sand, Gravel And Silt
12	320.0	N	TILLD-CSVZ	Till, Devensian - Clay, Sandy, Gravelly, Silty (unlithified Deposits Coding Scheme)	Clay, Sandy, Gravelly, Silty
13	355.0	W	TILLD-CSVZ	Till, Devensian - Clay, Sandy, Gravelly, Silty (unlithified Deposits Coding Scheme)	Clay, Sandy, Gravelly, Silty
14	413.0	E	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
15	421.0	N	GFDUD-XSVZ	Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt	Sand, Gravel And Silt
16	479.0	NW	GFDUD-XSVZ	Glaciofluvial Deposits, Devensian - Sand, Gravel And Silt	Sand, Gravel And Silt

1.2.2 Landslip

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

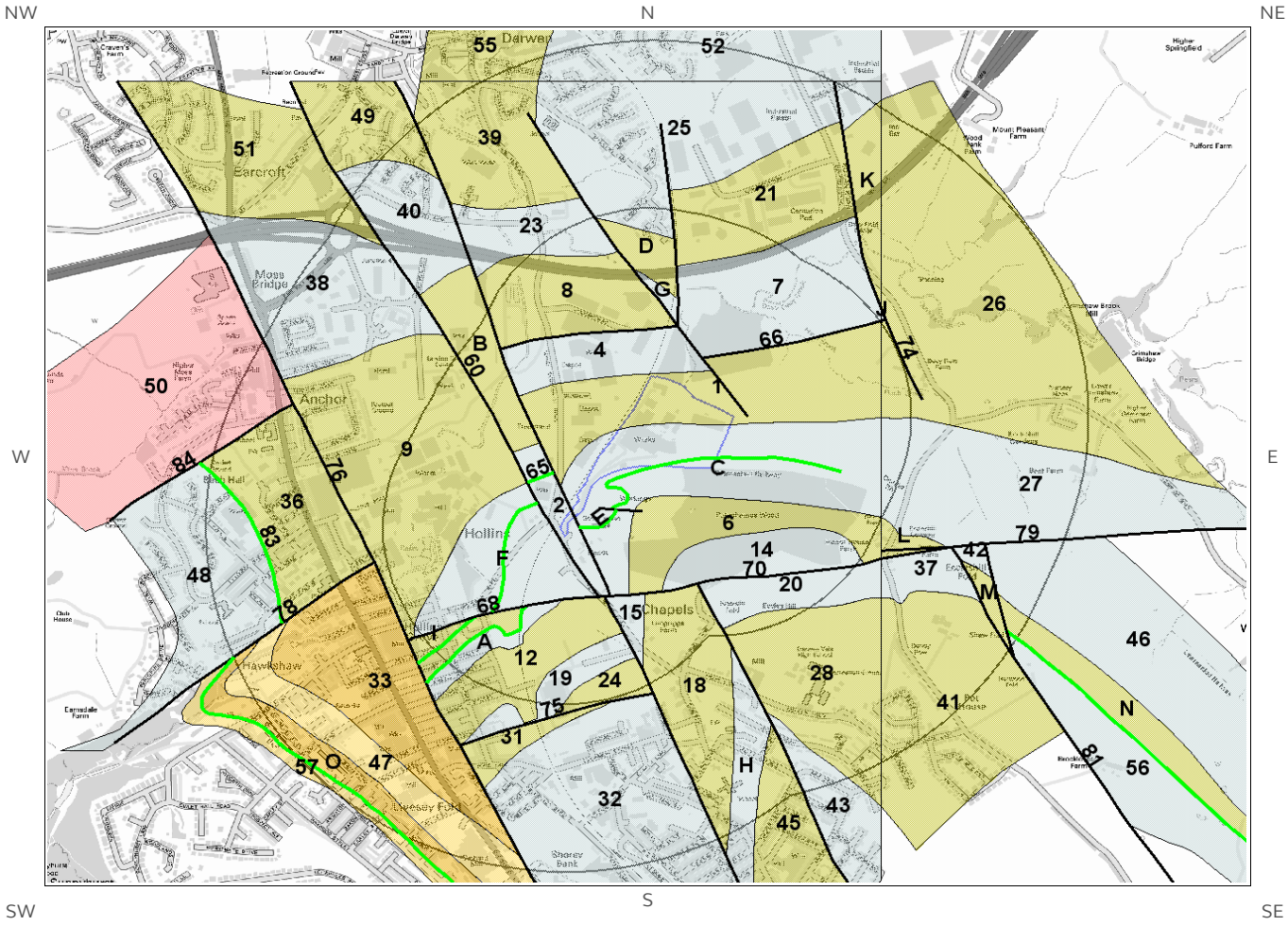
Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	298.0	NE	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry
2	362.0	NE	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry
3	449.0	NW	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry

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

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

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



Bedrock and linear features Legend

Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock and linear features

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
2	0.0	On Site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
3C	0.0	On Site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
4	8.0	N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
5F	16.0	SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
6	84.0	S	RSC-SDST	Riddle Scout Rock - Sandstone	Langsettian Sub-age
7	98.0	NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
8	140.0	N	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
9	147.0	W	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
10G	161.0	N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
11B	166.0	NW	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
12	186.0	S	MLRS-SDST	Milnrow Sandstone - Sandstone	Langsettian Sub-age
13A	189.0	S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
14	209.0	S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
15	210.0	SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
16A	233.0	SW	ICS-SDST	Icconhurst Sandstone - Sandstone	Langsettian Sub-age
17D	240.0	N	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
18	281.0	SE	MLRS-SDST	Milnrow Sandstone - Sandstone	Langsettian Sub-age
19	326.0	S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
20	331.0	S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
21	336.0	N	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
22I	346.0	SW	HER-SDST	Helpet Edge Rock - Sandstone	Langsettian Sub-age
23	383.0	N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
24	408.0	SE	DK-SDST	Dyneley Knoll Flags - Sandstone	Langsettian Sub-age
25	412.0	N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
26	413.0	E	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
27	413.0	E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
28	453.0	S	MLRS-SDST	Milnrow Sandstone - Sandstone	Langsettian Sub-age
29L	496.0	SE	RSC-SDST	Riddle Scout Rock - Sandstone	Langsettian Sub-age

1.3.2 Linear features

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

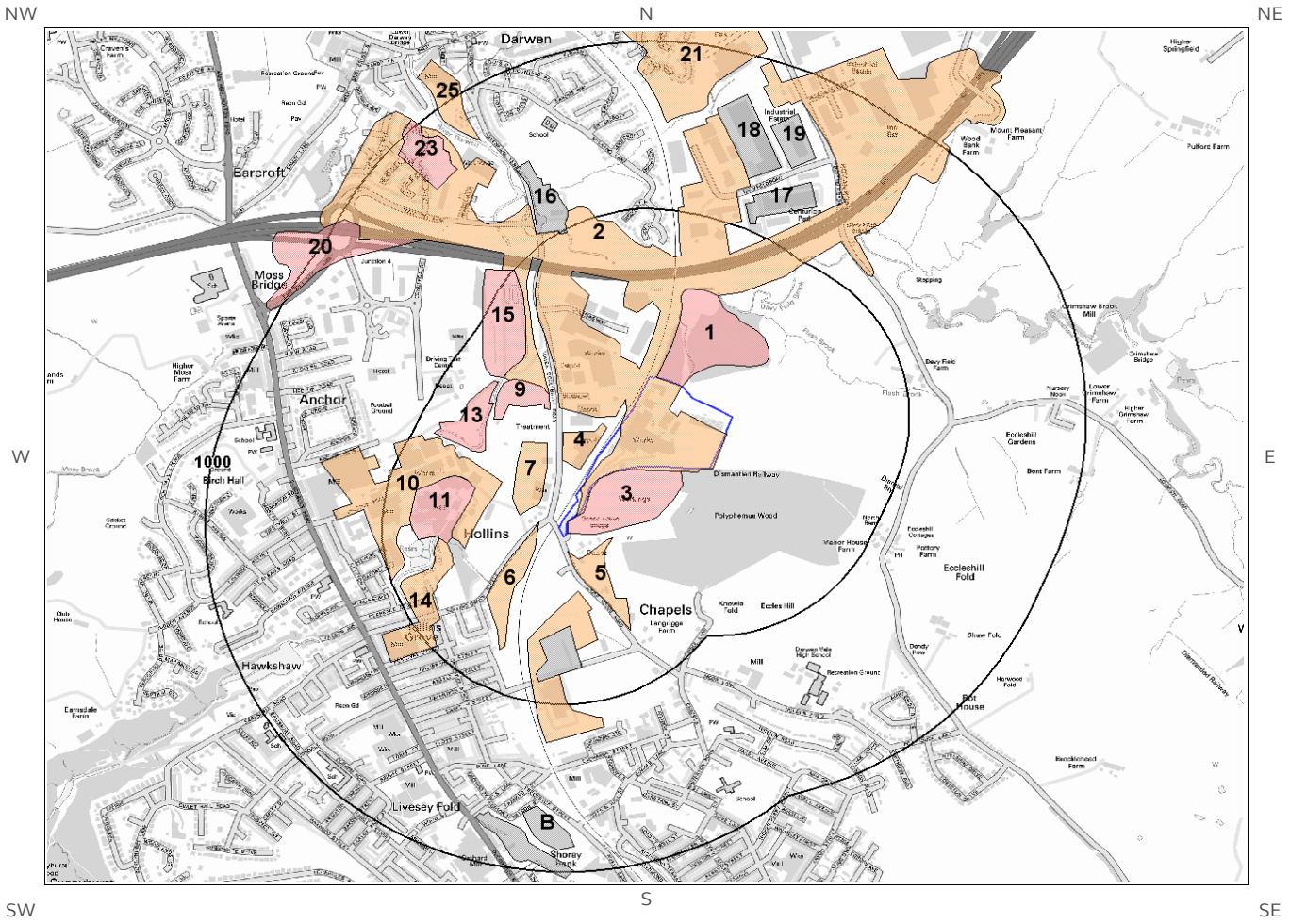
ID	Distance (m)	Direction	Category Description	Feature Description
58B	0.0	On Site	FAULT	Normal fault, inferred
59C	0.0	On Site	ROCK	Coal seam, inferred (075_preston_east_edge 4 105702)
60	16.0	SW	FAULT	Normal fault, inferred
61D	31.0	NE	FAULT	Normal fault, inferred
62E	32.0	E	ROCK	Coal seam, inferred (075_preston_east_edge 4 105702)
63E	39.0	E	FAULT	Normal fault, inferred
64F	90.0	NW	ROCK	Coal seam, inferred (075_preston_east_edge 4 105702)
65	92.0	NW	ROCK	Coal seam, inferred (075_preston_east_edge 4 105702)
66	98.0	NE	FAULT	Normal fault, inferred
67G	140.0	N	FAULT	Normal fault, inferred
68	186.0	S	FAULT	Normal fault, inferred
69H	210.0	SE	FAULT	Normal fault, inferred
70	218.0	SE	FAULT	Normal fault, inferred
71A	233.0	SW	ROCK	Coal seam, inferred (075_preston_east_edge 4 106202)
72I	346.0	SW	ROCK	Coal seam, inferred (075_preston_east_edge 4 106202)

