

CCG-C-25-15323

**FLOOD RISK ASSESSMENT REPORT
FOR LAND AT NO. 16 WOODWARD ROAD
KNOWSLEY INDUSTRIAL PARK
KIRKBY
MERSEYSIDE
L33 2UZ
MARCH 2025**

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Purpose & Aims of the Assessment	1
2.0	SITE DATA	1
2.1	Site Location & Description	1
2.2	Access and Egress.....	2
2.3	Existing and Proposed Development & PPG Classification	2
3.0	BACKGROUND AND APPLICATION OF PPS25	2
3.1	Introduction	2
3.2	Sequential Test.....	2
4.0	SITE HYDROLOGY AND HYDROGEOLOGY	2
4.1	Watercourses & Bodies of Standing Water.....	2
4.2	Geology, Hydrogeology and Groundwater Flooding	3
4.3	Drainage (Pluvial) Flooding	3
4.4	Coastal Flooding.....	3
5.0	SURFACE WATER RUNOFF.....	3
5.1	Requirements for Surface Water Drainage at the Site.....	3
5.2	Surface Water Runoff Rate at the Development Site.....	3
6.0	Suds options.....	5
6.1	Approach to Selection of SUDS Techniques	5
6.2	Alternative SUDS Techniques Background	6
6.3	What are Sustainable Drainage Systems	6
6.4	SUDS Techniques.....	6
6.5	Infiltration SUDS.....	7
6.6	Permeable Surfaces.....	7
6.7	Sub Surface Infiltration.	8
6.8	Attenuation SUDS	9
6.9	Basins	9
6.10	Ponds	10
6.11	Alternative forms of Attenuation.....	10
6.12	Combined Infiltration/Attenuation Systems	11
6.13	SUDS Options Appraisal	12
7.0	CONCLUSIONS AND RECOMMENDATIONS	12

DRAWINGS:

APPENDIX A:	NOTES ON LIMITATIONS
APPENDIX B:	COMMERCIAL FLOOD INSIGHT REPORT
APPENDIX C:	NATIONAL PLANNING POLICY FRAMEWORK TABLE 1 – 3
APPENDIX D:	GREENFIELD CALCULATIONS

1.0 INTRODUCTION

1.1 Purpose & Aims of the Assessment

CC GEOTECHNICAL LIMITED (CCG) was commissioned by **Mr. D. DONALD** (the *Client*) to prepare a Flood Risk Assessment (*FRA*) in connection with the proposed redevelopment of land located within the curtilage of Knowsley Industrial Park, Kirkby, Merseyside, L33.

It is understood that the rear of an existing commercial at No. 16 Woodward Road, Kirkby, which presently accommodates 4nr business units, is to be extended to provide a 5th unit, the extension to visually match the existing.

It is further proposed that the land to the rear of the site is to be redeveloped by the construction of a new steel framed building forming 2nr additional commercial use units, constructed in cladded elevations under a pitched roof.

External works will include hard paving, parking bays, and small areas of soft landscaping.

The existing and proposed site layouts are as annotated on **UNIT³ DESIGN STUDIO** architectural drawings contained herein.

A Flood Risk Assessment (*FRA*) was required by the *Client* to submit in support of a planning application.

The site is situated within the administrative jurisdiction of **KNOWSLEY METROPOLITAN BOURGH COUNCIL (MBC)**.

This *FRA* was undertaken in accordance with the requirements of **KNOWSLEY MBC** '*Local Flood Risk Management Strategy: 2017 (LFRMS)*', the *National Planning Policy Framework (NPPF): 2019*, **KNOWSLEY MBC** '*Level 2 Strategic Flood Risk Assessment: 2012 (L2SFRA)*', **KNOWSLEY MBC** '*Sustainable Drainage and Surface Water Management – Technical Guidance for Developers*' (Version 06, August 2016 - 2020), and the *Planning Practice Guidance*' (PPG: 2014).

The principal objectives of the *FRA* were:

- To assess the potential for flooding on and within the vicinity of the site, following the proposed redevelopment
- To calculate the effects of climate change on likely future run off rates at the site
- If appropriate, to propose conceptual flood amelioration measures which can be practicably incorporated in the development infrastructure, to accommodate the 1 in 100-yr (+ Climate Change (CC)) flood event.

2.0 SITE DATA

2.1 Site Location & Description

The site is located immediately to the south of public pavements extending along Woodward Road, Kirkby, L33 2UZ as illustrated on **CCG** Drawing No. CCG-C-25-15323-1 and Aerial Palte No. CCG-C-25-15323-2 contained within Appendix A.

The **ORDNANCE SURVEY** coordinates for the approximate site centre are 343417 399494. Its northern boundary stands at an approximate elevation of around 39maOrdnance Datum.

The site is situated wholly within a commercial / light industrial context, and lies within the curtilage of Knowsley Industrial Park, it comprises a rectangular shaped parcel of land which extends to the appropriate dimensions of c. 64m x 40m (c. 2579m²); its long axis being on a north – south alignment. It is bound to the north by public pavement extending along Woodward Road. Its remaining boundaries are formed by a development of mixed-use commercial units and associated grounds.

Permanent structures occupying the study site comprise a well-maintained single-storey commercial unit constructed of combination of traditional brick and profiled cladded elevations, with the site access fronting onto Woodward Road.

The surface topography across the site was seen to be sensibly flat with surface cover comprising locally poorly maintained hard pavement cover to the front and sides of the existing property, with compacted, poorly sorted, sands gravels and small cobbles to the rear.

Environmental data contained herein, confirms that the site and its immediate environs were initially utilised for agricultural purposes before being developed during the onset of the Second World War (WWII) for commercial / light industrial land uses with associated rail infrastructure where the site formed part of the Royal Ordnance Factory (ROF), Filling Factory 7:Kirkby, from September 1940, through to

March 1946. After the cessation of the war and following the removal of former historical structures and subsequent site clearance works, the site, and its immediate surroundings were again fully redeveloped for commercial land uses and formed part of larger Kirkby Industrial Estate, a land use which continues to this day.

2.2 Access and Egress

Access to the site is currently proposed from the Woodward Road frontage to the north which lies within a Flood Zone II (Fluvial /Tidal Models) and Flood Zone III (Fluvial Models) and therefore there is a potential for a 1: 100 (0.1%), or greater, chance of flooding each year from rivers or a 1: 200 (0.5%), or greater, chance of flooding each year from the sea.

2.3 Existing and Proposed Development & PPG Classification

By virtue of the proposed land use as '*Commercial*' in a brownfield regeneration area, the development is classified as '*Less Vulnerable*', according to Table 3 of PPG (presented in Appendix C).

3.0 BACKGROUND AND APPLICATION OF PPS25

3.1 Introduction

The aim of PPG is to ensure that flood risk is taken into account at all stages in the planning process and, where relevant, that development is directed away from areas at highest risk of flooding. Where new development is planned in risk areas, then current policy aims are:

- To make the development safe from flooding
- To avoid increasing flood risk elsewhere as a consequence of the development
- To contribute to reducing flood risk overall

3.2 Sequential Test

The proposed development was subjected to the Sequential Test as set out in Table 3 of PPG. For assessment in accordance with the Test, the site was determined by reference to the **ENVIRONMENT AGENCY (EA)** Flood Map to be in a Flood Zone II (Fluvial /Tidal Models) / Flood Zone III (Fluvial Models), as defined by PPG. Since the proposed development is '*Commercial*' in a brownfield regeneration area, a "*Less Vulnerable*" classification was assigned to it.

Inputting these parameters into the Sequential Test matrix indicated that the development proposal is '*appropriate*' and as such the development satisfies the Sequential Test as required by Table 3 of PPG.

4.0 SITE HYDROLOGY AND HYDROGEOLOGY

4.1 Watercourses & Bodies of Standing Water

EA mapping data indicates the site is situated within a designated Flood Zone II and Flood Zone III, and hence it is concluded that there is a '*Moderate - High*' Risk of flooding on site and within the immediate area associated with nearby surface water features and the sea.

There are no records relating to the presence of Water Networks (OS MasterMap) within 250m of the study site, the nearest record relating to an inland river / stream being located c.299m north of the study site, hence the risk of flooding associated with such features is considered to be '*Insignificant*'.

There are records relating to the presence of 1nr elongated body of standing water (un-named) within the local area, this feature is located c. 183m northwest of the site. The risk of flooding arising from this feature is deemed to be '*Significant*'.

The **EA** does not have any flood modelling flood data at this site, nor does the **EA** have records pertaining to historical flood events on, or within a 250m radius of, the study site.

There are no areas which are utilised for flood storage and/or flood defences within 250m of the study site.

There are no areas within 250m of the study site which benefit from the presence of flood defences for a 1: 100 plus Climate Change event.

The site is not located within 500m of an area which is identified as being at potential risk of a canal failure.

4.2 Geology, Hydrogeology and Groundwater Flooding

The geology of the site was researched by reference to Tonks L.H. *et.al* (1938) 'Memoirs of the Geological Survey England and Wales: Explanation of Sheet 84: The Geology of Wigan District', the **BRITISH GEOLOGICAL SURVEY (BGS)** 1:50, 000 scale Sheet 084 Wigan (2011), and 1:10, 000 scale (Solid and Drift Editions) geological mapping data.

The **BGS** 1:10, 000 Scale Drift Geological map indicate that the site is underlain with artificial made ground deposits, of recent deposition, of an unknown thickness, composition and extent. The underlying natural drift deposits are documented to comprise the Shirdley Hill Sand Formations comprising moderately to well-sorted brown fine to medium grained sands, locally interbedded with peat deposits of post glacial origin (*Pleistocene Epoch - Late Quaternary - Holocene Sub Age*), underlain with impermeable diamictons (*boulder clay*) comprising poorly stratified gravel sand silt and clay deposits of glacial origin (*Pleistocene Epoch - Late Quaternary - Devensian Sub Age*).

The solid geology underlying the site is documented as being the Chester Formation of the Sherwood Sandstone Group, comprising red - brown locally yellow, locally pebbly, fine - to coarse-grained, cross-stratified sandstone with subordinate argillaceous mudstone, siltstones horizons of the Early-Triassic Period (*Mesozoic Era: Olenekian Sub-Age*).

There are no documented geological lines of weakness within, or within a 500m radius of, the site.

The general dip of the solid geology within the surrounding area is seen to be 5°, is a southwesterly direction.

The made ground deposits underlying the site classify as an Unproductive Aquifer

The underlying Shirdley Hill Sand Formations are classified as being a Secondary A Aquifer

The underlying natural drift deposits (Diamicton) classify as a Secondary A Undifferentiated Aquifer

The underlying bed rock formation (Chester Formation) is classified as a Principal Aquifer

The site is not located within a Source Protection Zone

The highest risk of Surface Water Flooding within the is classified as being

4.3 Surface Water (Pluvial) Flooding

The flood risk data discussed in the GroundSure Report (Report Reference No. CMAPS-AAG-1212885-4165-180325, dated March 2025) presented in Appendix B shows a 'Low' (1: 100 years, 0.1m - 0.3m / 1: 1000 years, 0.1m – 0.3m Return Periods) risk of surface water / pluvial flooding affecting the northwestern southwestern sections of the study site.

4.4 Groundwater Flooding

The flood risk data presented in Appendix B states that there is a 'Low Risk' of groundwater flooding affecting the study site.

4.5 Coastal Flooding

The western site boundary is located c.12km east of the River Mersey. Notwithstanding this distance, the appended Groundsure Report states that there is a 'Medium' risk of flooding associated with the sea on, and within 50m of, the site. This is discounted as an unrealistic possibility.

5.0 SURFACE WATER RUNOFF

5.1 Requirements for Surface Water Drainage at the Site

PPG requires that surface water arising from a developed site should, as far as is practicable, be managed in a sustainable manner to mimic the surface water flows arising from the site prior to development. Opportunities to reduce surface runoff, and the associated flood risk, should be identified and future effects of climate change should be considered. The relevant calculations are described in this section of the report.

5.2 Surface Water Runoff Rate at the Development Site

This section of the report quantifies the impermeable and permeable areas of the site prior to, and following, the development. As shown on the appended historical environmental data, given that the site has historically been developed with significant areas comprising full hard

standing, the surface water run-off calculations presented hereunder are based on pre- and post-construction site configurations.

It was calculated that the proportion of impermeable surface (PIMP (%)) cover will increase following completion of the redevelopment of the site since the post development configuration will incorporate less areas of permeable cover. Notwithstanding this reduction, PPG now requires that climate change be considered in predicting future run-off.

The changes to proportions of permeable/impermeable surfaces from the proposed development are summarised in Table 1 hereunder:

Table 1: Changes to Permeable/Impermeable Areas Post Development

	Prior to development site	Developed Site
Buildings/Roofs Hardstanding	1649m ²	2478m ²
Permeable areas	930m ²	101m ²
Total	2579m²	2579m²

Using the Wallingford Procedure Runoff Equation, and the values contained in Volume 3 of the Wallingford procedure, a percentage runoff can be calculated for the current, and proposed site configurations.

$$PR (\%) = 0.829 \times PIMP (\%) + 25 \times SOIL + 0.078 \times UCWI - 20.7$$

$$SOIL = 0.45$$

$$UCWI = 138$$

$$PIMP \text{ Current site} = 64\%$$

$$PIMP \text{ Proposed Development} = 96\%$$

$$PR (\%) \text{ Current Site} = 54\%$$

$$PR (\%) \text{ Proposed development} = 81\%$$

It can be seen that the post-development percentage run-off (PR (%)) rates will increase by 27% since the post construction impermeable surface cover will increase from c.1649m² to c.2478m².

Using the Modified Rational Method, the run-off rate was calculated for a range of return periods. A time of concentration of 7.5 minutes was used, comprising a time of entry of 4 minutes and a time of flow of 3.5 minutes. A rainfall estimation calculation was also undertaken for 1, 5, 20 and 100year return period events. The calculated rainfall intensities are 34.3mm/hr, 55.2mm/hr, 77.7mm/hr, and 109mm/hr, respectively. The runoff rates given by the Modified Rational method are as follows:

$$Q = 2.78 \times C_v \times C_r \times \text{rainfall intensity} \times PIMP \times A$$

Table 2: Flow rates given by Modified Rational Method

Return Period	Runoff Rate (Q) Pre-Development	Runoff Rate (Q) Post Development	KMBC SFRA Target Discharge Rate (= -50% Q)	-50% (Q) Pre-Construction Reduction for 1:2yr Critical Events	Greenfield Runoff Rates (Q)
1 in 1 Year	18.61l/s	27.96l/s	13.98l/s	-	1.07l/s
1 in 2 Year	21.6l/s	32.46l/s	-	16.23l/s	-
1 in 5 Year	29.94l/s	45.00l/s	22.50l/s	-	-
1 in 20 Year	42.15l/s	63.35l/s	31.67l/s	-	-
1 in 30 Year	44.77l/s	67.28l/s	33.64l/s	-	1.7l/s
1 in 100 Year	59.30l/s	88.40l/s	44.20l/s	-	2.08l/s
1 in 100 Year + Climate Change (+40%)	83.03l/s	123.75l/s	61.88l/s	-	-

For the 1 in 100year plus climate change (set at 1:100yr + 40%), a post development surface water run-off rate of 123.75l/s was calculated.

This compares with the target value of 16.23l/s calculated for a 1:2-year critical rainfall event (-50%), to provide betterment over existing runoff in accordance with **KNOWSLEY MBC** "Sustainable Drainage and Surface Water Management – Technical Guidance for Developers" (Version 06, August 2016, 2020). However, it is understood that the lead Local Flood Authority (LLFA) in advising **KNOWSLEY MBC** planning department will only consider the 50% betterment flow rate as an acceptable discharge rate if the entirety of the existing drainage network is utilised without modification.

Given the proposed site configurations, this is not be a feasible option, and hence the LLFA will require the rate of Discharge to Sewer to be either the calculated Qbar value or the generally accepted rate of 5l/sec whichever is the greater (the rate of 5l/sec being the minimum flow to maintain efficient flow through an attenuation outlet valve). Since there is a potential for blockages in Vortex Flow Control systems arising from an intake of vegetation and other detritus, it is recommended that rates of discharge from attenuation systems are set at no less than 5l/s rather than adopting the calculated Qbar values for the 'Greenfield Run-off Rate' to maintain their integrity. It is advised that the drainage design engineers propose these parameters to **UNITED UTILITIES (UU)**. The developer must consider that these are their options unless they can prove that extraordinary circumstances apply. Taking account of these constraints, surface water SUD's measures and/or attenuation will be required.

Subject to agreement with **UU**, surface water runoff may be discharged to the drainage network, if present, extending along Woodward Road to the north. However, as stated above it is likely that **UU** will not accept any of the Return Period run-off rates calculated for the site and will require the rate to be limited to 5l/sec. In such circumstances, it will be necessary that the developer considers incorporation of supplementary SUDS measures to attenuate runoff in storm conditions.

Calculations for preliminary attenuation design based on 5l/sec discharge rate are presented hereunder:

Table 3: Post Development & Greenfield Run-off / Attenuation Calculations for 1:100^{yr} +CC Event

Unit	Post Development Run-off
Discharge to sewer rate l/sec	5l/s
Runoff rate 1;100yr + CC l/sec	123.75l/s
Accumulation rate l/sec	118.75l/s
Volume per 15m Storm Duration (m ³)	107
Length of Attenuation Storage facility based on 2m Ø chamber	106.88

Based on the generally accepted rate of 5l/s, to accommodate the 1:100yr + CC runoff rate for a 15 min' storm duration, a storage volume of 107m³ would be needed. This could be accommodated in a 2m diameter pipe of c.35m length (*where: $V = \pi r^2 h = \pi \cdot 1^2 \cdot 35 \approx 109m^3$*) incorporating a hydro-brake chamber or with discharge regulated by Vortex Flow Control or similar flow-controlled device.

As an alternative to the oversize pipe attenuation, consideration may be given to the construction of a c. 12m x 12m x 0.8m deep (total storage = 115m³) modular cell storage reservoir and associated works (*i.e., sediment catchpit etc.*), which slightly surpasses the calculated 107m³ as shown in Table 3 above. Thereafter, the attenuated surface water run-off should be designed to pass through a 'SPEL Stormceptor 300' Series Model 308 Class 1 oil/fuel separator as recommended in Gov.UK: 'Guidance: Discharges to surface water and groundwater: environmental permits' (2016, Revised April 2021) to provide an appropriate level of pollution treatment before being allowed to discharge into the nearby drainage network.

With regards to the potential for the adoption of soak-a-ways, the Client is advised to commission the undertaking of *in-situ* soil permeability tests, with each test being undertaken in accordance with BRE Digest 365 at 2nr locations to determine if the underlying ground conditions are suitable for the adoption of natural soakaway drainage systems.

Should the underlying drift deposits be unsuitable for the adoption of soakaway systems, then subject to agreement with **UU**, surplus surface water runoff may be accommodated in the nearby drainage network extending along Woodward Road to the north, discharging at the generally accepted rate of 5l/sec.

Other SUDS methods may be considered where they are appropriate, and an overview of the common SUDS options is presented below, with those most likely to be appropriate for this site identified in Section 6.13 hereunder.

6.0 SUDS OPTIONS

6.1 Approach to Selection of SUDS Techniques

The underlying ground conditions of a development site will often determine the type of SUDS approach used at development sites for the disposal of surface water runoff, the prevailing conditions being determined through ground investigations carried out on-site. However, in the absence of this information an initial assessment of the site suitability to the use of SUDS can be obtained from the review of the available soils/geological mapping.

The detailed design of any drainage system and SUDS approach, consideration should be given to site specific characteristics and where possible should be based on primary data from site investigations.

Further advice must also be sought in terms of water resources contaminated land, archaeology, ecology etc.

The initial appraisal of SUDS viability will help inform the developer/owner of the various options available for the development and may influence the final layout of the site.

6.2 Alternative SUDS Techniques Background

Traditionally, built developments have utilised piped drainage systems to manage storm water and convey surface water run-off away from developed areas as quickly as possible. Typically, these systems connect to the public sewer system for treatment and/or disposal to local watercourses. Whilst this approach rapidly transfers storm water from developed areas, the alteration of natural drainage processes can potentially impact on downstream areas by increasing flood risk and reducing water quality. Receiving watercourses are therefore much more sensitive to rainfall intensity, volume and catchment land uses after a catchment or areas of a catchment have been developed.

Due to the difficulties associated with upgrading sewer systems it is uncommon for sewer and drainage systems to keep pace with the rate of development/redevelopment and the increasingly stringent controls placed on discharges to watercourses. As development progresses and/or urban areas expand, these systems become inadequate for the volumes and rates of storm water they receive, resulting in increased flood risk and/or pollution of watercourses. Allied to this are the implications of climate change on rainfall intensities, overwhelming catchment responses and surcharging piped systems.

In addition, as flood risk has increased in importance within planning, a disparity has emerged between the design of conventional sewer systems (1 in 30yr) and the typical design event (1 in 100yr). This often results in drainage inadequacies for the flood return period developments need to consider, often resulting in potential flood risk from surface water sewers and combined sewer systems.

A sustainable solution to these issues is to reduce the volume and/or rate of water entering the sewer system and watercourses.

6.3 What are Sustainable Drainage Systems

Sustainable Drainage Systems (SUDS) are the preferred method (as set by the Environment Agency, Government and Building Regulations) for managing the surface water runoff generated by developed sites. SUDS seek to manage surface water runoff as close to the source as possible. Typically, this approach involves a move away from piped systems to softer engineering solutions inspired by natural drainage processes, where adoptable drainage criteria allow.

In addition, they should be designed to consider the surface water run-off quantity, rates and also water quality ensuring their effective operation up to and including the 1 in 100year design event.

Where possible a SUDS technique should seek to contribute to each of the three goals identified below with the favoured system contributing significantly to each objective:

- Reduce flood risk (to the site and to neighbouring areas)
- Reduce pollution
- Provide landscape and biodiversity benefit

In keeping with the guidance of Planning Policy Statement 25, Local Planning Authorities encourage the application of SUDS techniques.

Typically, the application of SUDS techniques is not limited to one technique per site. Often a successful SUDS solution will utilise several techniques in combination, providing flood risk, pollution, and biodiversity benefits. In addition, SUDS can be employed on a strategic scale, for example with several sites contributing to large scale jointly funded and managed SUDS.

6.4 SUDS Techniques

SUDS techniques can be used to reduce the rate and volume and improve the water quality of surface water discharges from sites to the

receiving environment (*i.e.*, *natural watercourse or public sewer etc*). Various SUDS techniques are available; however, the techniques operate on two main principles:

- Infiltration
- Attenuation

All systems generally fall into one of these categories, or a combination of the two.

The design of SUDS measures should be undertaken as part of the drainage strategy and design for a development site. A ground investigation is normally required to assess the suitability of using infiltration measures, with this information being used to assess the required volume on site storage. Hydrological analysis is undertaken using industry approved methods.

The viability of alternative SUDS techniques needs to be robustly assessed on an individual site basis as part of this Flood Risk Assessment taking account of the following:

- Underlying geology and the results of on site Geo-Environmental Investigations
- Proximity of groundwater table
- Long term maintenance and management of the SUDS asset
- Sewerage undertakers' criteria relating to any public sewer systems that would rely upon the function of the SUDS asset
- Environment Agency criteria relating to the protection of underlying groundwater and water resources
- Contaminated land issues

During the detailed design process of the SUDS liaison should take place with the Local Planning Authority, the Environment Agency, and United Utilities in order to establish that the design methodology is satisfactory and to also agree a permitted rate of discharge from the site.

Building regulations advise that a SUDS hierarchy be followed to select the appropriate solution for a development site, with preference given to infiltration techniques over attenuation systems, provided that underlying conditions allow.

6.5 Infiltration SUDS

This type of Sustainable Drainage System relies on discharges to ground, where suitable ground conditions allow. Therefore, infiltration SUDS are reliant on the local ground conditions (*i.e.*, permeability of soils and geology, the groundwater table depth, and the importance of underlying aquifers as water resources etc) for their successful operation.

Various infiltration SUDS techniques are available from directing the surface water run-off to ground. However, development pressures and a desire to maximise development potential often result in typically small land areas available for infiltration systems. Small areas allied to the rapid rates of run-off generation often require some form of supplementary attenuation as part of the infiltration system. The storage may be provided in the sub-base of a permeable surface, within the chamber of a soakaway, as a pond/water feature, or within underground storage pipes

Infiltration measures include the use of permeable surfaces and other systems that are generally located below ground.

6.6 Permeable Surfaces

Permeable surfaces are designed to allow water to drain through to a sub-base at a rate greater than the rain that falls to the surface. Permeable surfaces act by directly intercepting the rain that falls and are therefore true source controls. In theory, this system would prevent any surface water running off the site. However, it is impractical to design permeable surfaces to directly infiltrate intense rainfall events. The permeable sub-base can be used to temporarily store infiltrated run-off underground allowing it to percolate into the ground below. Alternatively, stored water within sub-base can be discharged from the site.

Maintenance programmes will need to ensure that the surface is kept clear of silt and voids are clear. The use of grit and salt during the winter months will adversely affect the drainage potential of paved surfaces, however this should not be required often as ice is less likely to form on these types of surfaces.

Grass/Landscaped Areas: Grassed or landscaped areas provide a permeable surface that allows for the infiltration of rain falling onto these areas, and potentially also run-off from adjacent impermeable areas. Grassed or landscaped areas are some relatively inexpensive SUDS measure however they are likely to be restricted to where vehicles are not present.

Reinforced Grass: Techniques are available that allow grass to be incorporated into a pavement type surface. These provide varying ratios of hard pavement to grass dependant on the site requirements. These range from concrete block arrangements to plastic meshes and can be utilised in those areas where the hard permanence of typical pavement might be undesirable, such as in conservation areas, roadside verges, emergency services access, canal towpaths, farm tracks, rural settings etc. In the past, these systems have been typically adopted for situations where a load bearing surface is required to fit into the surrounding environment, however these systems are often now installed for surface water management purposes. The grass: hard pavement ratio is one of the dominant factors that determine the rate of infiltration through to sub-surface.

Gravel: A bed of gravel with a high void space on a permeable sub-base offers a cost-effective solution for trafficked areas. Rain falling directly onto the area is able to infiltrate through to the subbase.

Solid paving with Void Spaces: Solid paving can be installed in such a way that voids are present that can be in-filled with a permeable material such as grass or gravel etc. If this is to be used as a SUDS measure, a permeable sub-base is required to allow infiltration into the underlying ground and/or temporary storage to attenuate discharges.

Permeable Pavements: Permeable pavements allow the rain falling directly onto the area to infiltrate through into a sub-base and where suitable, through into the underlying strata. Permeable pavements are constructed using porous concrete blocks. Small projects of less than 100m² (depending on sub-grade permeability can often be managed using 100% infiltration, whereas larger schemes will often require a combined system, with some form of attenuation as back up for periods of exceptional flows. The use of geo-membranes can trap pollutants and prevent them being carried into the environment. The use of geo-membranes can trap pollutants and prevent them being carried into the receiving environment. The use of an impermeable membrane beneath the subbase will work to contain any pollutants within the sub-base. One major advantage of tanked permeable paving systems is that any significant contamination, for example a diesel spillage, will be restricted to the immediate area and not transported into local sewers or watercourses. The performance of permeable pavements will dramatically decrease over a period of time with the clogging of voids, and this should be taken into consideration during the design process and maintenance.

6.7 Sub Surface Infiltration

Where permeable surfaces are not a practical option, more defined infiltration systems are available. In order to infiltrate run-off into the ground, a storage system is provided that allows the infiltration of the stored water into the surrounding ground through both the sides and bottom of the storage. These systems are constructed below ground and therefore may be advantageous with regards to the developable area of the site, however consideration needs to be given of construction methods and maintenance access to any development that takes place over an underground infiltration system. Consideration is also needed of the depth to the groundwater table. The provision of large volumes of infiltration /storage underground has potential cost implications and infiltration devices should not generally be built within 5m of a building, under a road or on soil that may dissolve or be washed away, in line with Building Regulations advice.

Geocellular Systems: Modular block systems can be used to provide an underground infiltration facility. The modular structures are usually made of plastic and can be stacked side by side or on top of each other to construct an infiltration/storage unit of the required size. The modular blocks are usually sited upon a highly permeable sub-base through which the surface water run-off is discharged (usually through perforated pipes). The outlet from the pipes is restricted which causes the run-off to rise up through the sub-base into a geocellular storage system. The storage systems are usually tanked with a geomembrane. These types of systems are quick and easy to install, flexible in their configuration, and have minimal maintenance requirements (providing the inflow of silt is limited). While many manufacturers claim that their products are suitable for installation beneath roadways or car parks, their use in these areas should be taken with caution. Geocellular systems can also be utilised for providing storage without infiltration to attenuate discharge rates. In these situations, the system is tanked with a geomembrane or similar.

Filter Drain: A filter drain is a trench that contains a perforated or porous pipe that runs along its bottom. The trench is filled with a suitable filler material, granular material, or lightweight aggregate fill, all with high void space. The fill may be exposed at the ground surface or capped with turf, topsoil etc that allow the trench to flood (i.e., not an impermeable surface that could pressurise the trench). Surface water run-off generated by the site is directed through the perforated pipe which then flows into the trench and infiltrates into the surrounding ground. Filter drains have been used extensively for highways and car parking areas, where they generally been constructed in the verge and median strip.

Soakaway (Chamber): Surface water run-off is directed to a chamber set in the ground with holes in the sides and base. This allows the stored water to soak into the ground. The storage capacities of soakaway chambers are limited and therefore they are more suitable for dwellings than large, developed areas. The chambers are prone to silting up over time and therefore, need regular maintenance

Soakaway (Trench): Where the liner space is available, soakaways that use a trench rather than a chamber may be used to manage the runoff from larger areas.

Soakaway (Granular Soakaway): Similar to a filter drain, a soakaway (either chamber or trench) filled with a high percentage void, granular material can be used to store surface water runoff as it is infiltrated into the surrounding ground. The granular fill will offer structural strength to the soakaway although the storage volume will be substantially reduced.

6.8 Attenuation SUDS

Where site ground conditions are deemed unsuitable for the widespread implementation of infiltration techniques, the surface water runoff discharged from a site will need to be attenuated utilising on site attenuation storage. While this is a SUDS technique that will reduce the rate of discharge from the site, the overall volume will not be minimised using on site storage alone. An important factor that needs to be taken into consideration when assessing the suitability of on-site storage as part of a proposed development is the volume required and the associated impacts the storage will impose on development proposals and risks to neighbouring properties.

Should the use of infiltration to either partially or fully dispose of the water runoff from a developed site be found to be unfeasible, on-site storage will be required to attenuate the discharge from the site. An allowable rate of discharge will need to be agreed with the Environment Agency, United Utilities, and the Planning Authority. This can have significant implications to the proposed development with regard to the large volume of storage that may be required. On site storage can be constructed above ground or below ground, the above ground systems usually being cheaper on a cost per m³ of storage basis. It should be noted, however, that below ground systems may pose less constraints on the developable area of the site.