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

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

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Disturbed Ground (undivided)

Worked Ground (undivided)

Landscaped Ground (undivided)

Infilled Ground

Reclaimed Ground

2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 076

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	0.0	On Site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
4	23.0	NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
5	45.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
6	58.0	W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
7	85.0	NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
8A	166.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
9	193.0	NW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
10	205.0	NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
11	264.0	W	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
12A	266.0	S	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
13	291.0	NW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
14	314.0	W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
15	340.0	NW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
16	490.0	NW	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID

2.1.2 Permeability of Artificial Ground

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

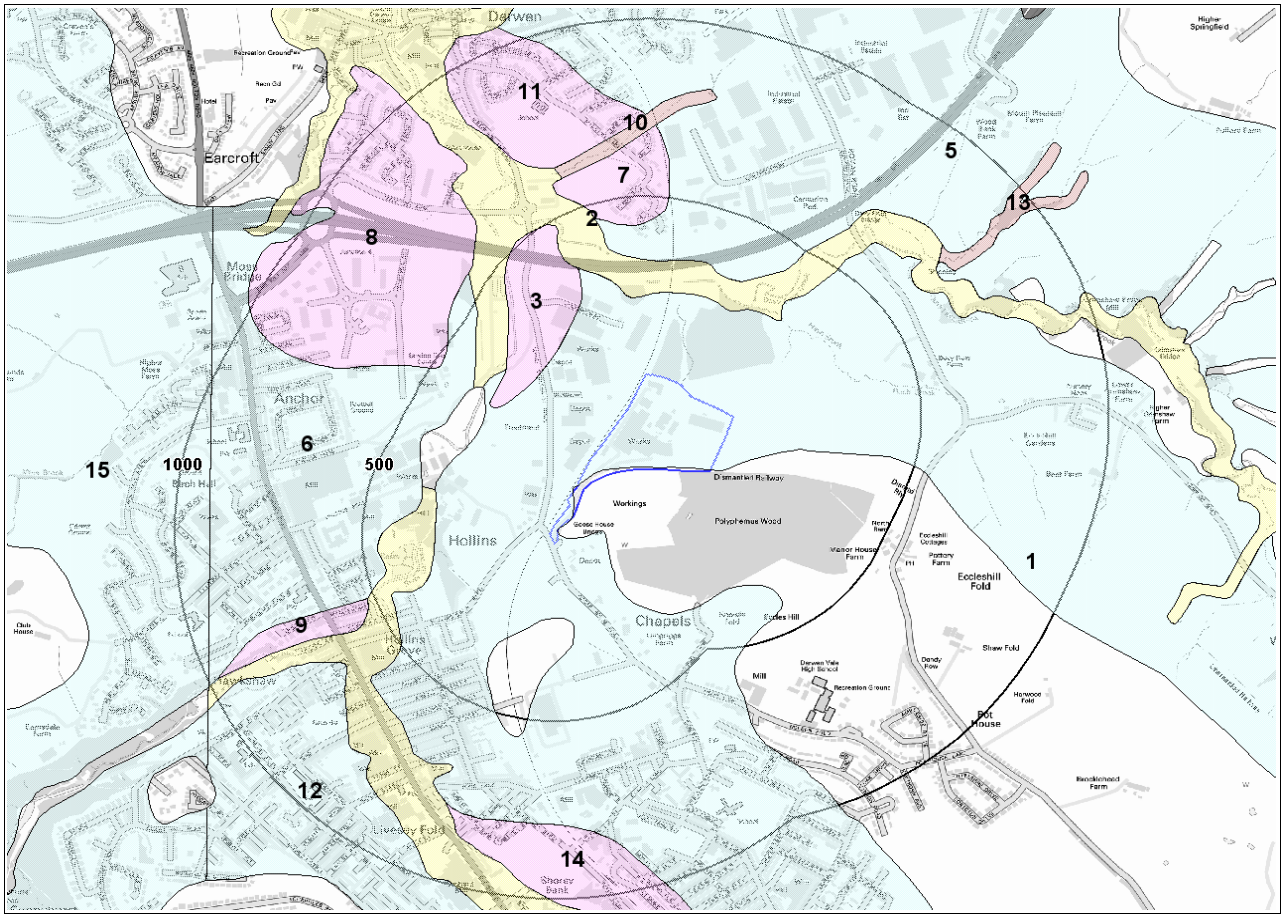
Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
23.0	NW	Mixed	Very High	Low
45.0	S	Mixed	Very High	Low

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

NW N NE

W E

SW S SE



Site Outline

500
1000
Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
2	219.0	N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	243.0	NW	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
4	306.0	W	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
5	319.0	N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
6	355.0	W	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	421.0	N	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
8	479.0	NW	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

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

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

2.2.3 Landslip

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

Database searched and no data found.

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

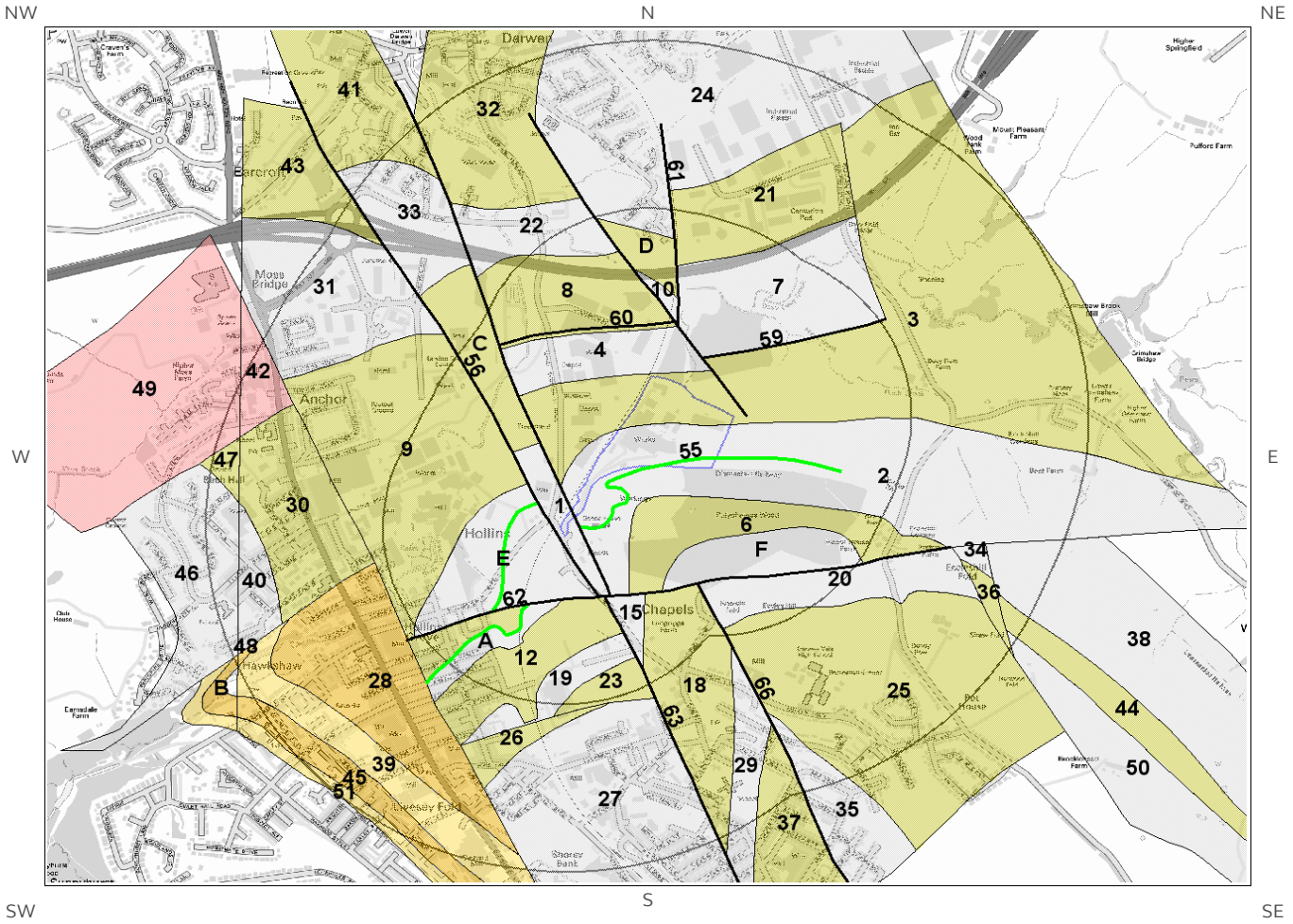
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

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

Database searched and no data found.

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



Site Outline

500
1000
Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 076

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	0.0	On Site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	0.0	On Site	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
4	8.0	N	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5E	17.0	SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	84.0	S	RSC-SDST	RIDDLE SCOUT ROCK - SANDSTONE	WESTPHALIAN
7	98.0	NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8	140.0	N	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
9	146.0	W	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
10	161.0	N	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
11C	167.0	NW	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
12	186.0	S	MLRS-SDST	MILNROW SANDSTONE - SANDSTONE	WESTPHALIAN
13A	190.0	S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
14F	208.0	S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
15	211.0	SE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
16A	227.0	SW	ICS-SDST	ICCONHURST SANDSTONE - SANDSTONE	WESTPHALIAN
17D	239.0	N	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
18	281.0	SE	MLRS-SDST	MILNROW SANDSTONE - SANDSTONE	WESTPHALIAN

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
19	326.0	S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
20	330.0	S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
21	337.0	N	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
22	382.0	N	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
23	408.0	SE	DK-SDST	DYNELEY KNOLL FLAGS - SANDSTONE	WESTPHALIAN
24	413.0	N	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
25	453.0	S	MLRS-SDST	MILNROW SANDSTONE - SANDSTONE	WESTPHALIAN