6.9 Basins

Basins are areas that have been re-profiled (or alternatively embanked) to allow for the temporary storage of runoff from a developed site. Basins are drained in such a way that ensures that they are free from water in dry weather. Therefore, between periods of rainfall they can be used for other purposes such as open public space, recreation etc. Basins treat run-off in a variety of ways i.e., settlement of solids in still water, absorption by aquatic vegetation by aquatic vegetation or biological activity etc. the construction of basins uses relatively simple techniques. Local varieties of vegetation should be used wherever possible and should be fully established before the basins are used. Access to the basin should be provided such that a maintenance programme can be implemented. This would include inspections, regular cutting of grass, annual clearance of aquatic vegetation and silt removal as required.

Detention Basins: A detention basin is designed and constructed to store surface water run-off temporarily in order to attenuate flows over a minimal period of time. Detention basins provide better flow attenuation than floodplains as they store water until the flood has passed. The stored water is then released at a controlled rate after the storm to avoid flooding downstream. If the runoff is held back for long enough, solids start to settle out of the water, which improves water quality.

Extended Detention Basin: If the period of detention increases to approximately 24hrs, the basin is referred to as an extended detention basin. This result in surface water runoff being stored beyond the time normally required for attenuation which provides extra time for natural

processes to remove some of the pollutants in the water.

6.10 Ponds

Ponds are similar to basins except that the outflow is configured such that a volume of water is contained during dry weather, usually for amenity, recreational or agricultural purposes. Ponds are designed to hold the additional surface water runoff generated by the site during rainfall events. Like basins, ponds are designed to control discharge rates by storing the collected runoff and releasing it slowly once the risk of flooding has passed. Ponds can provide wildlife habitats, water features to enhance the urban landscape and where quality and flooding risks are acceptable, they can be used for recreation. It may be possible to integrate ponds and wetlands into public area to create new community ponds. Ponds and wetlands trap silt which may need to be removed periodically. Ideally, the contaminants should be removed at source to prevent silt from reaching the pond or wetland in the first place. In situations where this is not possible, consideration should be given to a small detention basin placed at the inlet to the pond in order to trap and subsequently remove the silt. Depending on the setting of a pond, health and safety issues may be important issues that need to be taken into consideration. The design of the pond can help minimise any health and safety issues (i.e., shallower margins to the pond to reduce the danger of falling in). A fence may also be required for keeping children and wildlife out.

Balancing/Attenuating Ponds: A balancing or attenuation pond is designed only to store surface water run-off and attenuate discharge until the flood/storm peak has passed. Therefore, storage periods may not be long enough to significantly improve water quality capacity compared with ponds with longer retention times. They contain some water at all times with the water level fluctuating as the runoff passes through the device.

Flood Storage Reservoirs: Flood storage reservoirs are very similar to balancing/attenuation ponds except that they are usually much larger. They are generally used to attenuate fluvial flood flows rather than the surface water run-off from developed areas and are therefore likely to be utilised as a SUDS measure. Should an existing flood storage reservoir in the vicinity of the proposed development be identified to offer spare capacity, then depending on ownership and agreement, it may be possible to utilise the spare capacity for storm water management of development areas.

Lagoons: Should the surface water run-off have high suspended solids content; a lagoon could be a suitable method for attenuating its discharge to the receiving environment. Lagoons are similar to balancing /attenuation ponds except that they are also designed for the settlement of suspended solids. Usually, they are long and narrow in shape to ensure the longest retention time and therefore an efficient removal of suspended solids. However, lagoons are usually free of vegetation and therefore do not provide any biological treatment.

Retention ponds: Retention ponds are designed to detain the surface water run-off for periods between several days and two weeks. This allows for a higher level of settlement, biological treatment, and limited attenuation of flows. Retention ponds provide a greater degree of treatment than extended detention basins.

Wetlands: A wetland is similar to a pond except that it has a high proportion of emergent vegetation in relation to open water. Wetlands use plants to make the treatment of surface water run-off more efficient and can allow detention times required to fully treat the run-off to be reduced to a couple of weeks. Constructed wetlands are ponds with irregular perimeters and undulating bottom contours into which the wetland vegetation is purposely placed to enhance pollutant removal from surface water runoff. Surface water run-off enters a constructed wetland through a forebay where larger solids and coarse organic material settle out. The run-off discharged from the forebay passes through emergent vegetation which acts to filter organic materials and soluble nutrients. The use of constructed wetlands can be looked at from two perspectives. The first is that the wetland is primarily used to maximise pollutant removal from storm water flows. Alternatively, it may be used primarily to control storm water flows, with increased pollutant removal capabilities.

6.11 Alternative forms of Attenuation

In many situations the development of a site may involve proposals that would inhibit the use of basins or ponds as a means of managing surface water run-off discharged from the site. This may be due to land take, economic feasibility, or other issues such as health and safety etc. In these situations, it may be appropriate to use a storage option that is viewed as being more 'engineered' than an open basin or pond. Most

of these methods involve the provision of storage beneath the ground surface, which may be advantageous with regards to the developable area of the site; however, consideration needs to be given to construction methods, maintenance access and to any development that takes place over an underground storage facility. The provision of large volumes of storage underground also has potential cost implications.

Deep Shafts: Deep shafts can be utilised in areas with low groundwater tables. Shafts have small footprints and are therefore useful on sites with low land availability. However, pumping from the shaft into the receiving drainage network may be required. Therefore, substantial mechanical and electrical works may be required as potentially would major civil engineering requirements. With a relatively small cross-sectional area, a shaft would be prone to siltation at a rapid rate depending on the quality of the run-off. Therefore, a maintenance programme would be required as would regular servicing of any pump works.

Oversized pipes: Over sizing the pipes that make up the on-site drainage network is a cost-effective method that is often used for providing attenuation storage within the network. The main drawback with using this method is that it can be very difficult to obtain the required level of storage as the pipe diameters are often restricted by depth of cover (vertical distance between top of pipe work and ground surface) available and the need to gravity drain into an existing network. A solution to this is to lay multiple pipes side by side; however, this increases the excavation areas and may also place restrictions on the development footprint. The use of oversized pipes is not an effective method of providing on site storage if the network is at a relatively steep gradient. This is because the storage at the upstream end of the pipe is unlikely to be utilised.

Rainwater Harvesting: Rainwater harvesting is the process of collecting rain that falls directly onto roofs (and in some cases hardstanding areas) such that it can be re used for non-potable uses around the home or business (typically flushing toilets, car washing and irrigation etc). The simplest form of rainwater harvesting involves the collection of run-offs from a roof via a water butt situated at the bottom of a down pipe. This water can then be used for irrigation. For systems where the collected run-off is to be used for toilet flushing, washing machines etc, it is likely that the water would be pumped from a storage tank installed on the grounds of the property. Packaged systems are available although the costs (including ongoing maintenance) may outweigh the payback in terms of reduced water supply charges. The use of rainwater harvesting fits well with the overall water cycle, as it may assist with a minor reduction in volumes of off-site run-off 'post development' together with reducing overall demand for potable water.

Tanks: The use of tanks for the provision of storage to attenuate surface water runoff is varied in the number of options available. While most storage tanks are installed beneath the ground surface, above ground storage tanks may be feasible as part of industrial or commercial type developments where amenity issues or space are not significant restrictions. Tanks are likely to be prefabricated but could also be constructed in-situ for below ground concrete tanks. Plastic and Glass Reinforced Plastic Tanks are also often utilised with sizes up to 25m² being available off the shelf (although larger tanks used above ground may have additional reinforcing requirements). Consideration must be given to below ground tanks with regards to cover depths, load bearings, and also invert depths should the tank be drained by gravity. The storage requirements need to be based on a sound hydrological assessment as under-sizing the tank would be costly to remediate.

Green Roofs: A roof area that is used for growing appropriate types of vegetation which provides a degree of retention and attenuation, it also promotes evapotranspiration. In addition, vegetation and substrate can absorb a range of pollutants. Green roofs are more suitable for public and institutional buildings that have good maintenance programmes and support. Green roofs are available in both prefabricated and in-situ construction; however, they are heavy systems and can have major structural implications for buildings and are usually impractical to retrofit.

6.12 Combined Infiltration/Attenuation Systems

In most situations, SUDS systems include both infiltration and storage, and most of the techniques identified above can be used in combination. Dedicated infiltration and attenuation systems may also include swales and filter strips.

Swales: A swale is a grass lined channel designed to control both the flow rate and quality of the surface water run-off that is generated by the adjacent site. Not only does the water run down the sides of the swale at reduced speed, but it can also be slowed further as it flows along the channel before being discharged from the site. This detention of the runoff also increases the infiltration from the swale.

Filter strips: A filter strip runs along the edge of a permeable area and is sloped to allow the sheet flow across the vegetated strip. Unlike a

swale however, no storage is offered other than what is held back by the vegetation. The overland flow across the filter strip is likely to run into a water course at some point rather than being formally collected and discharged at a controlled rate from the site.

6.13 SUDS Options Appraisal

Taking account of the context setting of the site, it is strongly preferred that surface water runoff be wholly directed into the **UNITED UTILITIES (UU)** drainage system, and consultations should be made with UU to determine the feasibility of this. However, should supplementary SUDS be required by **UU**, or for conformity with design accreditations *e.g.*, **BREAM**, then the following comments are made:

- Natural rainwater infiltration *via* natural soak-a-ways should always be the prime objective wherever this may be feasible. With regards to the potential for the adoption of soak-a-ways, the Client is advised to commission the undertaking of *in-situ* soil permeability tests, with each test being undertaken in accordance with BRE Digest 365 at 2nr locations to determine if the underlying ground conditions are suitable for the adoption of natural soakaway drainage systems.

Should the underlying drift deposits be unsuitable for the adoption of soakaway systems, then subject to agreement with **UU**, surplus surface water runoff may be accommodated in the nearby drainage network extending along Woodward Road to the north, discharging at the generally accepted rate of 5l/sec, although in keeping with current policy objectives, it is unlikely that **UU** will accept the calculated unregulated run-off rates, and taking account of the strategic discharge target set by **KNOWSLEY MBC**, attenuation measures will be required.

In considering the foregoing recommendations, it should be borne in mind that the purpose of this FRA is to demonstrate that simple practical measures can be adopted to achieve the objectives of PPG. Detailed design of the adopted systems is outside the scope of this assessment.

7.0 CONCLUSIONS AND RECOMMENDATIONS

- It is concluded that the site lies within a Flood Zone II (Fluvial /Tidal Models) and Flood Zone III (Fluvial Models) as defined by PPG
- Since the proposed development is '*Commercial*' in a brownfield regeneration area, a "*Less Vulnerable*" classification is assigned
- Inputting these parameters into the Sequential Test matrix indicated that the development proposals satisfy the Sequential Test
- It is concluded that the site is not located within an **EA** designated Source Protection Zone
- **OS** mapping shows the western site boundary to be located c.12km east of the River Mersey. Notwithstanding this distance, the appended Groundsure Report states that there is a '*Medium*' risk of flooding associated with the sea on, and within 50m of, the site.
- There are no records relating to the presence of Water Networks (OS MasterMap) within 250m of the study site, the nearest record relating to an inland river / stream being located c.299m north of the study site, hence the risk of flooding associated with such features is considered to be '*Insignificant*'.
- There are records relating to the presence of 1nr elongated body of standing water (un-named) within the local area, this feature is located c. 183m northwest of the site. The risk of flooding arising from this feature is deemed to be '*Significant*'.
- The **EA** does not have any flood modelling flood data at this site, nor does the **EA** have records pertaining to historical flood events on, or within a 250m radius of, the study site.
- There are no areas which are utilised for flood storage and/or flood defences within 250m of the study site
- There are no areas within 250m of the study site which benefit from the presence of flood defences for a 1: 100 plus Climate Change event.
- The site is not located within 500m of an area which is identified as being at potential risk of a canal failure
- The flood risk data discussed in the GroundSure Report (Report Reference No. CMAPS-AAG-1212885-4165-180325, dated March 2025) presented in Appendix B shows a '*Low*' (1: 100 years, 0.1m - 0.3m / 1: 1000 years, 0.1m – 0.3m Return

Periods) risk of surface water / pluvial flooding affecting the northwestern southwestern sections of the study site.

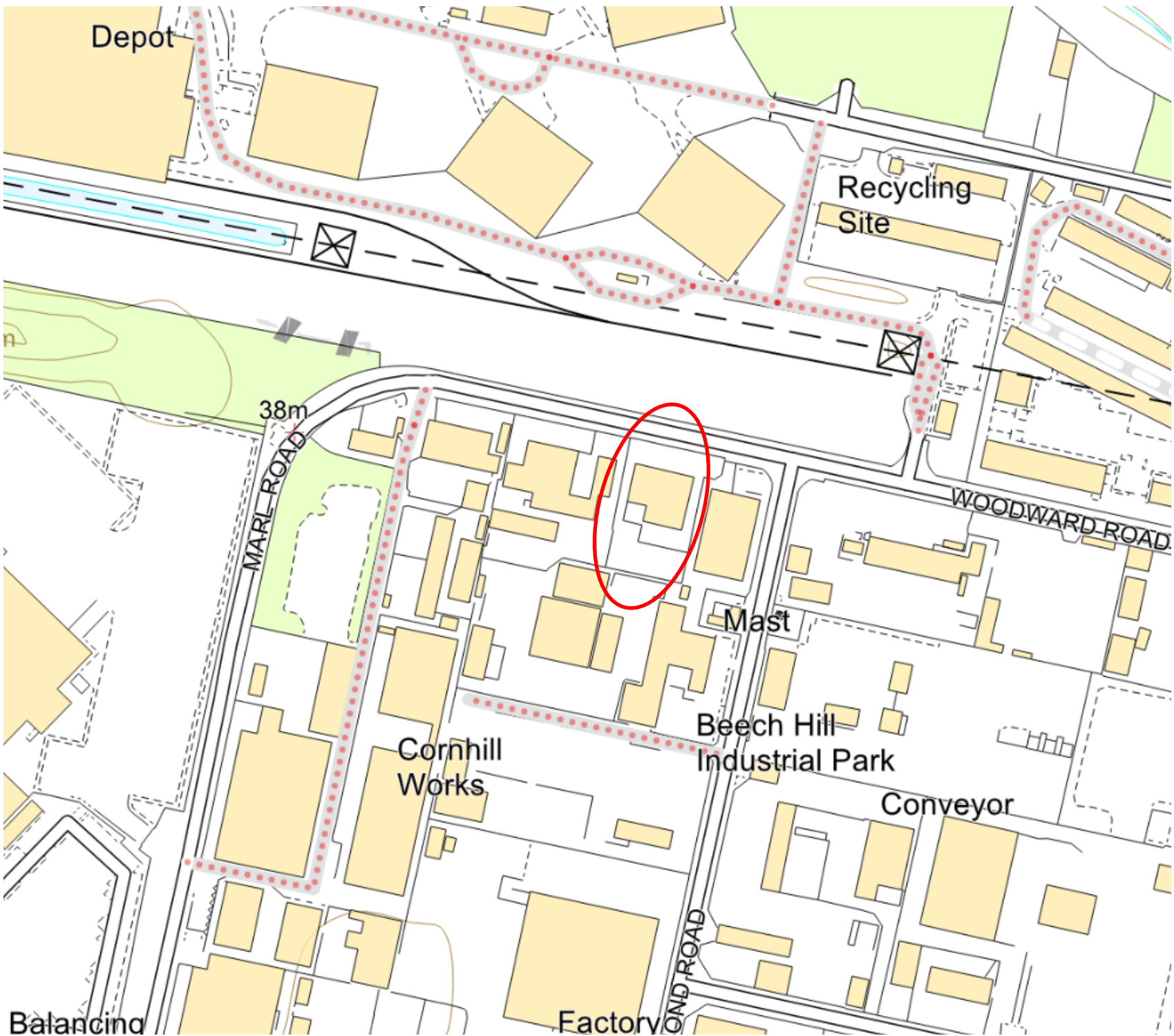
- The flood risk data presented in Appendix B states that there is a '*Low Risk*' of groundwater flooding affecting the study site.
- It is calculated that post-construction impermeable surface cover will increase from c.1649m² to c.2478m²
- For the 1 in 100year plus climate change (set at 1:100yr + 40%), a post development surface water run-off rate of 123.75l/s was calculated
- The appended calculations (presented in Appendix D) confirm greenfield runoff rates for the overall site to be 0.87l/s for a 1:1yr event, 1.7l/s for a 1:30yr event and 2.08l/s for a 1:100yr event respectively, with Qbar (l/s) (mean annual greenfield peak flow) being in the order of 0.87l/s.
- Natural rainwater infiltration *via* soakaways should be a prime objective wherever this may be feasible. With regards to the potential for the adoption of soak-a-ways, the Client is advised to commission the undertaking of in-situ soil permeability tests, with each test being undertaken in accordance with BRE Digest 365 at 2nr locations to determine if the underlying ground conditions are suitable for the adoption of natural soakaway drainage systems.
- Should the underlying ground conditions not be suitable for the adoption of soakaway systems, then subject to agreement with **UU**, the surface water runoff rate may be accommodated in the existing drainage network extending along Woodward Road to the north, although in keeping with current policy objectives, it is unlikely that **UU** will accept the calculated unregulated run-off rates, and taking account of the strategic discharge target set by **KNOWSLEY MBC**, it is highly likely that attenuation measures will be required. – see Section 6.13 above

7.1 Surface Water Run-off Attenuation

- Based on the calculated post construction impermeable surface covering the proposed development will induce calculated run-off rate of c.123.75l/s for a 1-100yr event + Climate Change
This compares with the target value of 16.23l/s calculated for a 1:2-year critical rainfall event (-50%), to provide betterment over existing runoff in accordance with **KNOWSLEY MBC** "Sustainable Drainage and Surface Water Management – Technical Guidance for Developers" (Version 06, August 2016, 2020). However, it is understood that the Lead Local Flood Authority (LLFA) in advising **KNOWSLEY MBC** planning department will only consider the 50% betterment flow rate as an acceptable discharge rate if the entirety of the existing drainage network is utilised without modification.
- Based on the generally accepted rate of 5l/s, to accommodate the 1:100yr + CC runoff rate for a 15 min' storm duration, a storage volume of 107m³ would be needed. This could be accommodated in a 2m diameter pipe of c.35m length (*where: $V = \pi r^2 h = \pi \cdot 1^2 \cdot 35 \approx 109m^3$*) incorporating a hydro-brake chamber or with discharge regulated by Vortex Flow Control or similar flow-controlled device.
- As an alternative to the oversize pipe attenuation, consideration may be given to the construction of a c. 12m x 12m x 0.8m deep (total storage = 115m³) modular cell storage reservoir and associated works (i.e., sediment catchpit etc.), which slightly exceeds the calculated 107m³ as shown in Table 3 above. Thereafter, the attenuated surface water run-off should be designed to pass through a 'SPEL Stormceptor 300' Series Model 308 Class 1 oil/fuel separator as recommended in Gov.UK: 'Guidance: Discharges to surface water and groundwater: environmental permits' (2016, Revised April 2021) to provide an appropriate level of pollution treatment before being allowed to discharge into the nearby drainage network.
- Notwithstanding the above calculations and the fact the site and its immediate environs have been historically developed for commercial uses since the Early 1940s', for drainage purposes, the site classifies as '*Greenfield*' in a '*Brownfield*' setting and therefore operation of the attenuation system should take account of the **LLFA** and **KNOWSLEY MBC** '*Sustainable Drainage and Surface Water Management*' (2016) requirement that the '*Greenfield*' discharge rate of 5l/s be adopted as the basis of discussion with **UNITED UTILITIES**

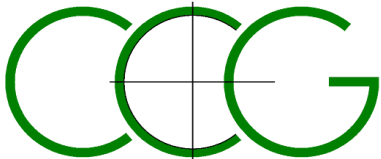
DRAWINGS:

25-15323-1 – SITE LOCATION PLAN
25-15323-2 – AERIAL PHOTOGRAPH



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Notes: Study Site



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Client:
MR. D. DONALD

Project:
Woodward Road, Kirkby, L33

Title:
Site Location

Scale:
NTS

Issue:
01

Drawn by:
DG

Date:
March 2025

Project No.
CCG-C-25-15323

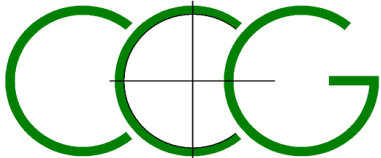
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Client:
MR. D. DONALD

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Title:
Aerial Photograph

Scale:
NTS

Issue:
01

Drawn by:
DG

Date:
March 2025

Project No.
CCG-C-25-15323

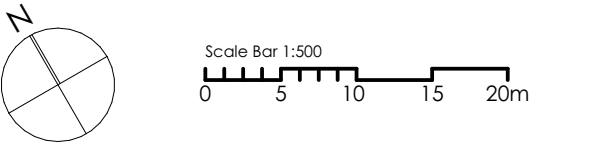
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01 - WIP	Work in Progress	TH	First Issue
REV	DATE	DRN	
STATUS		STAGE 3 - PLANNING	



CLIENT	HARTLEY INVESTMENTS
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PROJECT NUMBER	241003
PROJECT	WOODWARD ROAD
SITE LOCATION	16 Woodward Road, Kirkby, L33 7U2

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DRAWING No.	241003-U3L-XX-GF-DR-A-00002		
DRAWING NAME	Existing Site Plan		
REVISION	01 - WIP	SCALE - 1:500	SHEET SIZE - A3
DATE - 12/12/2024	DRAWN - TH	CHECKED - AF	

01 Site Plan Existing
1:500



01 Site Plan Proposed
1:200

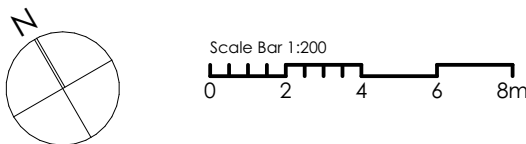
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MATERIALS KEY

- TARMAC
- COLOURED TARMAC TO DENOTE PARKING SPACE
- GENERAL NATIVE PLANTING

01 - WIP	Work in Progress	TH	First Issue
REV	DATE	DRN	
STATUS	STAGE 3 - PLANNING		



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DRAWING No.	241003-U3L-XX-GF-DR-A-00003		
DRAWING NAME	Proposed Site Plan		
REVISION	01 - WIP	SCALE - 1:200	SHEET SIZE - A2
DATE - 12/12/2024	DRAWN - TH	CHECKED - AF	

APPENDIX A: NOTES ON LIMITATIONS

Notes on Limitations For Geoenvironmental and Geotechnical Consultancy Services

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2. the consequences of use of this document by any party with whom an agreement has not been executed.

Phase I Environmental Audits / Desk Studies

The work undertaken to provide the basis of a Phase 1 Desk Study report comprises a study of available documented information from a variety of sources (including the client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The opinions given in a Desk Study report have been dictated by finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in the report, CC GEOTECHNICAL LTD reserves the right to review such information and to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Factual Ground Investigations

The investigation of the site has been carried out in accordance with the scope and specification instructed by the Client. No interpretations of the data generated by the investigation have been provided or implied. The exploratory holes undertaken in this commission, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of site conditions. Conditions may exist on the site which have not been detected by the works undertaken. Furthermore, the number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" or more widespread contamination where concentrations may be significantly higher than those actually encountered.

Interpretative Phase II Environmental Audits

The investigation of the site has been carried out with the intention of providing sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made. The objectives of the investigation have been limited to establishing the risks associated to potential human targets, building materials, the environment (including adjacent land), and surface and groundwater.

The amount of exploratory work and chemical testing undertaken may have been restricted by factors including inter alia the Clients budget, the available timescale, access to all parts of the site, the existence of buried services etc., and where this is the case, a more comprehensive investigation may be required if the site is to be redeveloped, since a number of important engineering and environmental issues may need further assessment.

For those reasons, if costs have been included in relation to site remediation these must be considered as tentative only and must, in any event, be confirmed by a qualified quantity surveyor.

It must be borne in mind, that the exploratory holes undertaken, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site of each of the exploratory holes. There may be ground conditions present on the site which have not been disclosed by this investigation, and which have therefore not been taken into account in this report. The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" or more widespread contamination where concentrations may be significantly higher than those actually encountered. The findings of the investigation are valid for the time of investigation and the passage of time may result in changes to the contamination status of the site, and a reassessment of the site may be required where significant time has elapsed.

Geoenvironmental Ground Investigations

The investigation of the site has been carried out within the constraints of Client budget, available timeframe, access to all parts of the site, the existence of buried services and a more comprehensive investigation may be required to provide sufficient information regarding the type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions, to formulate a reasonable assessment of the environmental risks together with engineering and development implications.

If costs have been included in relation to the site remediation, these must be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of the site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site of each of the exploratory holes. There may be ground conditions present on the site which have not been disclosed by this investigation, and which have therefore not been taken into account in this report. The findings of the investigation are valid for the time of investigation and the passage of time may result in changes to the contamination status of the site, and a reassessment of the site may be required where significant time has elapsed.

The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that groundwater levels will vary owing to seasonal, tidal, weather, or other effects.

The risk assessment and opinions provided, inter alia, take into consideration currently available guidance relating to acceptable contamination concentrations and no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

APPENDIX B: COMMERCIAL FLOOD INSIGHT REPORT

Woodward Road, Kirkby, L33 7UZ

Order Details

Date: 18/03/2025
Your ref: CMAPS-AAG-1212885-4165-180325
Our Ref: CMAPS-AAG-1212885-4165-180325EDRGEO

Site Details

Location: 343417 399494
Area: 0.26 ha
Authority: [Knowsley Metropolitan Borough Council](#) ↗



[Summary of findings](#)

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

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#) [Insight User Guide](#) ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	5	2	2	11	-
16 >	1.2 >	Historical tanks >	0	0	17	30	-
18 >	1.3 >	Historical energy features >	0	2	7	25	-
20	1.4	Historical petrol stations	0	0	0	0	-
20	1.5	Historical garages	0	0	0	0	-
20 >	1.6 >	Historical military land >	1	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
22 >	2.1 >	Historical industrial land uses >	6	2	3	13	-
23 >	2.2 >	Historical tanks >	0	0	22	45	-
26 >	2.3 >	Historical energy features >	0	3	11	45	-
28	2.4	Historical petrol stations	0	0	0	0	-
29	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
30 >	3.1 >	Active or recent landfill >	0	0	1	0	-
31	3.2	Historical landfill (BGS records)	0	0	0	0	-
31	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
31	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
31 >	3.5 >	Historical waste sites >	0	0	1	2	-
32 >	3.6 >	Licensed waste sites >	0	0	4	12	-
37 >	3.7 >	Waste exemptions >	0	1	11	39	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
42 >	4.1 >	Recent industrial land uses >	1	6	33	-	-
45	4.2	Current or recent petrol stations	0	0	0	0	-
45	4.3	Electricity cables	0	0	0	0	-
46	4.4	Gas pipelines	0	0	0	0	-
46	4.5	Sites determined as Contaminated Land	0	0	0	0	-



46 >	4.6 >	Control of Major Accident Hazards (COMAH) >	2	0	2	1	-
47	4.7	Regulated explosive sites	0	0	0	0	-
47 >	4.8 >	Hazardous substance storage/usage >	0	0	4	5	-
48 >	4.9 >	Historical licensed industrial activities (IPC) >	0	0	0	38	-
53 >	4.10 >	Licensed industrial activities (Part A(1)) >	0	0	0	59	-
62 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	4	0	-
63	4.12	Radioactive Substance Authorisations	0	0	0	0	-
63 >	4.13 >	Licensed Discharges to controlled waters >	0	0	0	2	-
64	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
64	4.15	Pollutant release to public sewer	0	0	0	0	-
64 >	4.16 >	List 1 Dangerous Substances >	0	0	0	2	-
65 >	4.17 >	List 2 Dangerous Substances >	0	0	3	1	-
65 >	4.18 >	Pollution Incidents (EA/NRW) >	0	0	3	4	-
66	4.19	Pollution inventory substances	0	0	0	0	-
66 >	4.20 >	Pollution inventory waste transfers >	0	0	0	1	-
69	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
70 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
72 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
74 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
75	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
75	5.5	Groundwater vulnerability- local information	None (within 0m)				
76 >	5.6 >	Groundwater abstractions >	0	0	0	3	38
86 >	5.7 >	Surface water abstractions >	0	0	0	0	5
88 >	5.8 >	Potable abstractions >	0	0	0	0	2
88 >	5.9 >	Source Protection Zones >	1	0	0	0	-
89	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
90	6.1	Water Network (OS MasterMap)	0	0	0	-	-



90 >	6.2 >	Surface water features >	0	0	1	-	-
91 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
91 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
92 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
93 >	7.1 >	Risk of flooding from rivers and the sea >	Medium (within 50m)				
94	7.2	Historical Flood Events	0	0	0	-	-
94	7.3	Flood Defences	0	0	0	-	-
94	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
94	7.5	Flood Storage Areas	0	0	0	-	-
95 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
96 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
97 >	8.1 >	Surface water flooding >	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding >					
99 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
100	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
101	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
101	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
101	10.4	Special Protection Areas (SPA)	0	0	0	0	0
101	10.5	National Nature Reserves (NNR)	0	0	0	0	0
102 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
102	10.7	Designated Ancient Woodland	0	0	0	0	0
102	10.8	Biosphere Reserves	0	0	0	0	0
102	10.9	Forest Parks	0	0	0	0	0
103	10.10	Marine Conservation Zones	0	0	0	0	0
103 >	10.11 >	Green Belt >	0	0	0	1	2
103	10.12	Proposed Ramsar sites	0	0	0	0	0



103	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
104	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
104	10.15	Nitrate Sensitive Areas	0	0	0	0	0
104 >	10.16 >	<u>Nitrate Vulnerable Zones ></u>	1	0	0	0	1
105	10.17	SSSI Impact Risk Zones	0	-	-	-	-
105	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
106	11.1	World Heritage Sites	0	0	0	-	-
106	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
106	11.3	National Parks	0	0	0	-	-
106	11.4	Listed Buildings	0	0	0	-	-
107	11.5	Conservation Areas	0	0	0	-	-
107	11.6	Scheduled Ancient Monuments	0	0	0	-	-
107	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	<u>Agricultural designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
108 >	12.1 >	<u>Agricultural Land Classification ></u>	Urban (within 250m)				
109	12.2	Open Access Land	0	0	0	-	-
109	12.3	Tree Felling Licences	0	0	0	-	-
109	12.4	Environmental Stewardship Schemes	0	0	0	-	-
109	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	<u>Habitat designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
110 >	13.1 >	<u>Priority Habitat Inventory ></u>	0	0	1	-	-
111	13.2	Habitat Networks	0	0	0	-	-
111	13.3	Open Mosaic Habitat	0	0	0	-	-
111	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	<u>Geology 1:10,000 scale ></u>	On site	0-50m	50-250m	250-500m	500-2000m
112 >	14.1 >	<u>10k Availability ></u>	Identified (within 500m)				
113	14.2	Artificial and made ground (10k)	0	0	0	0	-
114	14.3	Superficial geology (10k)	0	0	0	0	-