2.3.2 Permeability of Bedrock Ground

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

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

2.3.3 Linear features

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

ID	Distance	Direction	Category Description	Feature Description
54C	0.0	On Site	FAULT	Fault, inferred
55	0.0	On Site	ROCK	Coal seam, inferred
56	17.0	SW	FAULT	Fault, inferred
57D	30.0	NE	FAULT	Fault, inferred
58E	90.0	NW	ROCK	Coal seam, inferred
59	98.0	NE	FAULT	Fault, inferred
60	153.0	N	FAULT	Fault, inferred
61	161.0	N	FAULT	Fault, inferred
62	186.0	S	FAULT	Fault, inferred
63	211.0	SE	FAULT	Fault, inferred
64F	219.0	SE	FAULT	Fault, inferred
65A	227.0	SW	ROCK	Coal seam, inferred
66	342.0	S	FAULT	Fault, inferred

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

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

3 Radon Data

3.1 Radon Affected Areas

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

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

3.2 Radon Protection

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

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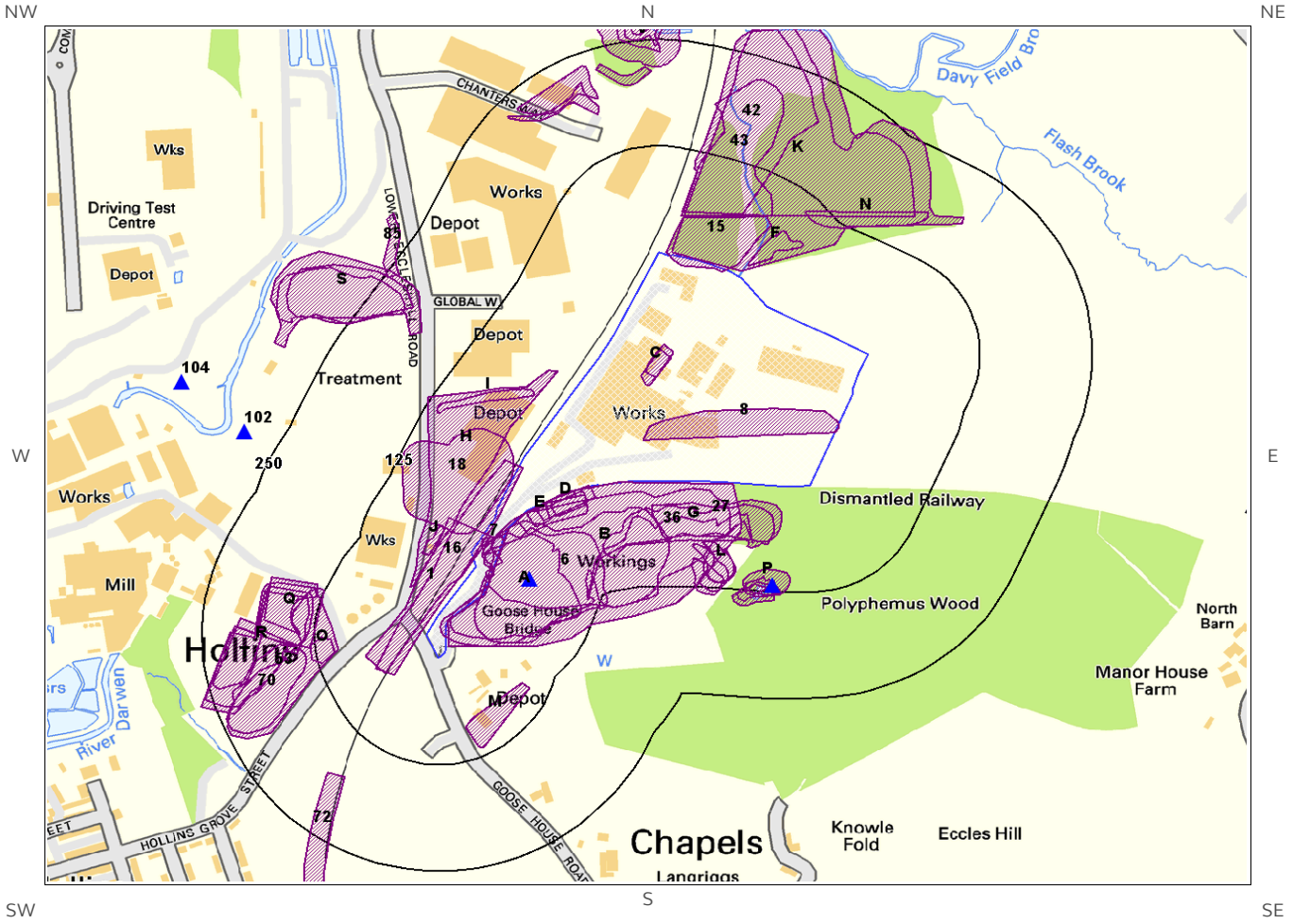
4 Ground Workings map



Ground Workings Legend

Site Outline

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	369097 423706	Cuttings	1891
2A	0.0	On Site	369209 423724	Clay Pit	1909
3B	0.0	On Site	369299 423772	Unspecified Quarry	1970
4A	0.0	On Site	369204 423726	Clay Pit	1938
5A	0.0	On Site	369204 423726	Clay Pit	1928
6	0.0	On Site	369244 423742	Unspecified Pit	1966
7	0.0	On Site	369171 423775	Unspecified Pit	1891
8	0.0	On Site	369446 423917	Refuse Heap	1966
9B	0.0	On Site	369283 423753	Refuse Heap	1983
10C	0.0	On Site	369351 423985	Pond	1891
11C	0.0	On Site	369355 423992	Reservoir	1928
12C	0.0	On Site	369355 423992	Reservoir	1938
13C	0.0	On Site	369355 423992	Reservoir	1909
14D	0.0	On Site	369250 423825	Ponds	1966
15	0.0	On Site	369421 424130	Unspecified Heap	1891
16	0.0	On Site	369121 423749	Cuttings	1846
17D	1.0	SE	369236 423811	Reservoirs	1891
18	2.0	NW	369130 423851	Brick Works	1891
19K	2.0	N	369531 424269	Refuse Heap	1966
20E	3.0	SE	369220 423809	Reservoirs	1909
21D	3.0	SE	369241 423818	Reservoirs	1938

ID	Distance (m)	Direction	NGR	Use	Date
22E	3.0	SE	369220 423809	Reservoirs	1928
23D	3.0	S	369254 423824	Reservoirs	1909
24D	3.0	S	369254 423824	Reservoirs	1928
25F	17.0	NE	369484 424125	Refuse Heap	1928
26F	17.0	NE	369484 424125	Refuse Heap	1938
27	19.0	S	369419 423804	Refuse Heap	1966
28G	25.0	S	369387 423792	Refuse Heap	1938
29G	25.0	S	369387 423792	Refuse Heap	1928
30H	28.0	NW	369128 423853	Brick Works	1909
31H	28.0	NW	369128 423853	Brick Works	1928
32H	28.0	NW	369128 423853	Brick Works	1938
33I	34.0	NW	369143 423945	Refuse Heap	1928
34I	34.0	NW	369143 423945	Refuse Heap	1909
35I	34.0	NW	369143 423945	Refuse Heap	1938
36	35.0	S	369290 423762	Refuse Heap	1909
37J	39.0	NW	369104 423781	Ponds	1909
38J	39.0	NW	369104 423781	Ponds	1938
39J	39.0	NW	369104 423781	Ponds	1928
40K	47.0	N	369509 424293	Unspecified Heap	1928
41K	47.0	N	369509 424293	Unspecified Heap	1938
42	47.0	N	369509 424293	Unspecified Heap	1910
43	52.0	N	369437 424243	Unspecified Heaps	1892
44L	70.0	S	369421 423756	Unspecified Pit	1966
45L	74.0	S	369412 423749	Unspecified Pit	1928
46L	74.0	S	369412 423749	Unspecified Old Quarries	1909
47L	74.0	S	369412 423749	Unspecified Pit	1938
48L	78.0	S	369421 423752	Unspecified Pit	1970
49M	79.0	SE	369175 423576	Unspecified Ground Workings	1970
50M	79.0	SE	369175 423576	Unspecified Ground Workings	1983

ID	Distance (m)	Direction	NGR	Use	Date
51L	91.0	S	369408 423738	Unspecified Pit	1891
52P	99.0	S	369474 423732	Sandstone Quarry	1846
53	99.0	W	368936 423636	Refuse Heap	1983
54N	103.0	NE	369585 424158	Refuse Heap	1938
55N	103.0	NE	369585 424158	Refuse Heap	1928
56O	104.0	W	368979 423652	Refuse Heap	1928
57O	104.0	W	368979 423652	Refuse Heap	1938
58P	107.0	S	369467 423728	Pond	1966
59P	115.0	S	369466 423721	Pond	1938
60P	115.0	S	369466 423721	Unspecified Old Quarries	1909
61P	115.0	S	369466 423721	Pond	1928
62P	117.0	S	369459 423717	Unspecified Pit	1891
63Q	123.0	W	368943 423693	Pond	1846
64Q	130.0	W	368935 423699	Reservoirs	1909
65R	130.0	W	368909 423656	Reservoirs	1928
66R	130.0	W	368909 423656	Reservoirs	1938
67Q	131.0	W	368944 423705	Pond	1970
68Q	131.0	W	368944 423705	Pond	1983
69R	133.0	W	368899 423656	Reservoirs	1891
70	137.0	W	368917 423603	Refuse Heap	1970
71T	156.0	W	368890 423636	Reservoirs	1909
72	174.0	SW	368972 423324	Cuttings	1846
73U	176.0	NW	369265 424298	Unspecified Ground Workings	1910
74S	178.0	NW	369006 424065	Refuse Heap	1970
75S	178.0	NW	369006 424065	Refuse Heap	1983
76T	182.0	W	368886 423648	Pond	1983
77T	182.0	W	368886 423648	Pond	1970
78U	193.0	N	369242 424310	Unspecified Ground Workings	1892
79	200.0	N	369301 424329	Unspecified Ground Workings	1983

ID	Distance (m)	Direction	NGR	Use	Date
80S	203.0	NW	368983 424074	Refuse Heap	1966
81S	208.0	NW	369000 424069	Refuse Heap	1938
82S	208.0	NW	369000 424069	Refuse Heap	1928
83V	218.0	N	369317 424394	Unspecified Ground Workings	1928
84V	236.0	N	369343 424390	Unspecified Ground Workings	1910
85	238.0	NW	369056 424129	Unspecified Ground Workings	1983
86V	243.0	N	369317 424394	Unspecified Ground Workings	1938