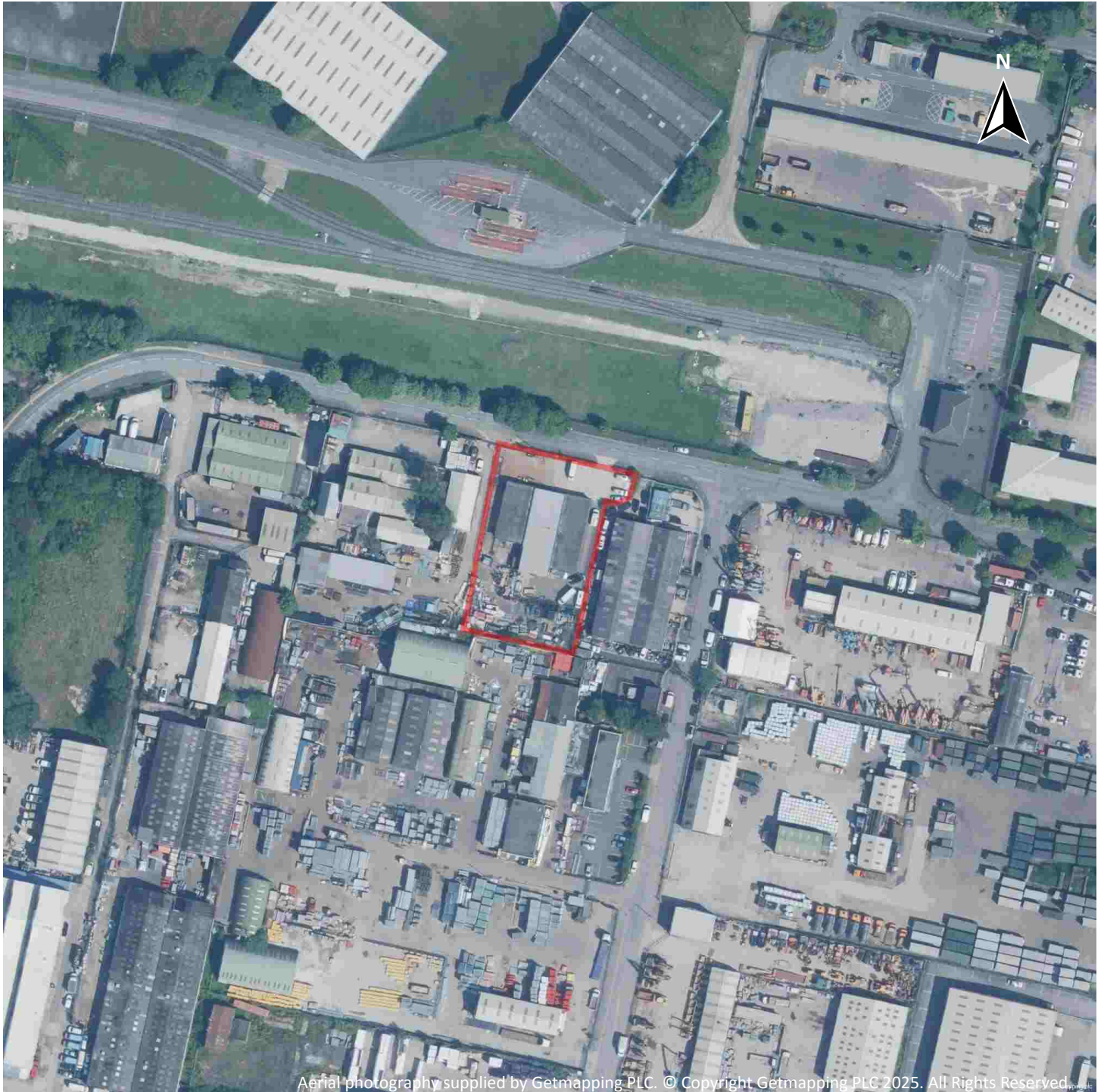
114	14.4	Landslip (10k)	0	0	0	0	-
115	14.5	Bedrock geology (10k)	0	0	0	0	-
115	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
116 >	15.1 >	50k Availability >	Identified (within 500m)				
117 >	15.2 >	Artificial and made ground (50k) >	1	0	0	0	-
118 >	15.3 >	Artificial ground permeability (50k) >	1	0	-	-	-
119 >	15.4 >	Superficial geology (50k) >	1	0	3	2	-
120 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
120	15.6	Landslip (50k)	0	0	0	0	-
120	15.7	Landslip permeability (50k)	None (within 50m)				
121 >	15.8 >	Bedrock geology (50k) >	1	0	0	1	-
122 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
122	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
123 >	16.1 >	BGS Boreholes >	0	0	44	-	-
Page	Section	Natural ground subsidence >					
126 >	17.1 >	Shrink swell clays >	Negligible (within 50m)				
127 >	17.2 >	Running sands >	Low (within 50m)				
129 >	17.3 >	Compressible deposits >	Very low (within 50m)				
131 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
132 >	17.5 >	Landslides >	Very low (within 50m)				
133 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
135	18.1	BritPits	0	0	0	0	-
136 >	18.2 >	Surface ground workings >	0	1	0	-	-
136	18.3	Underground workings	0	0	0	0	0
136	18.4	Underground mining extents	0	0	0	0	-
136	18.5	Historical Mineral Planning Areas	0	0	0	0	-



137	18.6	Non-coal mining	0	0	0	0	0
137	18.7	JPB mining areas	None (within 0m)				
137	18.8	The Coal Authority non-coal mining	0	0	0	0	-
137	18.9	Researched mining	0	0	0	0	-
138	18.10	Mining record office plans	0	0	0	0	-
138	18.11	BGS mine plans	0	0	0	0	-
138	18.12	Coal mining	None (within 0m)				
138	18.13	Brine areas	None (within 0m)				
138	18.14	Gypsum areas	None (within 0m)				
139	18.15	Tin mining	None (within 0m)				
139	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
140	19.1	Natural cavities	0	0	0	0	-
140	19.2	Mining cavities	0	0	0	0	0
140	19.3	Reported recent incidents	0	0	0	0	-
140	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
142 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
144 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	0	-	-	-
144	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
144	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
145	22.1	Underground railways (London)	0	0	0	-	-
145	22.2	Underground railways (Non-London)	0	0	0	-	-
146	22.3	Railway tunnels	0	0	0	-	-
146 >	22.4 >	Historical railway and tunnel features >	3	2	22	-	-
147	22.5	Royal Mail tunnels	0	0	0	-	-
147 >	22.6 >	Historical railways >	0	1	0	-	-

148 >	22.7 >	Railways >	0	0	3	-	-
148	22.8	Crossrail 2	0	0	0	0	-
148	22.9	HS2	0	0	0	0	-

Recent aerial photograph



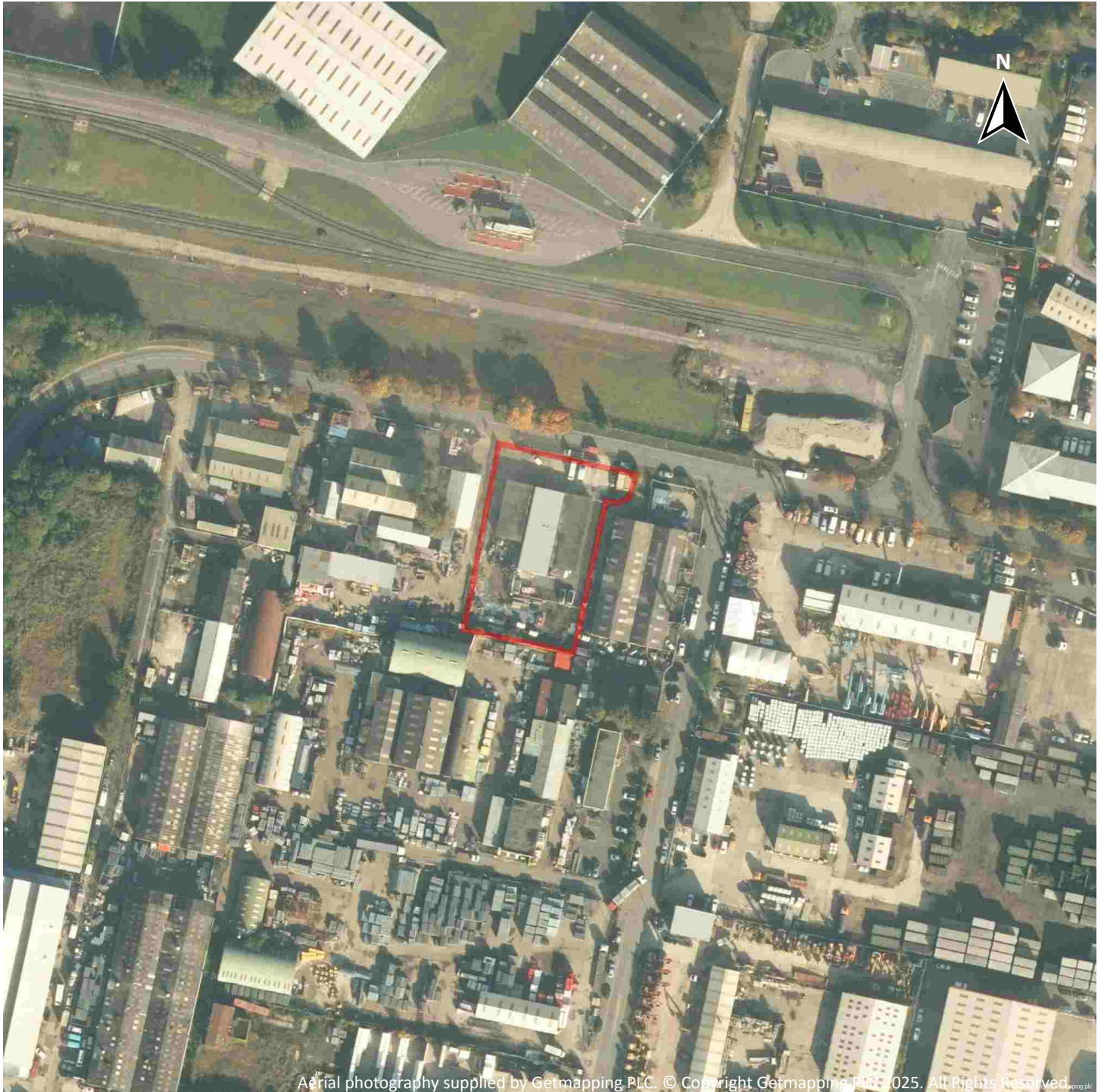
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved.

Capture Date: 20/05/2023

Site Area: 0.26ha



Recent site history - 2022 aerial photograph



Aerial photography supplied by Getmapping Pl.C. © Copyright Getmapping Pl.C. 2025. All Rights Reserved.

Capture Date: 18/10/2022

Site Area: 0.26ha



Recent site history - 2015 aerial photograph



Capture Date: 11/06/2015

Site Area: 0.26ha



Recent site history - 2001 aerial photograph



Capture Date: 01/05/2001

Site Area: 0.26ha



Recent site history - 2000 aerial photograph



Capture Date: 21/07/2000

Site Area: 0.26ha



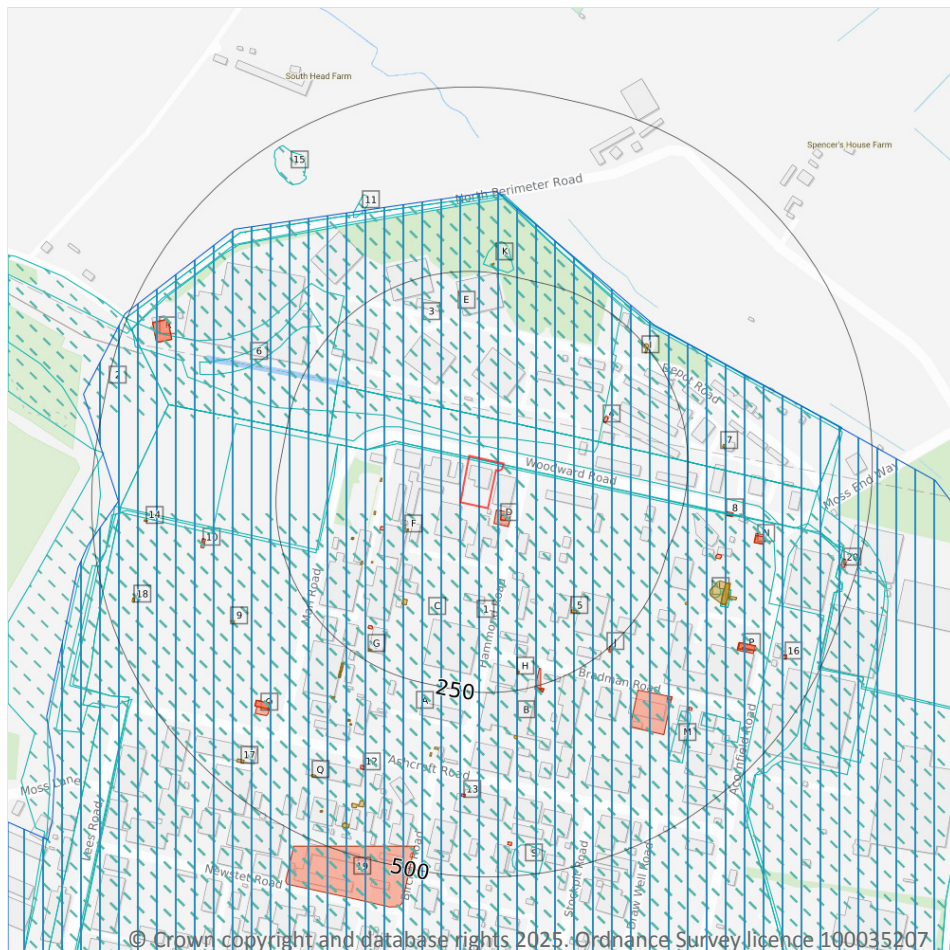
OS MasterMap site plan



Site Area: 0.26ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

20

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

Features are displayed on the Past land use map on [page 15](#) >

ID	Location	Land use	Dates present	Group ID
A	On site	Industrial Estate	1966	918975



ID	Location	Land use	Dates present	Group ID
A	On site	Unspecified Commercial/Industrial	1956	925687
B	On site	Industrial Estate	1988	955430
B	On site	Industrial Estate	1978	992608
C	On site	Railway Sidings	1955 - 1978	2405268
2	18m N	Railway Sidings	1956	994428
3	26m N	Unspecified Commercial/Industrial	1988	930560
E	56m N	Unspecified Commercial/Industrial	1956	894867
E	56m N	Unspecified Commercial/Industrial	1966 - 1978	1000682
K	254m N	Unspecified Pit	1966	830663
6	267m NW	Cuttings	1966	808024
L	321m SE	Unspecified Tank	1988	974276
L	321m SE	Unspecified Tank	1978	981654
L	337m SE	Unspecified Tanks	1966 - 1978	884154
L	337m SE	Unspecified Tanks	1988	909096
11	358m NW	Marl Pit	1928	857265
M	380m SE	Unspecified Heap	1978	843737
M	403m SE	Unspecified Heaps	1978	837901
15	435m NW	Unspecified Pit	1890 - 1907	864145
S	459m S	Unspecified Heap	1966	843735

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

47

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

Features are displayed on the Past land use map on [page 15 >](#)



ID	Location	Land use	Dates present	Group ID
F	79m SW	Unspecified Tank	1986	155787
F	79m SW	Unspecified Tank	1971	144479
F	80m SW	Unspecified Tank	1994	138510
F	110m W	Tanks	1971	108574
F	115m W	Unspecified Tank	1971	114871
F	143m SW	Unspecified Tank	1971	114872
C	151m SW	Unspecified Tank	1971 - 1994	137082
F	152m SW	Unspecified Tank	1971 - 1986	142705
F	153m SW	Unspecified Tank	1994	152542
F	155m SW	Unspecified Tank	1971	114869
5	179m SE	Unspecified Tank	1984 - 1994	141485
H	225m S	Unspecified Tank	1971	114809
G	233m SW	Unspecified Tank	1994	131537
G	233m SW	Unspecified Tank	1986	131344
G	234m SW	Unspecified Tank	1971	136693
I	243m NE	Tanks	1976	108528
I	248m NE	Tanks	1976	108527
K	260m N	Tanks	1962	108529
G	270m SW	Tanks	1986	151226
G	270m SW	Tanks	1971	129499
G	281m SW	Tanks	1971	126556
G	282m SW	Tanks	1994	148913
L	297m SE	Unspecified Tank	1994	114797
7	298m E	Unspecified Tank	1962 - 1976	135883
B	310m S	Unspecified Tank	1971 - 1994	127423
G	314m SW	Unspecified Tank	1971 - 1986	141717
L	321m SE	Tanks	1971 - 1984	136521
G	331m SW	Unspecified Tank	1986	141535



ID	Location	Land use	Dates present	Group ID
G	331m SW	Unspecified Tank	1994	154048
G	331m SW	Unspecified Tank	1971	134253
A	331m S	Unspecified Tank	1971	114873
G	335m SW	Unspecified Tank	1962	137534
G	335m SW	Unspecified Tank	1962	143697
L	338m E	Tanks	1962	137211
L	338m SE	Tanks	1962	132489
A	340m S	Unspecified Tank	1971	114874
9	346m SW	Unspecified Tank	1971	114870
L	348m SE	Unspecified Tank	1971 - 1984	128132
Q	419m SW	Tanks	1971 - 1994	150744
14	425m W	Tanks	1985	108570
Q	426m S	Tanks	1971 - 1986	156243
Q	433m S	Tanks	1971 - 1986	150610
17	456m SW	Unspecified Tank	1971 - 1986	152659
Q	458m SW	Unspecified Tank	1986	136464
Q	459m SW	Unspecified Tank	1971	138798
18	460m W	Tanks	1962	136587
Q	462m S	Tanks	1971 - 1994	128033

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

34

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

Features are displayed on the Past land use map on [page 15 >](#)



ID	Location	Land use	Dates present	Group ID
D	12m SE	Electricity Substation	1986 - 1994	89096
D	21m SE	Electricity Substation	1971	74348
F	108m SW	Electricity Substation	1986 - 1994	75687
4	147m NE	Electricity Substation	1976 - 1994	87760
G	206m SW	Electricity Substation	1986 - 1994	70661
H	225m S	Electricity Substation	1986	67750
H	228m S	Electricity Substation	1971	79985
J	250m SE	Electricity Substation	1994	91197
J	250m SE	Electricity Substation	1971 - 1992	70211
H	251m S	Electricity Substation	1986	90405
H	255m S	Electricity Substation	1992	76777
H	255m S	Electricity Substation	1984	86758
8	308m E	Electricity Substation	1992 - 1994	85361
L	313m E	Electricity Substation	1992 - 1994	83245
M	320m SE	Electricity Substation	1971	84418
10	349m W	Electricity Substation	1971 - 1994	84811
M	353m SE	Electricity Substation	1971	89202
N	355m E	Electricity Substation	1994	74019
N	356m E	Electricity Substation	1971 - 1992	84145
O	375m SW	Electricity Substation	1986	84026
O	375m SW	Electricity Substation	1971	92077
O	376m SW	Electricity Substation	1994	74104
12	380m S	Electricity Substation	1971 - 1994	82541
M	384m SE	Electricity Substation	1971	66230
P	386m SE	Electricity Substation	1984 - 1992	84033
P	386m SE	Electricity Substation	1994	78666
P	387m SE	Electricity Substation	1971	91147
13	389m S	Electricity Substation	1971	67749



ID	Location	Land use	Dates present	Group ID
R	433m NW	Electricity Substation	1993	80339
R	433m NW	Electricity Substation	1984 - 1985	79005
16	447m SE	Electricity Substation	1971 - 1994	87646
S	453m S	Electricity Substation	1971 - 1994	85552
19	469m S	Electricity Substation	1994	84595
20	478m E	Electricity Substation	1971 - 1994	84197

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

1

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

Features are displayed on the Past land use map on [page 15 >](#)

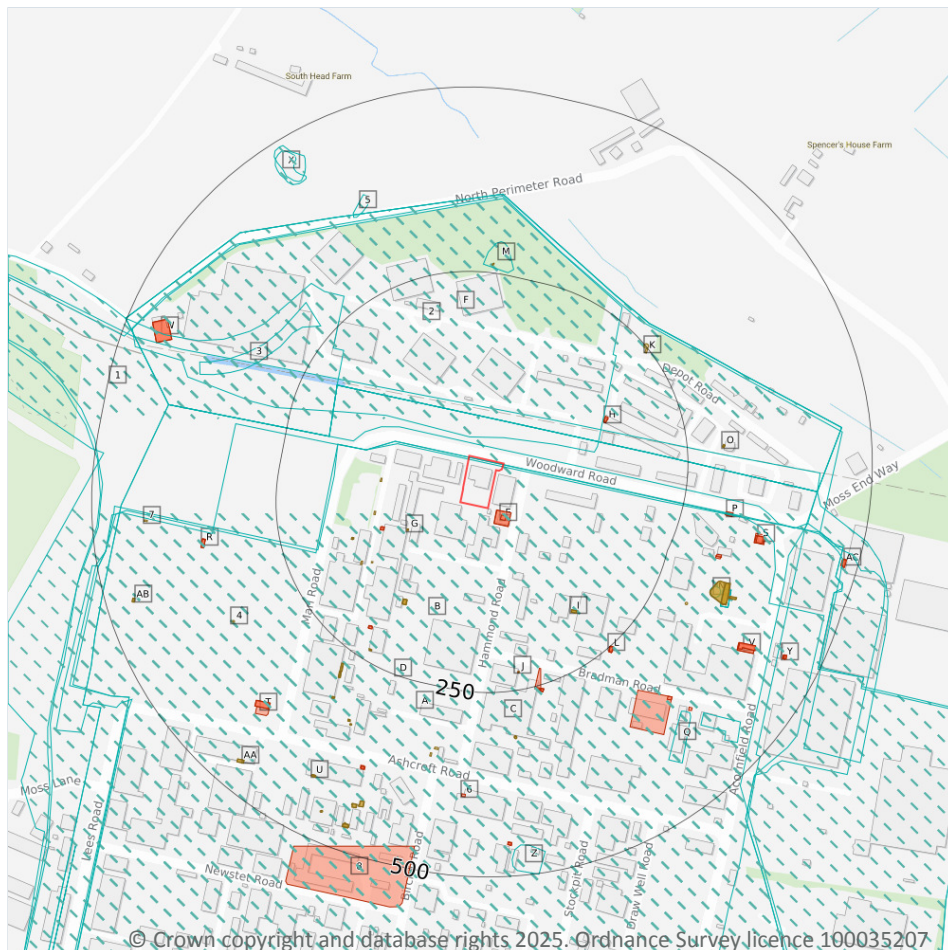


ID	Location	Site Name	Date of Operation	Activities
1	On site	ROF Kirkby	September 1940 - March 1946	Produced approximately 10% of WW2 ammunition; Approximately 23,000 employees; Filling Factory No.7

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

24

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

Features are displayed on the Past land use - un-grouped map on [page 22](#) >

ID	Location	Land Use	Date	Group ID
A	On site	Industrial Estate	1966	918975
A	On site	Unspecified Commercial/Industrial	1956	925687
B	On site	Railway Sidings	1966	2405268



ID	Location	Land Use	Date	Group ID
C	On site	Industrial Estate	1978	992608
C	On site	Industrial Estate	1988	955430
D	On site	Railway Sidings	1978	2405268
1	18m N	Railway Sidings	1956	994428
2	26m N	Unspecified Commercial/Industrial	1988	930560
F	56m N	Unspecified Commercial/Industrial	1966	1000682
F	56m N	Unspecified Commercial/Industrial	1978	1000682
F	56m N	Unspecified Commercial/Industrial	1956	894867
M	254m N	Unspecified Pit	1966	830663
3	267m NW	Cuttings	1966	808024
N	321m SE	Unspecified Tank	1978	981654
N	321m SE	Unspecified Tank	1988	974276
N	337m SE	Unspecified Tanks	1966	884154
N	337m SE	Unspecified Tanks	1978	884154
N	337m SE	Unspecified Tanks	1988	909096
5	358m NW	Marl Pit	1928	857265
Q	380m SE	Unspecified Heap	1978	843737
Q	403m SE	Unspecified Heaps	1978	837901
X	435m NW	Unspecified Pit	1907	864145
X	437m NW	Unspecified Pit	1890	864145
Z	459m S	Unspecified Heap	1966	843735

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

67

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

Features are displayed on the Past land use - un-grouped map on [page 22 >](#)



ID	Location	Land Use	Date	Group ID
G	79m SW	Unspecified Tank	1986	155787
G	79m SW	Unspecified Tank	1971	144479
G	80m SW	Unspecified Tank	1994	138510
G	110m W	Tanks	1971	108574
G	115m W	Unspecified Tank	1971	114871
G	143m SW	Unspecified Tank	1971	114872
B	151m SW	Unspecified Tank	1994	137082
B	151m SW	Unspecified Tank	1986	137082
B	151m SW	Unspecified Tank	1971	137082
G	152m SW	Unspecified Tank	1986	142705
G	153m SW	Unspecified Tank	1971	142705
G	153m SW	Unspecified Tank	1994	152542
G	155m SW	Unspecified Tank	1971	114869
I	179m SE	Unspecified Tank	1984	141485
I	179m SE	Unspecified Tank	1992	141485
I	179m SE	Unspecified Tank	1994	141485
J	225m S	Unspecified Tank	1971	114809
D	233m SW	Unspecified Tank	1994	131537
D	233m SW	Unspecified Tank	1986	131344
D	234m SW	Unspecified Tank	1971	136693
K	243m NE	Tanks	1976	108528
K	248m NE	Tanks	1976	108527
M	260m N	Tanks	1962	108529
D	270m SW	Tanks	1986	151226
D	270m SW	Tanks	1971	129499
D	281m SW	Tanks	1971	126556
D	282m SW	Tanks	1994	148913
N	297m SE	Unspecified Tank	1994	114797



ID	Location	Land Use	Date	Group ID
O	298m E	Unspecified Tank	1962	135883
O	298m E	Unspecified Tank	1976	135883
O	298m E	Unspecified Tank	1962	135883
C	310m S	Unspecified Tank	1994	127423
C	312m S	Unspecified Tank	1986	127423
C	312m S	Unspecified Tank	1971	127423
D	314m SW	Unspecified Tank	1986	141717
D	314m SW	Unspecified Tank	1971	141717
N	321m SE	Tanks	1984	136521
N	322m SE	Tanks	1971	136521
D	331m SW	Unspecified Tank	1986	141535
D	331m SW	Unspecified Tank	1994	154048
D	331m SW	Unspecified Tank	1971	134253
A	331m S	Unspecified Tank	1971	114873
D	335m SW	Unspecified Tank	1962	137534
D	335m SW	Unspecified Tank	1962	143697
N	338m E	Tanks	1962	137211
N	338m SE	Tanks	1962	132489
A	340m S	Unspecified Tank	1971	114874
4	346m SW	Unspecified Tank	1971	114870
N	348m SE	Unspecified Tank	1984	128132
N	349m SE	Unspecified Tank	1971	128132
U	419m SW	Tanks	1994	150744
U	419m SW	Tanks	1986	150744
U	420m SW	Tanks	1971	150744
7	425m W	Tanks	1985	108570
U	426m S	Tanks	1986	156243
U	426m S	Tanks	1971	156243



ID	Location	Land Use	Date	Group ID
U	433m S	Tanks	1986	150610
U	434m S	Tanks	1971	150610
AA	456m SW	Unspecified Tank	1986	152659
AA	457m SW	Unspecified Tank	1971	152659
U	458m SW	Unspecified Tank	1986	136464
U	459m SW	Unspecified Tank	1971	138798
AB	460m W	Tanks	1962	136587
AB	461m W	Tanks	1962	136587
U	462m S	Tanks	1994	128033
U	462m S	Tanks	1986	128033
U	463m S	Tanks	1971	128033

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

59

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

Features are displayed on the Past land use - un-grouped map on [page 22 >](#)

ID	Location	Land Use	Date	Group ID
E	12m SE	Electricity Substation	1994	89096
E	13m SE	Electricity Substation	1986	89096
E	21m SE	Electricity Substation	1971	74348
G	108m SW	Electricity Substation	1986	75687
G	110m SW	Electricity Substation	1994	75687
H	147m NE	Electricity Substation	1994	87760
H	147m NE	Electricity Substation	1976	87760
D	206m SW	Electricity Substation	1994	70661
D	207m SW	Electricity Substation	1986	70661



ID	Location	Land Use	Date	Group ID
J	225m S	Electricity Substation	1986	67750
J	228m S	Electricity Substation	1971	79985
L	250m SE	Electricity Substation	1994	91197
L	250m SE	Electricity Substation	1984	70211
L	250m SE	Electricity Substation	1992	70211
L	250m SE	Electricity Substation	1971	70211
J	251m S	Electricity Substation	1986	90405
J	255m S	Electricity Substation	1971	79985
J	255m S	Electricity Substation	1984	86758
J	255m S	Electricity Substation	1992	76777
P	308m E	Electricity Substation	1992	85361
P	309m E	Electricity Substation	1994	85361
N	313m E	Electricity Substation	1992	83245
N	314m E	Electricity Substation	1994	83245
Q	320m SE	Electricity Substation	1971	84418
R	349m W	Electricity Substation	1986	84811
R	350m W	Electricity Substation	1971	84811
R	350m W	Electricity Substation	1994	84811
Q	353m SE	Electricity Substation	1971	89202
S	355m E	Electricity Substation	1994	74019
S	356m E	Electricity Substation	1984	84145
S	356m E	Electricity Substation	1992	84145
S	358m E	Electricity Substation	1971	84145
T	375m SW	Electricity Substation	1986	84026
T	375m SW	Electricity Substation	1971	92077
T	376m SW	Electricity Substation	1994	74104
U	380m S	Electricity Substation	1994	82541
U	381m S	Electricity Substation	1986	82541



ID	Location	Land Use	Date	Group ID
U	381m S	Electricity Substation	1971	82541
Q	384m SE	Electricity Substation	1971	66230
V	386m SE	Electricity Substation	1984	84033
V	386m SE	Electricity Substation	1992	84033
V	386m SE	Electricity Substation	1994	78666
V	387m SE	Electricity Substation	1971	91147
6	389m S	Electricity Substation	1971	67749
W	433m NW	Electricity Substation	1993	80339
W	433m NW	Electricity Substation	1984	79005
W	433m NW	Electricity Substation	1985	79005
Y	447m SE	Electricity Substation	1984	87646
Y	447m SE	Electricity Substation	1992	87646
Y	448m SE	Electricity Substation	1994	87646
Y	449m SE	Electricity Substation	1971	87646
Z	453m S	Electricity Substation	1986	85552
Z	454m S	Electricity Substation	1994	85552
Z	454m S	Electricity Substation	1971	85552
8	469m S	Electricity Substation	1994	84595
AC	478m E	Electricity Substation	1984	84197
AC	478m E	Electricity Substation	1992	84197
AC	478m E	Electricity Substation	1994	84197
AC	479m E	Electricity Substation	1971	84197

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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