4.2 Historical Underground Working Features derived from Historical Mapping

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

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

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	574.0	S	369572 423270	Unspecified Shaft	1891
Not shown	658.0	SE	369501 423110	Unspecified Old Shaft	1951
Not shown	660.0	SE	369492 423102	Unspecified Old Shaft	1928
Not shown	660.0	SE	369492 423102	Old Coal Shaft	1909
Not shown	660.0	SE	369492 423102	Unspecified Old Shaft	1938
Not shown	893.0	SE	369977 423073	Unspecified Old Shafts	1928
Not shown	893.0	SE	369977 423073	Unspecified Old Shafts	1938
Not shown	893.0	SE	369977 423073	Old Coal Shafts	1909
Not shown	898.0	SE	370005 423070	Coal Pits	1891
Not shown	907.0	SE	370015 423081	Unspecified Old Shafts	1938
Not shown	907.0	SE	370015 423081	Unspecified Old Shafts	1928
Not shown	907.0	SE	370015 423081	Old Coal Shafts	1909

4.3 Current Ground Workings

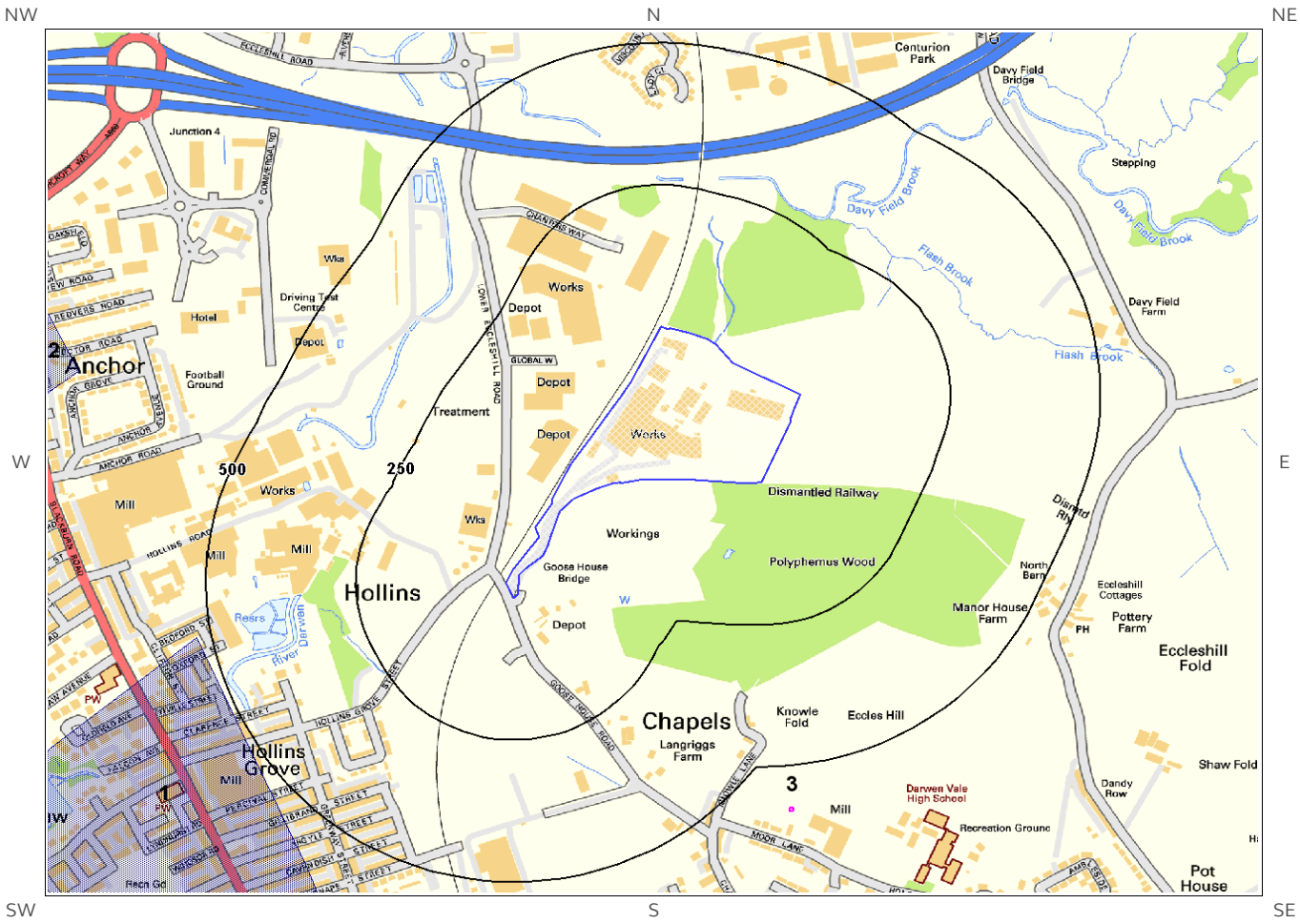
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

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

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

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
99A	42.0	E	369210 423735	Clay & Shale	Hollins Brickworks	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
100P	117.0	S	369480 423728	Sandstone	Goose House	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	287.0	S	369102 423355	Sandstone	Chapel Cottage	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
102	290.0	NW	368892 423909	Sandstone	Hollins	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	343.0	NW	369141 424389	Sand	Oakenhurst Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
104	380.0	NW	368822 423967	Sandstone	Hollins	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	661.0	S	368871 423026	Sandstone	Hey Fold	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	667.0	SE	369913 423305	Sandstone	Dandy Row	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	757.0	SE	370012 423268	Sandstone	Dandy Row	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	808.0	SE	369517 422945	Sandstone	Darwen Chapels	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	854.0	SE	370287 423466	Sandstone	Shaw Fold	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	864.0	SE	370088 423192	Sandstone	Dandy Row	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



Mining, Extraction and Natural Cavities Legend

Site Outline

Search Buffers (m) — 250 — 500

Historical Mining

Non-Coal Mining Cavities

Natural Cavities (point data)

Natural Cavities (polygon data)

Non-Coal Mining

Highly likely

Likely

Unlikely

Highly unlikely

Rare

5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
3	574.0	S	369572 423270	Unspecified Shaft	1891
Not shown	658.0	SE	369501 423110	Unspecified Old Shaft	1951
Not shown	660.0	SE	369492 423102	Unspecified Old Shaft	1928
Not shown	660.0	SE	369492 423102	Old Coal Shaft	1909
Not shown	660.0	SE	369492 423102	Unspecified Old Shaft	1938
Not shown	893.0	SE	369977 423073	Unspecified Old Shafts	1928
Not shown	893.0	SE	369977 423073	Unspecified Old Shafts	1938
Not shown	893.0	SE	369977 423073	Old Coal Shafts	1909
Not shown	898.0	SE	370005 423070	Coal Pits	1891
Not shown	907.0	SE	370015 423081	Old Coal Shafts	1909
Not shown	907.0	SE	370015 423081	Unspecified Old Shafts	1938
Not shown	907.0	SE	370015 423081	Unspecified Old Shafts	1928

5.2 Coal Mining

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

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

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

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

5.3 Johnson Poole and Bloomer

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

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

The following information provided by JPB is not represented on mapping: In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

5.4 Non-Coal Mining

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

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

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	510.0	SW	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
2	804.0	NW	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

5.5 Non-Coal Mining Cavities

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

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

Database searched and no data found.

5.6 Natural Cavities

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

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

Database searched and no data found.

5.7 Brine Extraction

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

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 Tin Mining

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

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

Database searched and no data found.

5.10 Clay Mining

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

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

Database searched and no data found.

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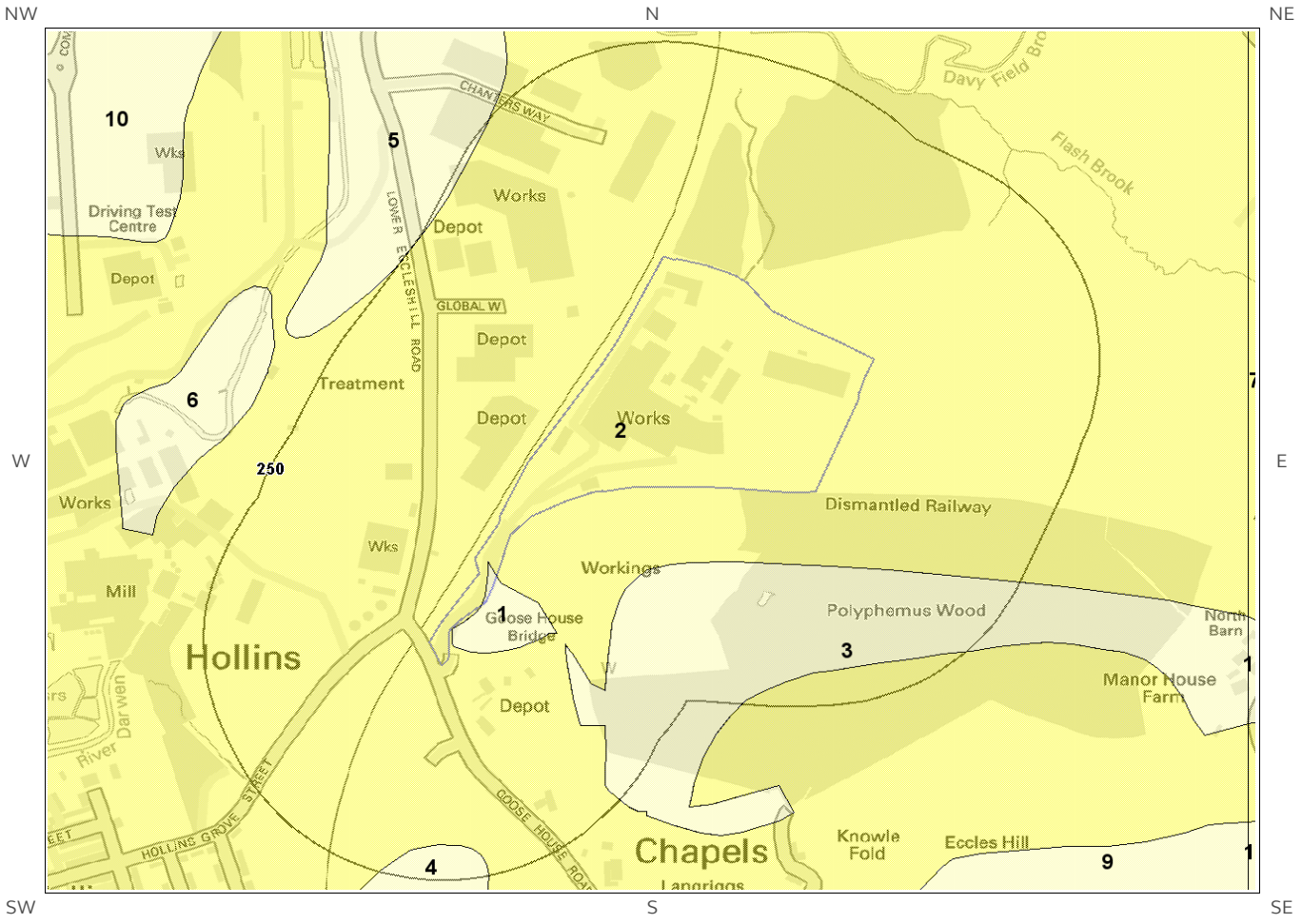
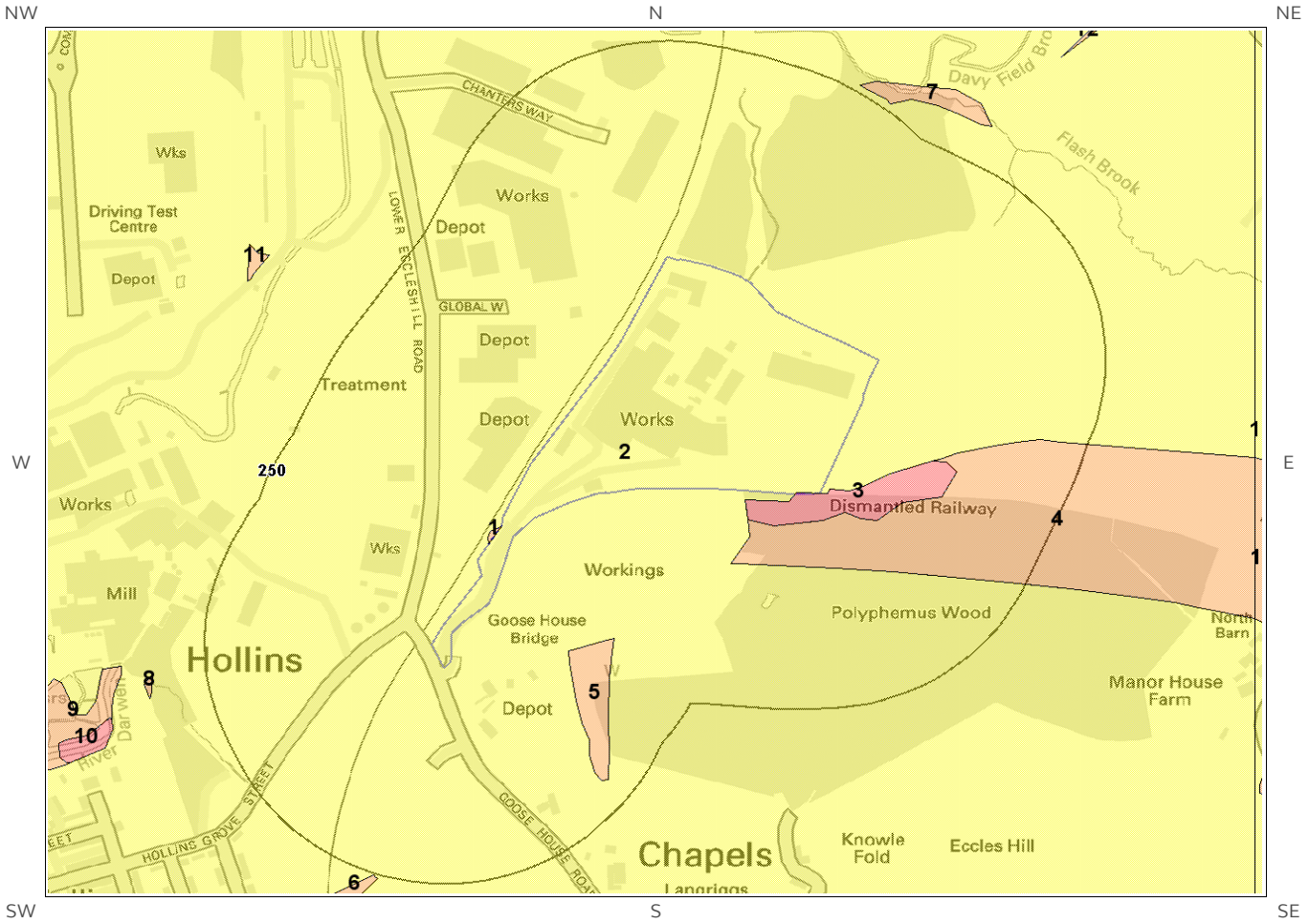
6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map