This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

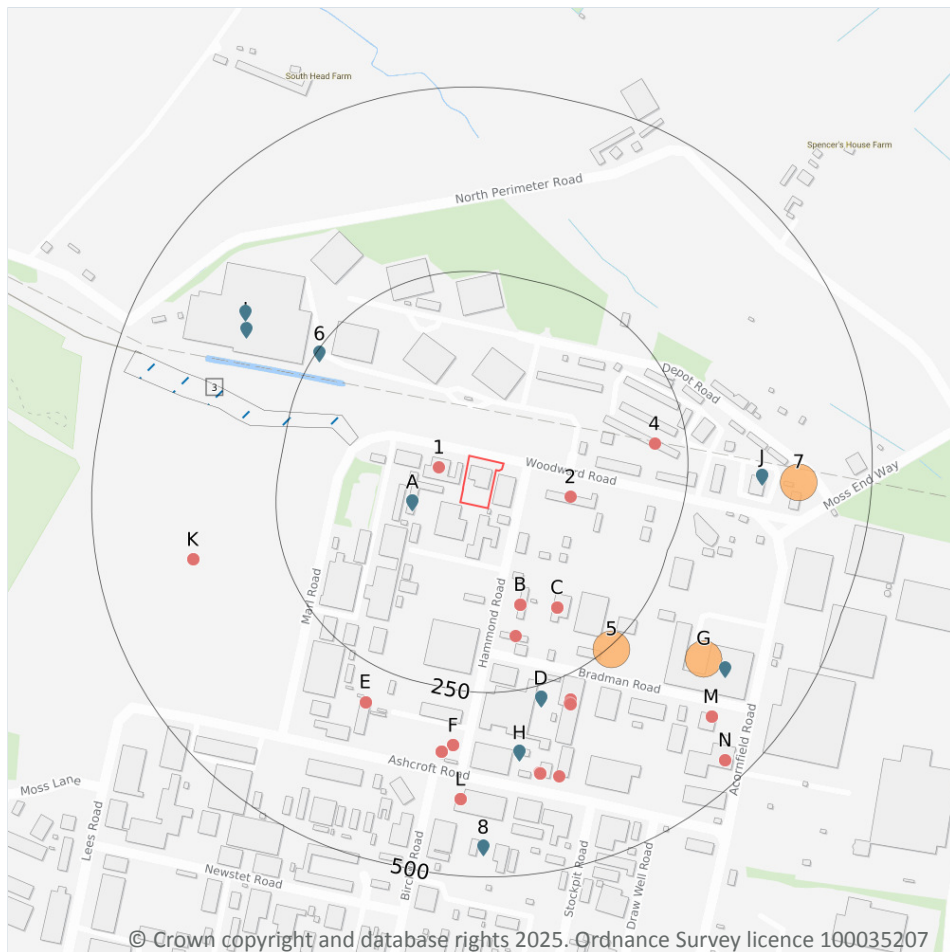
0

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

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



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

3.1 Active or recent landfill

Records within 500m

1

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

Features are displayed on the Waste and landfill map on [page 30](#) >

ID	Location	Details	
3	153m W	Operator: Knowsley Metropolitan Borough Council Site Address: Knowsley Metropolitan Borough Council, Land/premises At, Marl Roadw/woodward Road, Simonswood, Kirkby, Merseyside, L33 7UH	WML Number: 54257 EPR Reference: 654106 Landfill type: A05: Landfill taking Non-Biodegradable Wastes Status: Closure IPPC Reference: - EPR Number: EA/EPR/KP3197CA



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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m

0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

0

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

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

3.5 Historical waste sites

Records within 500m

3

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

Features are displayed on the Waste and landfill map on [page 30](#) >

ID	Location	Address	Further Details	Date
5	229m SE	Site Address: Vacant Warehouse/Bradman House, Bradman Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UR	Type of Site: Waste Treatment/Transfer Operation Facility Planning application reference: 13/00384/FUL Description: Scheme comprises change of use of vacant unit (use class B8) to form a healthcare waste treatment and transfer operation (use class sui generis) facilitating the treatment and temporary storage of waste prior to being transferred off-site for re-cycling together with external alteration to parts of external building & associated works. Data source: Historic Planning Application Data Type: Point	13/12/2013
G	332m SE	Site Address: SRCL Limited, Acornfield Road/Bradman Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UR, N.WEST	Type of Site: Waste Management Facility Planning application reference: 22/00295/SO Description: Scheme comprises screening opinion for the change of use, alterations and refurbishment to existing waste management facility. Data source: Historic Planning Application Data Type: Point	12/05/2022
7	376m E	Site Address: Depot Road, Knowsley Industrial Park North, LIVERPOOL, Merseyside, L33 7B	Type of Site: Waste Recycling Centre Planning application reference: 09/00376/FUL Description: Scheme comprises construction of new householder waste recycling centre. Works will include construction of new link road. Construction - black top surfacing, white lining site works. An application (ref: 09/00376/FUL) for detailed planning permissions granted by Knowsley B.C. Detailed plans have been approved. Veolia Environmental services has been awarded the main contract. Data source: Historic Planning Application Data Type: Point	28/03/2011

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

3.6 Licensed waste sites

Records within 500m

16

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation. Features are displayed on the Waste and landfill map on [page 30 >](#)



ID	Location	Details		
A	65m W	Site Name: Marl Road Site Address: Marl Roadw/woodward Road, Simonswood, Kirkby, Merseyside, L33 7UH Correspondence Address: Po Box 26, Archway Road, Huyton, Knowsley, Merseyside, L36 9FB	Type of Site: Landfill taking Non-Biodegradable Wastes Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KNO001 EPR reference: - Operator: Knowsley M B C Waste Management licence No: 54257 Annual Tonnage: 100000	Issue Date: 24/06/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
A	65m W	Site Name: Marl Road/wood Ward Road Inert Landfill Site Address: Land/premises At, Marl Roadw/woodward Road, Simonswood, Kirkby, Merseyside, L33 7UH Correspondence Address: -	Type of Site: Landfill taking Non-Biodegradable Wastes Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KNO001 EPR reference: EA/EPR/KP3197CA/A001 Operator: Knowsley Metropolitan Borough Council Waste Management licence No: 54257 Annual Tonnage: 100000	Issue Date: 24/06/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure
A	65m W	Site Name: Marl Road/wood Ward Road Inert Landfill Site Address: Land/premises At, Marl Roadw/woodward Road, Simonswood, Kirkby, Merseyside, L33 7UH Correspondence Address: -	Type of Site: Landfill taking Non-Biodegradable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 656974 EPR reference: EA/EPR/KP3197CA Operator: Knowsley Metropolitan Borough Council Waste Management licence No: 54257 Annual Tonnage: 100000	Issue Date: 24/06/1992 Effective Date: 24/06/1992 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure
6	245m NW	Site Name: Knowsley Rail Transfer Loading Station Site Address: Knowsley Rail T L S, Woodward Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UZ Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 659014 EPR reference: EA/EPR/ZP3892EE Operator: Suez Recycling And Recovery Uk Ltd Waste Management licence No: 102932 Annual Tonnage: 500000	Issue Date: 12/03/2012 Effective Date: 12/03/2012 Modified: 12/03/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
D	268m S	Site Name: Rentokil, Bradman Road Site Address: Knowsley Industrial Park North, Bradman Road, Knowsley, Merseyside, L33 7UR Correspondence Address: Rentokil Initial Corporate Head Office, Felcourt, East Grinstead, West Sussex, RH19 2JY	Type of Site: Special Waste Transfer Station Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REN001 EPR reference: - Operator: Rentokil Ltd Waste Management licence No: 54261 Annual Tonnage: 5000	Issue Date: 09/10/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
D	268m S	Site Name: Rentokil, Bradman Road Site Address: Knowsley Industrial Park North, Bradman Road, Knowsley, Merseyside, L33 7UR Correspondence Address: Felcourt, East Grinstead, West Sussex, RH1 2JY	Type of Site: Special Waste Transfer Station Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REN001 EPR reference: - Operator: Rentokil Group Plc Waste Management licence No: 54261 Annual Tonnage: 0	Issue Date: 09/10/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
D	268m S	Site Name: Rentokil Initial U K Ltd Site Address: Rentokil Initial U K Ltd, Bradman Road, Knowsley Ind Park, Liverpool, Merseyside, L33 7UR Correspondence Address: -	Type of Site: Special Waste Transfer Station Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 643907 EPR reference: EA/EPR/TP3997CR Operator: Rentokil Initial 1927 Plc Waste Management licence No: 54261 Annual Tonnage: 0	Issue Date: 09/10/1992 Effective Date: 09/10/1992 Modified: - Surrendered Date: 09/10/1992 Expiry Date: - Cancelled Date: - Status: Surrendered
H	335m S	Site Name: Unit 1 Prestige Complex Site Address: Aschroft Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7TW Correspondence Address: -	Type of Site: Vehicle Depollution Facility 5000 tps Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TRI031 EPR reference: EA/EPR/BB3906SS/A001 Operator: Triton (North West) Limited Waste Management licence No: 401692 Annual Tonnage: 4999	Issue Date: 18/09/2014 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
H	335m S	Site Name: Unit 1 Prestige Complex Site Address: Aschroft Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7TW Correspondence Address: -	Type of Site: Vehicle Depollution Facility 5000 tps Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 628084 EPR reference: EA/EPR/BB3906SS Operator: Triton (North West) Limited Waste Management licence No: 401692 Annual Tonnage: 4999	Issue Date: 18/09/2014 Effective Date: 18/09/2014 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
I	348m NW	Site Name: Marl Road Site Address: Marl Roadw/woodward Road, Simonswood, Kirkby, Merseyside, L33 7UH Correspondence Address: Contract Services Dept, Stretton Way, Huyton Industrial Estate, Huyon, Merseyside, L36 6JF	Type of Site: Landfill taking Non- Biodegradeable Wastes Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KNO001 EPR reference: - Operator: Knowsley M B C Waste Management licence No: 54257 Annual Tonnage: 0	Issue Date: 24/06/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
J	351m E	Site Name: Kirkby W R C Site Address: Depot Road, Kirkby, Knowsley Ind. Est, Merseyside, L33 3AR Correspondence Address: Port Of Liverpool Building, 2nd Floor, Pier Head, Liverpool, Merseyside, L3 1BY	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR003 EPR reference: - Operator: Mersey Waste Holdings Ltd Waste Management licence No: 54268 Annual Tonnage: 0	Issue Date: 21/08/1995 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
J	351m E	Site Name: Kirkby H W R C Site Address: Kirkby H W R C, Depot Road, Knowsley Industrial Park, Knowsley, Merseyside, L33 3AR Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 640926 EPR reference: EA/EPR/EP3691LR Operator: Veolia Es Merseyside & Halton Limited Waste Management licence No: 54268 Annual Tonnage: 0	Issue Date: 21/08/1995 Effective Date: 21/08/1995 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Surrendered



ID	Location	Details		
J	351m E	Site Name: Kirkby Household Waste Recycling Centre Site Address: Kirkby H W R C, Depot Road, Knowsley Industrial Park, Knowsley, Merseyside, L33 3AR Correspondence Address: -	Type of Site: 75kte Non-hazardous & hazardous HWA Site Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 631513 EPR reference: EA/EPR/DB3833AU Operator: Veolia Es Merseyside & Halton Limited Waste Management licence No: 103676 Annual Tonnage: 74999	Issue Date: 15/12/2011 Effective Date: 15/12/2011 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
I	361m NW	Site Name: Knowsley Rail Transfer Loading Station Site Address: Knowsley Rail T L S, Woodward Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UZ Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT734 EPR reference: EA/EPR/ZP3892EE/A001 Operator: Sita U K Ltd Waste Management licence No: 102932 Annual Tonnage: 500000	Issue Date: 12/03/2012 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: - Cancelled Date: - Status: Issued
G	389m SE	Site Name: SRCL Knowsley Treatment and Transfer Station Site Address: SRCL Knowsley Treatment and Transfer Station, Bradman Road, Knowsley Industrial Park, Merseyside, L33 7UR Correspondence Address: -	Type of Site: Clinical Waste Transfer Station Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 649954 EPR reference: EA/EPR/KP3436NL Operator: Srcl Limited Waste Management licence No: 400611 Annual Tonnage: 8760	Issue Date: 04/10/2022 Effective Date: 13/10/2022 Modified: 22/12/2023 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
8	460m S	Site Name: Unit 9 Lodge Works Site Address: Kirkby Skips Limited, Birchill Road, Kirkby Industrial Estate, Liverpool, Merseyside, L33 7TD Correspondence Address: -	Type of Site: 75kte HCI Waste TS Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: 627250 EPR reference: EA/EPR/WE8737AB Operator: Lh Waste Removal And Grab Hire Ltd Waste Management licence No: 120748 Annual Tonnage: 0	Issue Date: 23/06/2023 Effective Date: 23/06/2023 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



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

3.7 Waste exemptions

Records within 500m

51

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

Features are displayed on the Waste and landfill map on [page 30 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
1	37m W	Kirkby Hwrc, Depot Road, Knowsley Industrial Park, Kirkby, L33 7uz	WEX308873	Storing waste exemption	Not on a farm	Storage of waste in a secure place
2	100m E	Kirkby Hwrc, Depot Road, Knowsley Industrial Park, Kirkby, L33 7uz	WEX175403	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	138m S	Drawell House, Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX099972	Treating waste exemption	Not on a farm	Recovery of scrap metal
B	138m S	Drawell House, Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX099972	Storing waste exemption	Not on a farm	Storage of waste in a secure place
B	138m S	Drawell House, Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX099972	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
B	138m S	Drawell House, Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX099972	Storing waste exemption	Not on a farm	Storage of waste in secure containers
C	164m SE	. Hammond Road Liverpool L33 7ul	EPR/TE5258A U/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
C	164m SE	. Hammond Road Liverpool L33 7ul	EPR/TE5258A U/A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
C	164m SE	. Hammond Road Liverpool L33 7ul	EPR/TE5258A U/A001	Treating waste exemption	Non-agricultural waste only	Sorting mixed waste



ID	Location	Site	Reference	Category	Sub-Category	Description
C	164m SE	. Hammond Road Liverpool L33 7ul	EPR/TE5258A U/A001	Treating waste exemption	Non-agricultural waste only	Recovery of scrap metal
B	177m S	. Hammond Road Liverpool L33 7ul	EPR/HF0734ZE /A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
4	206m E	-	WEX370890	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
D	283m S	Unit 1, Bradman Road, Kirkby Industrial Estate, Knowsley, L33 7ur	WEX287646	Treating waste exemption	Not on a farm	Sorting mixed waste
D	283m S	Unit 1, Bradman Road, Kirkby Industrial Estate, Knowsley, L33 7ur	WEX416822	Treating waste exemption	Not on a farm	Sorting mixed waste
D	287m S	Unit 1 Bradman House Bradman Road Kirkby Merseyside L33 7ur	EPR/MF0807X Q/A001	Treating waste exemption	Non-agricultural waste only	Sorting mixed waste
D	289m S	Unit 1 Bradman House, Bradman Road, Kirkby Industrial Estate, Merseyside, L33 7ur	WEX125264	Treating waste exemption	Not on a farm	Sorting mixed waste
E	301m SW	-	WEX415569	Storing waste exemption	Not on a farm	Storage of waste in a secure place
E	301m SW	-	WEX415569	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
F	326m S	Drawell House Hammond Road Liverpool Merseyside L33 7ul	EPR/CH0079X C/A001	Treating waste exemption	Non-agricultural waste only	Recovery of scrap metal
F	326m S	Drawell House Hammond Road Liverpool Merseyside L33 7ul	EPR/CH0079X C/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in secure containers
F	326m S	Drawell House Hammond Road Liverpool Merseyside L33 7ul	EPR/CH0079X C/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place