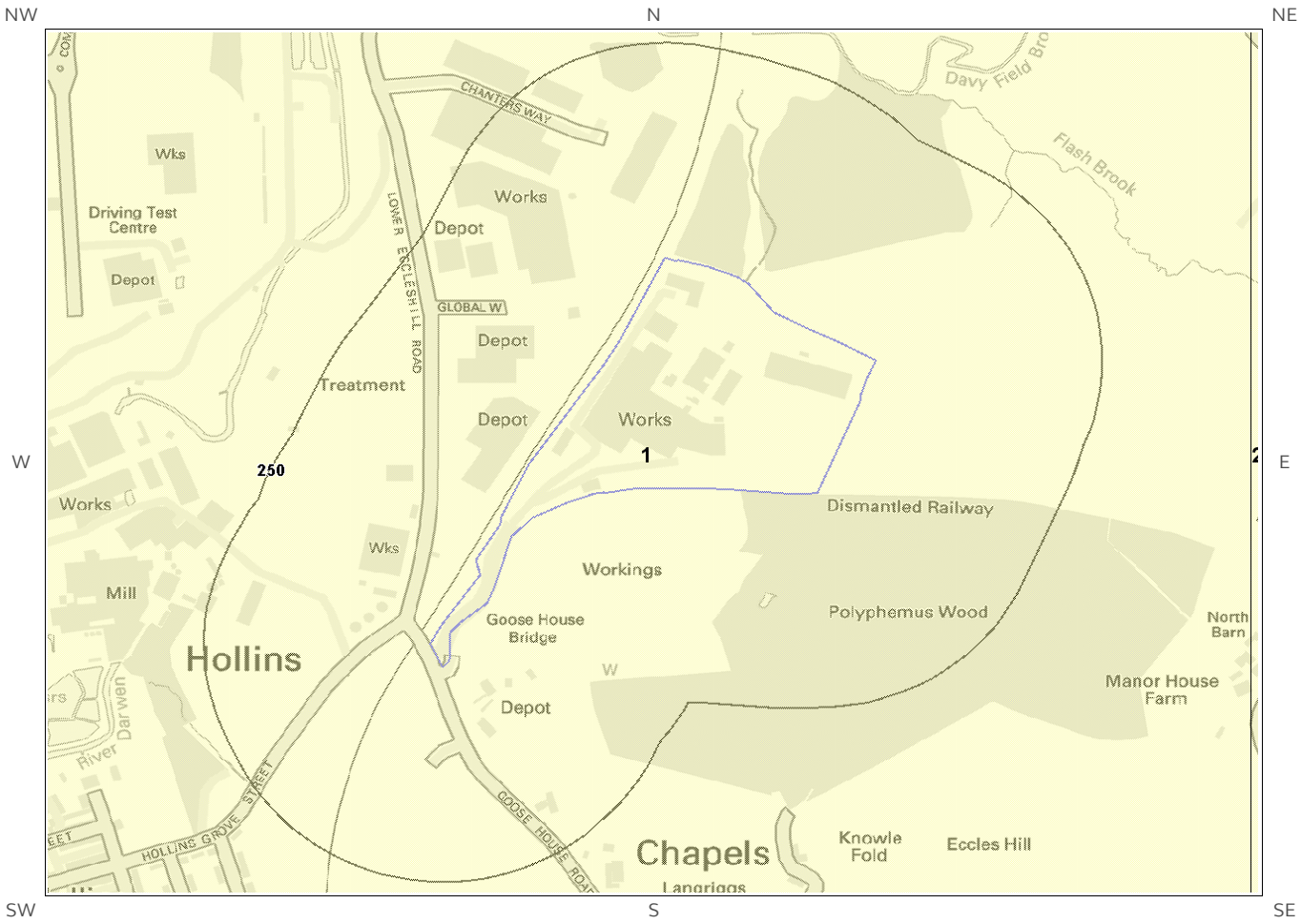
Shrink Swell Clay Legend

6.2 Landslides map



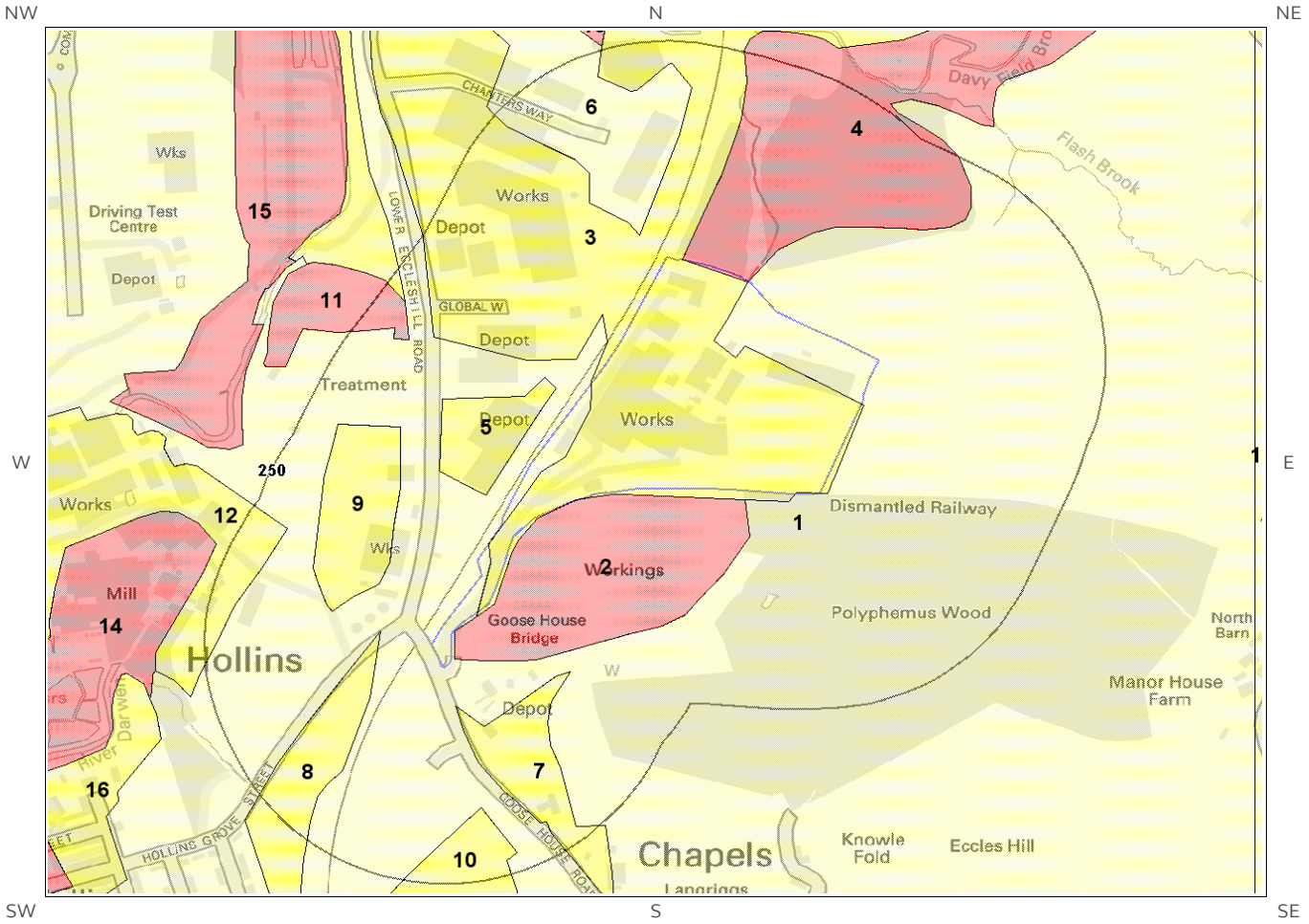
Landslides Legend

6.3 Ground Dissolution of Soluble Rocks map



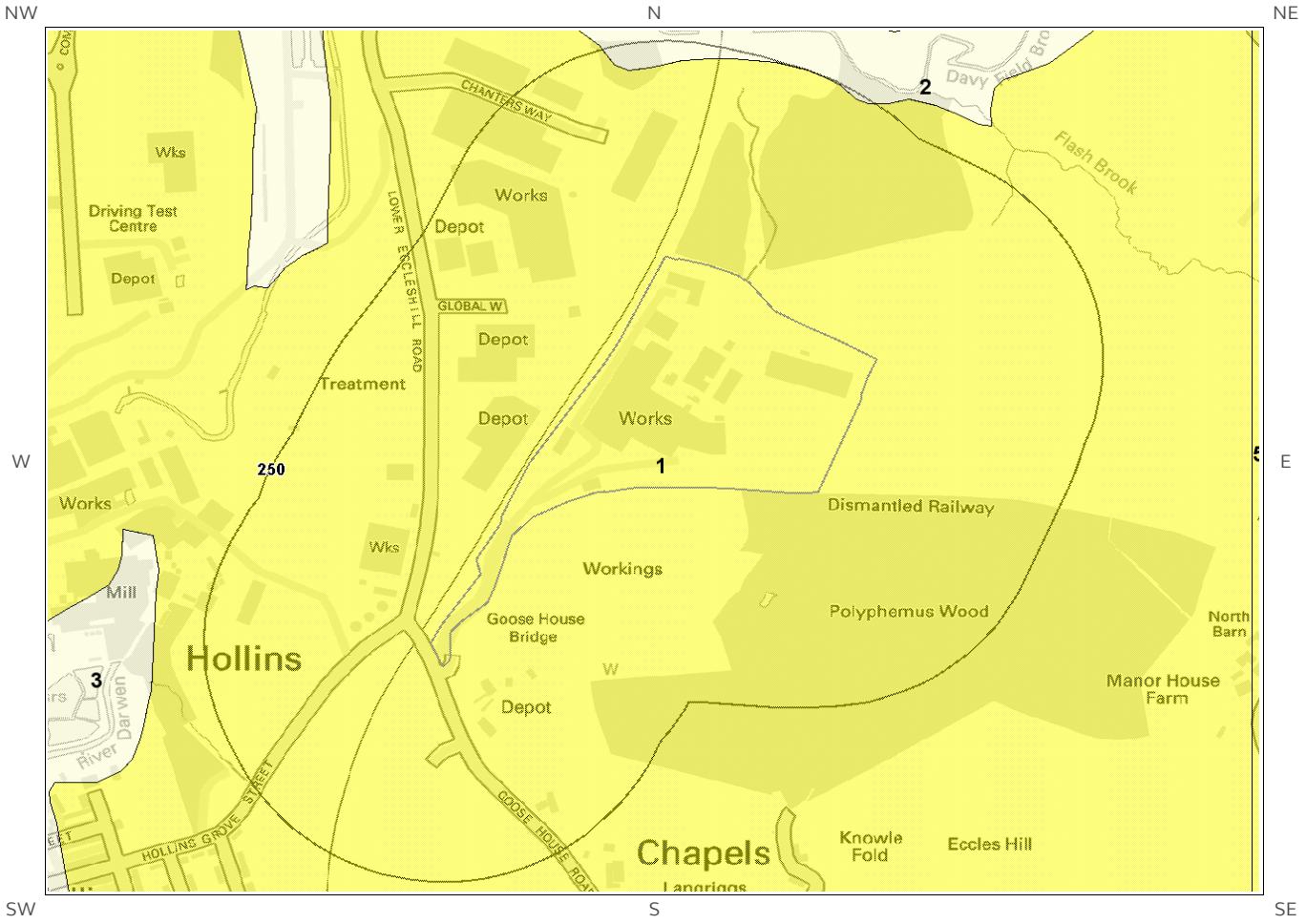
Ground Dissolution Soluble Rocks Legend

6.4 Compressible Deposits map



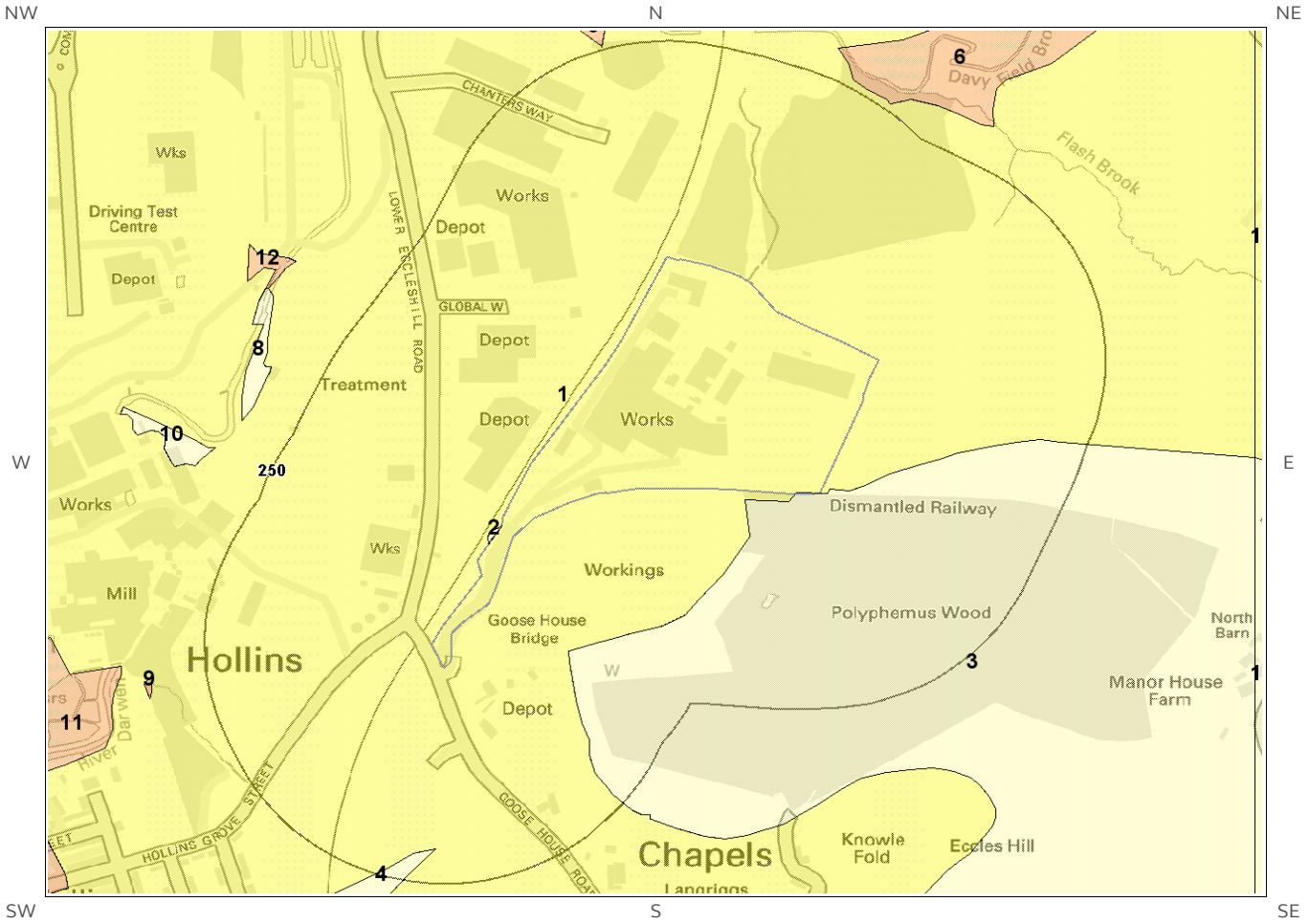
Compressible Deposits Legend

6.5 Collapsible Deposits map



Collapsible Deposits Legend

6.6 Running Sand map



Running Sand Legend

6 Natural Ground Subsidence

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

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

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

6.1 Shrink-Swell Clays

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

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

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.
2	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

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

ID	Distance (m)	Direction	Hazard Rating	Details
3	0.0	On Site	Moderate	Significant potential for slope instability with relatively small changes in ground conditions. Avoid large amounts of water entering the ground through pipe leakage or soak-aways. Do not undercut or place large amounts of material on slopes without technical advice. For new build - consider the potential and consequences of ground movement during excavations, or consequence of changes to loading or drainage. For existing property - probable increase in insurance risk is likely due to potential natural slope instability after changes to ground conditions such as a very long, excessively wet winter.
4	30.0	S	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.

6.3 Ground Dissolution of Soluble Rocks

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

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

6.4 Compressible Deposits

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

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

ID	Distance (m)	Direction	Hazard Rating	Details
4	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.
5	23.0	NW	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
6	39.0	NW	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
7	45.0	S	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

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

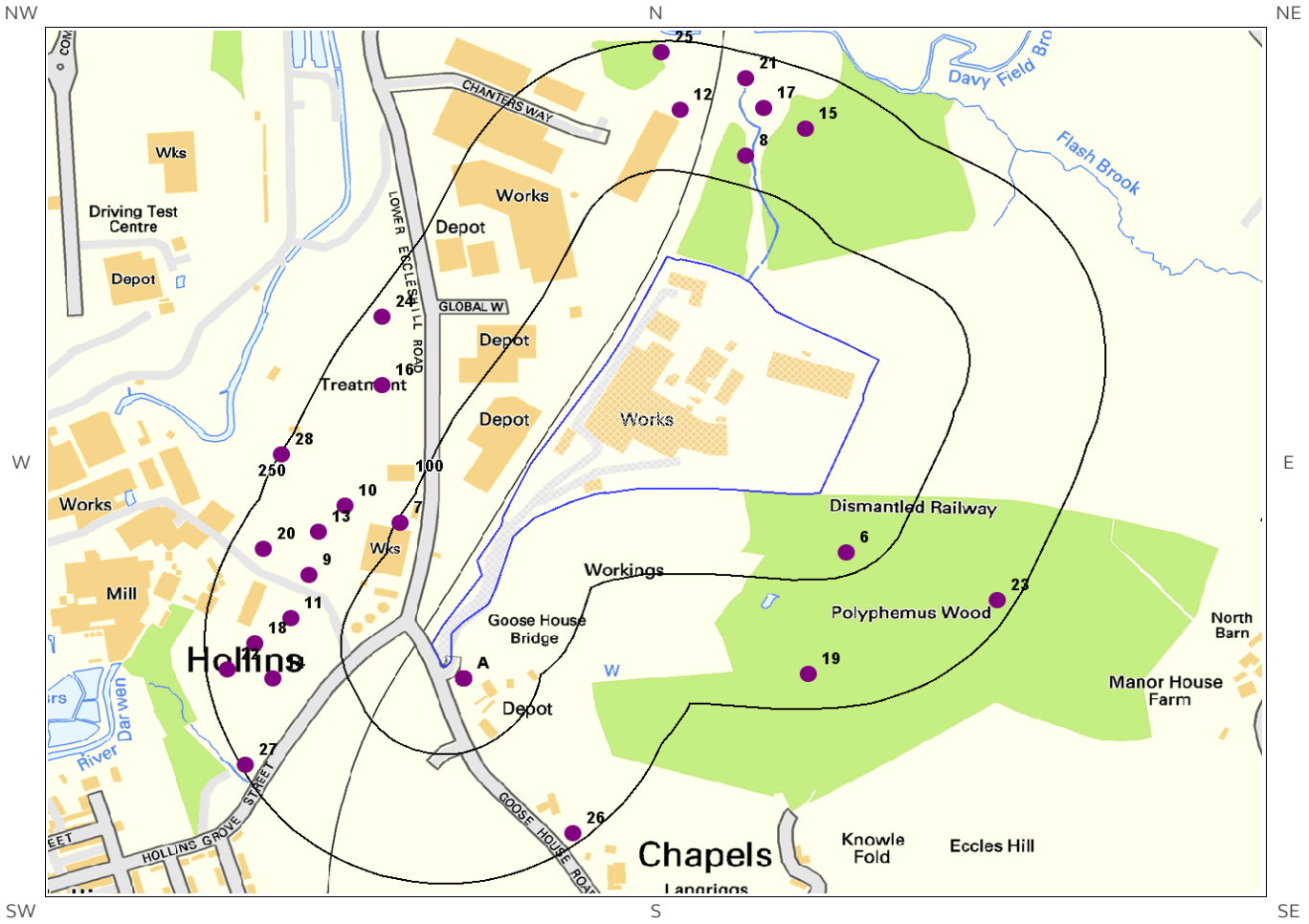
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible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

6.6 Running Sands

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
3	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

Site Outline

Borehole Locations

125
250
Search Buffers (m)

7 Borehole Records

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

Records of boreholes within 250m of the study site boundary: 28

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1A	23.0	SE	369130 423630	SD62SE175	9.85	GOOSE HOUSE ROAD SITE 5
2A	23.0	SE	369130 423630	SD62SE171	6.1	GOOSE HOUSE ROAD SITE 1
3A	23.0	SE	369130 423630	SD62SE172	6.15	GOOSE HOUSE ROAD SITE 2
4A	23.0	SE	369130 423630	SD62SE174	10.5	GOOSE HOUSE ROAD SITE 4
5A	23.0	SE	369130 423630	SD62SE173	8.0	GOOSE HOUSE ROAD SITE 3
6	75.0	SE	369551 423776	SD62SE14	-1.0	WESTBRICK NO.D2 DARWEN MANOR FARM
7	95.0	NW	369060 423810	SD62SE327	-1.0	TRAILOR PARK DARWEN LANCASHIRE BH6
8	133.0	N	369440 424236	SD62SE33	1.0	BLACKBURN STH BYPASS TP.46A
9	157.0	NW	368960 423750	SD62SE379	-1.0	ST REGIS PAPER MILL DARWIN NR BLACKBURN 5
10	158.0	NW	369000 423830	SD62SE234	20.0	DARWEN SWR F3648 5A
11	158.0	W	368940 423700	SD62SE322	-1.0	TRAILOR PARK DARWEN LANCASHIRE BH1
12	170.0	N	369368 424290	SD62SE43	25.2	BLACKBURN STH BYPASS A27
13	175.0	NW	368970 423800	SD62SE385	-1.0	ST REGIS PAPER MILL DARWIN NR BLACKBURN TP 6
14	180.0	W	368920 423630	SD62SE326	-1.0	TRAILOR PARK DARWEN LANCASHIRE BH5
15	185.0	NE	369506 424268	SD62SE34	3.0	BLACKBURN STH BYPASS TP.47
16	187.0	NW	369040 423970	SD62SE384	-1.0	ST REGIS PAPER MILL DARWIN NR BLACKBURN TP 5
17	192.0	N	369460 424292	SD62SE32	3.0	BLACKBURN STH BYPASS TP.46
18	195.0	W	368900 423670	SD62SE323	-1.0	TRAILOR PARK DARWEN LANCASHIRE BH2
19	210.0	S	369509 423635	SD62SE13	-1.0	WESTBRICK NO.D1 DARWEN MANOR FARM
20	216.0	NW	368910 423780	SD62SE236	25.0	DARWEN SWR F3648 7
21	220.0	N	369440 424326	SD62SE44	23.0	BLACKBURN STH BYPASS A28

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
22	227.0	W	368870 423640	SD62SE324	-1.0	TRAILOR PARK DARWEN LANCASHIRE BH3
23	231.0	SE	369717 423721	SD62SE15	-1.0	WESTBRICK NO.D3 DARWEN MANOR FARM
24	233.0	NW	369040 424050	SD62SE375	-1.0	ST REGIS PAPER MILL DARWIN NR BLACKBURN BH1
25	236.0	N	369347 424356	SD62SE144	13.3	BLACKBURN STH BYPASS Y125
26	238.0	SE	369250 423450	SD62SE3	81.08	JOSEPH PLACE ECCLES HILL
27	246.0	SW	368890 423530	SD62SE240	23.0	DARWEN SWR F3648 10A&10R
28	248.0	NW	368930 423890	SD62SE233	25.0	DARWEN SWR F3648 5

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

#1A: scans.bgs.ac.uk/sobi_scans/boreholes/17379
#2A: scans.bgs.ac.uk/sobi_scans/boreholes/17375
#3A: scans.bgs.ac.uk/sobi_scans/boreholes/17376
#4A: scans.bgs.ac.uk/sobi_scans/boreholes/17378
#5A: scans.bgs.ac.uk/sobi_scans/boreholes/17377
#8: scans.bgs.ac.uk/sobi_scans/boreholes/17237
#10: scans.bgs.ac.uk/sobi_scans/boreholes/17438
#12: scans.bgs.ac.uk/sobi_scans/boreholes/17247
#15: scans.bgs.ac.uk/sobi_scans/boreholes/17238
#17: scans.bgs.ac.uk/sobi_scans/boreholes/17236
#20: scans.bgs.ac.uk/sobi_scans/boreholes/17440
#21: scans.bgs.ac.uk/sobi_scans/boreholes/17248
#25: scans.bgs.ac.uk/sobi_scans/boreholes/17348
#26: scans.bgs.ac.uk/sobi_scans/boreholes/17206
#27: scans.bgs.ac.uk/sobi_scans/boreholes/17444
#28: scans.bgs.ac.uk/sobi_scans/boreholes/17437

8 Estimated Background Soil Chemistry

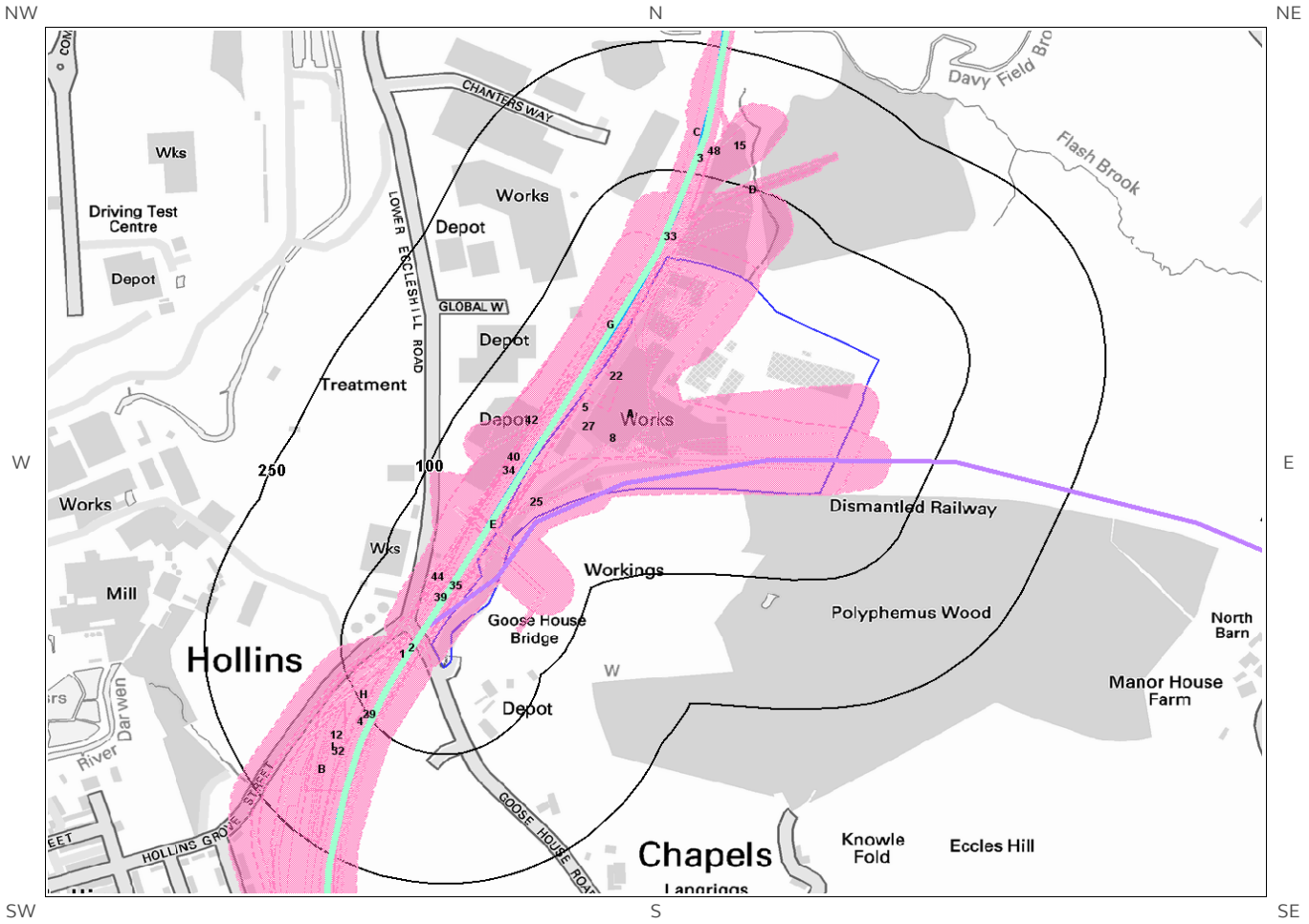
Records of background estimated soil chemistry within 250m of the study site boundary: 12

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
16.0	SW	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

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

9 Railways and Tunnels map



Railways and Tunnels Legend

- Site Outline
- Search Buffers (m) 250 / 500
- Underground or Partially Underground Railway / Subway System
- Railway Tunnel (OS Mapping)
- Abandoned or Dismantled Railway (OpenStreetMap)
- Railway Track (OS Mapping)
- Railway Track (OpenStreetMap)
- High Speed 2
- High Speed 2 Revised Proposed Route
- Crossrail 1
- Railway and/or Tunnel Feature from Historical Mapping

9 Railways and Tunnels

9.1 Tunnels

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

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

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

Database searched and no data found.

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

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

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

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

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

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

ID	Distance (m)	Direction	NGR	Details	Date
1	0	On Site	369014 423603	Railway Sidings	1970
2	0	On Site	369001 423173	Railway Sidings	1966
3	0	On Site	369391 424232	Railway Sidings	1966
4	0	On Site	369014 423603	Railway Sidings	1983
5	0	On Site	369310 423986	Railway Sidings	1891
6A	0	On Site	369316 423918	Railway Sidings	1938

ID	Distance (m)	Direction	NGR	Details	Date
7A	0	On Site	369316 423918	Railway Sidings	1928
8	0	On Site	369316 423918	Railway Sidings	1909
18E	0	On Site	369163 423805	Old Tunnel	1954
19E	0	On Site	369167 423802	Old Tunnel	1954
20E	0	On Site	369156 423795	Tunnel	1911
21E	0	On Site	369156 423795	Tunnel	1930
22	0	On Site	369295 424000	Railway Sidings	1891
23F	0	On Site	369322 424057	Tramway Sidings	1911
24F	0	On Site	369322 424057	Tramway Sidings	1930
25	0	On Site	369211 423831	Railway Sidings	1891
26A	0	On Site	369301 423986	Railway Sidings	1930
27	0	On Site	369328 423916	Railway Sidings	1911
28	0	On Site	369218 423729	Tramway Sidings	1930
29	0	On Site	n/a	Railway	1894
30F	0	NW	369319 424059	Railway Sidings	1954
31F	1	NW	369316 424060	Railway Sidings	1954
32	3	W	n/a	Railway	1911
33	5	NW	369358 424139	Railway Sidings	1930
9B	9	SW	368983 423395	Railway Sidings	1938
10B	9	SW	368983 423395	Railway Sidings	1928
34	11	NW	369188 423877	Railway Sidings	1891
35	11	NW	369120 423733	Railway Sidings	1930
36G	12	NW	369293 424041	Railway Sidings	1954
37G	12	NW	369293 424040	Railway Sidings	1954
38	14	NW	369013 423602	Railway Sidings	1954
39	16	NW	369106 423721	Railway Sidings	1891
40	17	NW	369187 423887	Railway Sidings	1954
41G	18	NW	369281 424028	Railway Sidings	1930
42	22	NW	369205 423927	Railway Sidings	1930
43B	24	NW	368946 423459	Railway Sidings	1967

ID	Distance (m)	Direction	NGR	Details	Date
44	31	W	369102 423745	Railway Sidings	1930
11B	34	SW	368983 423395	Railway Sidings	1909
45H	34	W	369013 423602	Railway Sidings	1966
12	35	W	368995 423544	Railway Sidings	1891
13C	43	N	369393 424274	Railway Sidings	1938
14C	43	N	369393 424274	Railway Sidings	1928
46B	45	W	368943 423429	Railway Sidings	1930
47B	45	W	368943 423429	Railway Sidings	1911
15	46	N	369432 424230	Railway Sidings	1910
16D	47	N	369452 424196	Railway Sidings	1938
17D	47	N	369452 424196	Railway Sidings	1928
48	47	N	369399 424234	Railway Sidings	1891
49I	64	SW	368975 423545	Railway Sidings	1891
50H	72	SW	369008 423609	Railway Sidings	1954
51B	114	SW	368961 423406	Railway Sidings	1954
52I	115	SW	368978 423552	Railway Sidings	1975
53I	115	SW	368971 423552	Railway Sidings	1962
54I	115	SW	368971 423552	Railway Sidings	1954
55J	179	SW	368943 423351	Railway Sidings	1971
56J	179	SW	368961 423322	Railway Sidings	1954

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

9.3 Historical Railways

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

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

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

Distance (m)	Direction	Status
0	On Site	Abandoned

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

9.4 Active Railways

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

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

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

Distance (m)	Direction	Name	Type
3	NW	Ribble Valley Line	Rail
3	NW	Ribble Valley Line	Rail
5	NW	Not given	Multi Track
5	NW	Not given	Multi Track
19	W	Not given	Multi Track
19	W	Not given	Multi Track

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

9.5 Railway Projects

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

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

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

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

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

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

Contact Details

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thomas.stokes@rpsgroup.com

British Geological Survey Enquiries

Kingsley Dunham Centre
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Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

British Gypsum

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Loughborough
Leicestershire
LE12 6HX

The Coal Authority

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

Public Health England

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https://www.gov.uk/government/organisations/public-health-england
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Main switchboard: 020 7654 8000

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Ordnance Survey

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Getmapping PLC

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Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
https://www.groundsure.com/terms-and-conditions-may25-2018

APPENDIX F

Coal Authority Report

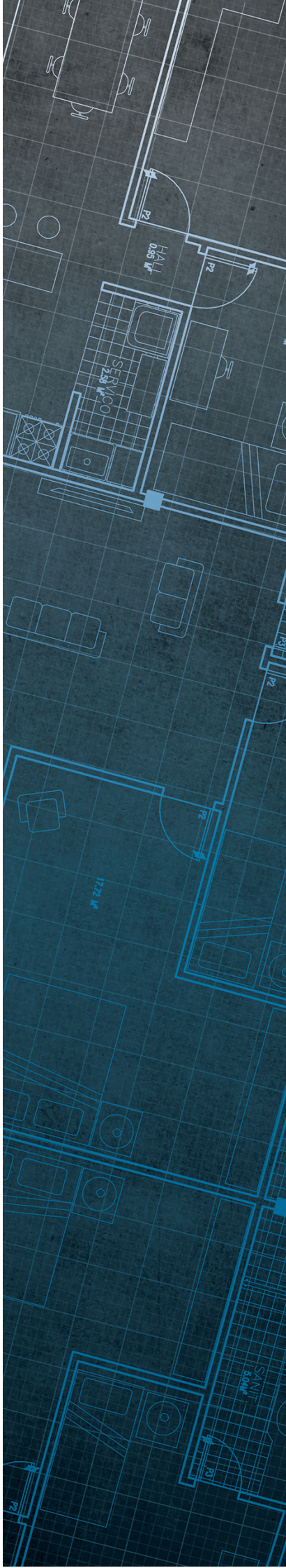
The Coal Authority

Consultants

Coal Mining Report

Derf, Lower Eccleshill Road, Darwen,
Bb3 0eh
Lancashire

Date of enquiry:	**7 January 2019**
Date enquiry received:	**7 January 2019**
Issue date:	**7 January 2019**
Our reference:	**51001988680001**
Your reference:	**RPS-5731192**



Consultants
Coal Mining Report

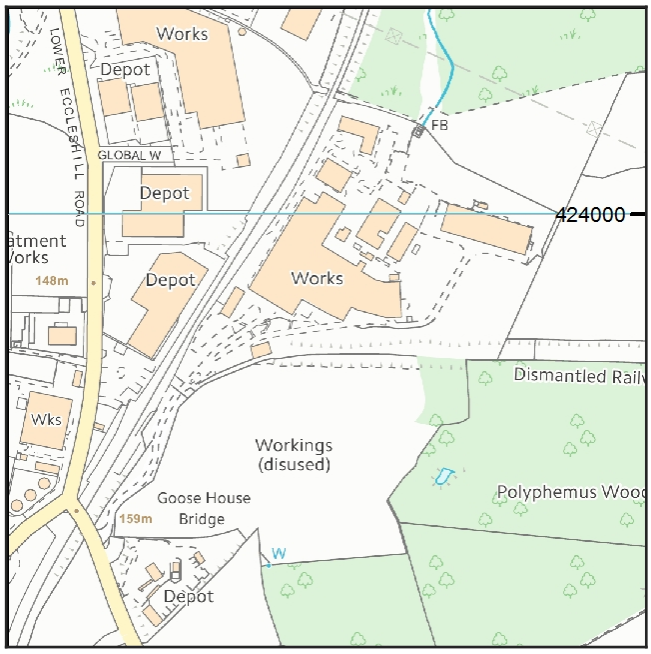
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GROUNDSURE LIMITED

Enquiry address

Derf, Lower Eccleshill Road, Darwen, Bb3 0eh
Lancashire



Approximate position of property

Map data

How to contact us

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Mansfield
Nottinghamshire
NG18 4RG

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/company/the-coal-authority
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/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining
No past mining recorded.

Probable unrecorded shallow workings
None.

Spine roadways at shallow depth
No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	369423-023	369252 423895		Coal	

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

NW270	6598	0
PO0	NW1222	

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

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
DIB HOLE	Coal	Yes	Within	N/A	87

Geological faults, fissures and breaklines
Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property recorded.

Opencast mines
None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips
None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

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

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

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

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

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

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

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

Section 5 – Data definitions

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

Past underground coal mining

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

Probable unrecorded shallow workings

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

Spine roadways at shallow depth

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

Mine entries

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

Abandoned mine plan catalogue numbers

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

Outcrops

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

Geological faults, fissures and breaklines

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

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

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

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

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

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

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

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

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

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

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

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

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

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

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

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

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

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