ID	Location	Site	Reference	Category	Sub-Category	Description
F	326m S	Drawell House Hammond Road Liverpool Merseyside L33 7ul	EPR/CH0079X C/A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
F	337m S	-	WEX314340	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
F	337m S	-	WEX314340	Storing waste exemption	Not on a farm	Storage of waste in secure containers
F	337m S	-	WEX314340	Storing waste exemption	Not on a farm	Storage of waste in a secure place
F	337m S	-	WEX314340	Treating waste exemption	Not on a farm	Recovery of scrap metal
F	337m S	Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX185888	Storing waste exemption	Not on a farm	Storage of waste in a secure place
F	337m S	Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX185888	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
F	337m S	Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX185888	Storing waste exemption	Not on a farm	Storage of waste in secure containers
F	337m S	Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX185888	Treating waste exemption	Not on a farm	Recovery of scrap metal
F	337m S	Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX021667	Treating waste exemption	Not on a farm	Recovery of scrap metal
F	337m S	Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX021667	Storing waste exemption	Not on a farm	Storage of waste in secure containers
F	337m S	Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX021667	Storing waste exemption	Not on a farm	Storage of waste in a secure place
F	337m S	Hammond Road, Knowsley Industrial Park, Liverpool, L33 7ul	WEX021667	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
H	366m S	Unit 1 2 Ashcroft Road L33 7tw	EPR/NH0811A A/A001	Treating waste exemption	Non-agricultural waste only	Mechanical treatment of end-of-life tyres



ID	Location	Site	Reference	Category	Sub-Category	Description
H	367m S	Able Clearance Recycling, Ashcroft Road, Knowlsey Industrial Estate, Kirkby, L337tw	WEX082476	Treating waste exemption	Not on a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
H	367m S	Able Clearance Recycling, Ashcroft Road, Knowlsey Industrial Estate, Kirkby, L337tw	WEX082476	Treating waste exemption	Not on a farm	Sorting mixed waste
H	367m S	Able Clearance Recycling, Ashcroft Road, Knowlsey Industrial Estate, Kirkby, L337tw	WEX082476	Treating waste exemption	Not on a farm	Manual treatment of waste
H	367m S	Able Clearance Recycling, Ashcroft Road, Knowlsey Industrial Estate, Kirkby, L337tw	WEX082476	Treating waste exemption	Not on a farm	Recovery of scrap metal
K	372m W	Unit 5/e Cornhill Works Marl Road Liverpool L33 7uh	EPR/JF0005EU /A001	Using waste exemption	Non-agricultural waste only	Use of waste in construction
K	372m W	Unit 5/e Cornhill Works Marl Road Liverpool L33 7uh	EPR/JF0005EU /A001	Treating waste exemption	Non-agricultural waste only	Screening and blending of waste
H	377m S	Pride Point, Knowsley Business Park, Unit 1 Ashcroft Road, Kirkby, L33 7tw	EA/EPR/VP394 4CH/A001	Treating waste exemption	Not on a farm	Repair or refurbishment of WEEE
L	397m S	-	WEX299537	Storing waste exemption	Not on a farm	Storage of waste in a secure place
L	397m S	-	WEX299537	Disposing of waste exemption	Not on a farm	Burning waste in the open
L	397m S	-	WEX299537	Treating waste exemption	Not on a farm	Recovery of scrap metal
L	397m S	-	WEX299537	Treating waste exemption	Not on a farm	Sorting mixed waste
M	414m SE	Unit 3, Bradman Road, Knowsley Industrial Park, Liverpool, L33 7ur	WEX087988	Storing waste exemption	Not on a farm	Storage of waste in a secure place

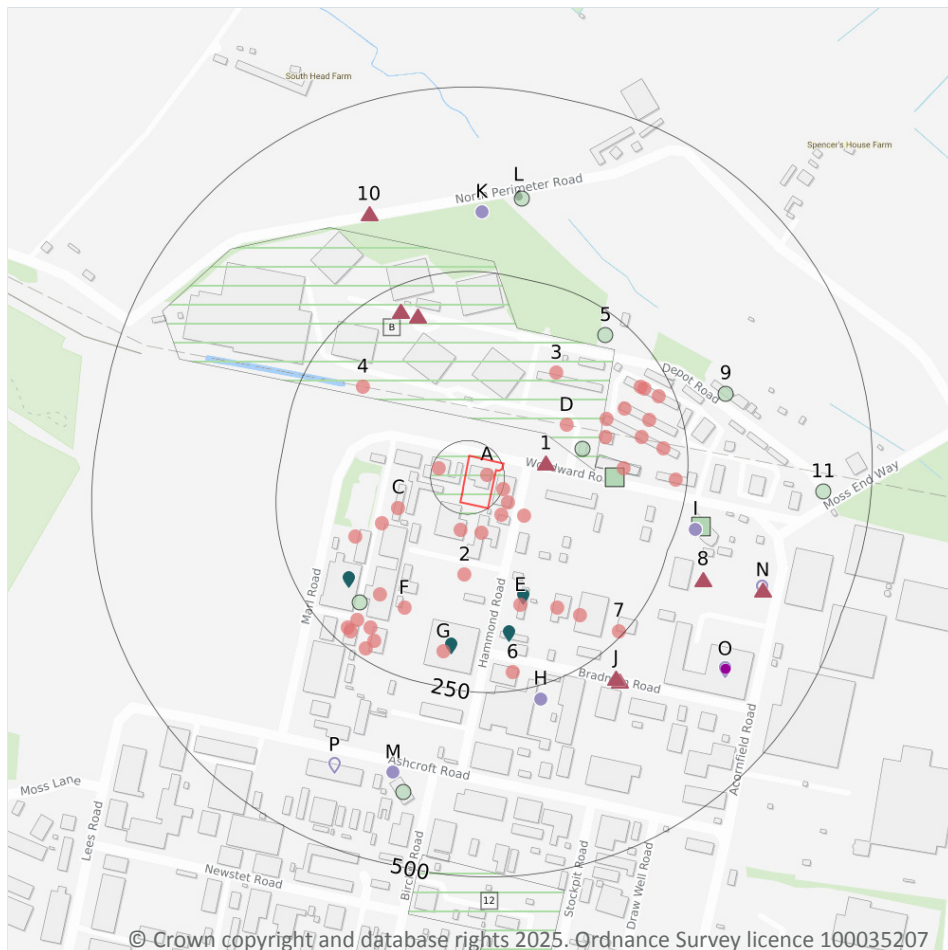


ID	Location	Site	Reference	Category	Sub-Category	Description
M	414m SE	Unit 3, Bradman Road, Knowsley Industrial Park, Liverpool, L33 7ur	WEX087988	Treating waste exemption	Not on a farm	Recovery of scrap metal
M	414m SE	Unit 3, Bradman Road, Knowsley Industrial Park, Liverpool, L33 7ur	WEX087988	Using waste exemption	Not on a farm	Use of depolluted end-of-life vehicles for vehicle parts
N	470m SE	Security House, Step Up Security Services Ltd, Acornfield Road, Knowsley Industrial Park, Liverpool, L33 7pa	WEX102906	Using waste exemption	Not on a farm	Use of waste to manufacture finished goods
N	470m SE	Security House, Step Up Security Services Ltd, Acornfield Road, Knowsley Industrial Park, Liverpool, L33 7pa	WEX244831	Using waste exemption	Not on a farm	Use of waste to manufacture finished goods

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Control of Major Accident Hazards
- ▲ Hazardous substance storage/usage
- Historical licensed industrial activities
- Part A(1) industrial activities
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- List 1 Dangerous Substances
- List 2 Dangerous Substances
- Pollution Incidents (EA/NRW)
- Pollution inventory waste transfers

4.1 Recent industrial land uses

Records within 250m

40

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 42](#) >

ID	Location	Company	Address	Activity	Category
A	On site	K M C Packaging & Business Products Ltd	Kmc Packaging 16a, Woodward Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UZ	Packaging	Industrial Products
A	15m E	Artist in Lead	Unit 3, Hammond Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UZ	Glass	Industrial Products



ID	Location	Company	Address	Activity	Category
A	20m SE	Electricity Sub Station	Merseyside, L33	Electrical Features	Infrastructure and Facilities
A	25m SE	S I P Building Systems Ltd	D B Polymer UK Ltd 1-1a, Hammond Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UZ	General Construction Supplies	Industrial Products
A	34m S	Factory	Merseyside, L33	Unspecified Works Or Factories	Industrial Features
A	36m S	Blok N Mesh UK Ltd	Hammond Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UL	Fences, Gates and Railings	Industrial Products
A	37m W	S T L Building Services	8, Woodward Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UZ	General Construction Supplies	Industrial Products
A	50m SE	Mast (Telecommunication)	Merseyside, L33	Telecommunications Features	Infrastructure and Facilities
C	85m W	McKenna	9a Cornhill Works, Marl Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UH	Civil Engineers	Engineering Services
2	95m S	Industrial Park	Merseyside, L33	Business Parks and Industrial Estates	Industrial Features
D	100m NE	Pylon	Merseyside, L33	Electrical Features	Infrastructure and Facilities
C	110m SW	Electricity Sub Station	Merseyside, L33	Electrical Features	Infrastructure and Facilities
E	139m S	Boundry Plant Ltd	Boundary Plant (Hire and Sales) Store and Office, Hammond Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UL	Construction and Tool Hire	Hire Services
3	142m NE	Public Recycling Facility	Merseyside, L33	Recycling Centres	Infrastructure and Facilities
D	143m E	North West Air Ambulance Charity	Stanley Building, North Mersey Business Park, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UY	Ambulance and Medical Transportation Services	Health Support Services
C	150m SW	Tank	Merseyside, L33	Tanks (Generic)	Industrial Features
D	152m NE	Electricity Sub Station	Merseyside, L33	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
F	162m SW	Tank	Merseyside, L33	Tanks (Generic)	Industrial Features
D	163m E	K Rend Ltd	Edward House North Mersey Business Centre, Woodward Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UY	Construction Completion Services	Construction Services
E	164m SE	M P E	M P E (Liverpool) Ltd, Hammond Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UL	Air and Water Filtration	Industrial Products
F	166m SW	Tint Wizard	Unit 4 Marl Road Business Centre, Marl Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UH	Industrial Coatings and Finishings	Industrial Products
4	172m NW	Pylon	Merseyside, L33	Electrical Features	Infrastructure and Facilities
D	180m NE	K Daly Flooring Ltd	Ksscc 57, North Mersey Business Park, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UY	Construction Completion Services	Construction Services
D	191m E	Bluesat Solutions Ltd	North Mersey Business Centre, Woodward Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UY	Radar and Telecommunications Equipment	Industrial Products
E	192m SE	Tank	Merseyside, L33	Tanks (Generic)	Industrial Features
G	203m S	Factory	Merseyside, L33	Unspecified Works Or Factories	Industrial Features
D	206m E	M & B Bargains	M and B Bargains 53, North Mersey Business Park, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UY	Container and Storage	Transport, Storage and Delivery
F	208m SW	Electricity Sub Station	Merseyside, L33	Electrical Features	Infrastructure and Facilities
F	212m SW	Works	Merseyside, L33	Unspecified Works Or Factories	Industrial Features
D	213m NE	Marton Electronics Ltd	Marton Electronics 92, North Mersey Business Park, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UY	Electronic Equipment	Industrial Products
D	216m NE	Klenz Ltd	91, North Mersey Business Park, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UY	Clothing, Components and Accessories	Consumer Products
D	217m E	Print Media Ltd	36, North Mersey Business Park, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UY	Published Goods	Industrial Products



ID	Location	Company	Address	Activity	Category
F	221m SW	Merseyside Castings & Engineering Co	Unit 3 Cornhill Works, Marl Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UH	Special Purpose Machinery and Equipment	Industrial Products
6	225m S	Total Scaffolding Ltd	Unit 1 Bradman Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UR	Construction and Tool Hire	Hire Services
F	228m SW	P R Plastics Ltd	2a Cornhill Works, Marl Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UH	General Construction Supplies	Industrial Products
F	229m SW	T G L Developments	Unit 2 Cornhill Works, Marl Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UH	Metals Manufacturers, Fabricators and Stockholders	Industrial Products
D	229m NE	Underwater Vision	West Lancs Plastering 88, North Mersey Business Park, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UY	Industrial Engineers	Engineering Services
D	234m E	Anti-pest Environmental Services	119-120, North Mersey Business Park, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UY	Pest and Vermin Control	Contract Services
F	236m SW	Tank	Merseyside, L33	Tanks (Generic)	Industrial Features
7	243m SE	Sovereign Transport Services	Krol Corlett Properties Ltd, Bradman Road, Knowsley Industrial Park, Kirkby, Merseyside, L33 7UR	Distribution and Haulage	Transport, Storage and Delivery

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0
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Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0
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High voltage underground electricity transmission cables.

This data is sourced from National Grid.



4.4 Gas pipelines

Records within 500m	0
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High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0
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Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	5
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Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Company	Address	Operational status	Tier
A	On site	Archimcya	Archimcya, Woodward Road, Kirkby, L33 7UZ	Historical NIHHS Site	-
A	On site	Freeman Chemicals Ltd	Freeman Chemicals Ltd, Faraday Road, Knowsley, L33 7UZ	Historical NIHHS Site	-
B	50m N	Potter Logistics Ltd	Potter Logistics Ltd, Knowsley Rail Freight Terminal, Woodward Road, Knowsley Industrial Park, Liverpool, Merseyside, L33 7UZ	Historical NIHHS Site	-
D	124m E	Syntor Fine Chemicals Limited	Syntor Fine Chemicals Limited, Knowsley, Knowsley Industrial Estate, Woodward Road, Kirkby, Merseyside, L33 7UG	Historical COMAH Site	COMAH Lower Tier Operator
12	478m S	Baker Hughes Limited	Baker Hughes Limited, Liverpool, Knowsley Industrial Park, Kirkby Bank Road, Liverpool, Merseyside, L33 7SY	Current COMAH Site	COMAH Lower Tier Operator

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

9

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

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Details	
1	57m E	Application reference number: 99/00672/HSC Application status: Historical Consent Application date: 04/10/1999 Address: Archimica Ltd., Woodward Road, Knowsley Industrial Park, Kirkby, Knowsley, L33 7UZ	Details: Claim For Deemed Consent For The Storage Of Various Hazardous Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
B	202m N	Application reference number: 00/00616/HAZ Application status: Approved Application date: 18/10/2000 Address: Henry Diaper & Co Ltd, Lees Road, Liverpool, Merseyside, England, L33 7SE	Details: Application For Hazardous Substances Consent For Storage Of Category 2 (toxics), Category 3 (oxydising) And Category 6 (flammable) Substances Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
B	217m NW	Application reference number: 07/00065/HAZ Application status: Historical Consent Application date: 25/01/2007 Address: The Potter Group, Knowsley Rail Freight Terminal, Land Bounded By North Perimeter Road And Woodward Road, Knowsley Industrial Park, Kirkby, Knowsley, L33 7UZ	Details: Application to increase storage levels of various substances ranging from 'very toxic' to 'any classification' approved under existing consent 06/00470/HAZ Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
B	217m NW	Application reference number: 06/00470/HAZ Application status: Approved Application date: 13/06/2006 Address: The Potter Group, Knowsley Rail Freight Terminal, Woodward Road, Knowsley Industrial Estate, Kirkby, Merseyside, England, L33 7UZ	Details: Storage of various substances ranging from 'very toxic' to 'any classification'. Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
J	288m SE	Application reference number: 02/00761/HAZ Application status: Historical Consent Application date: 02/10/2002 Address: Bradman Manufacturing Ltd, Bradman Road, Knowsley Industrial Park, Kirkby, Knowsley, L33 7UR	Details: Application For Part A Substances (arsenic trioxide and arsenic (v) acid) Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified



ID	Location	Details	
J	295m SE	Application reference number: 02/00043/HAZ Application status: Historical Consent Application date: No Details Address: Bradman Manufacturing Ltd, Bradman House, 6 Bradman Road, Knowsley Industrial Park, Kirkby, Knowsley, L33 7UR	Details: Application For Hazardous Substances Consent For Part A Substances (arsenic Trioxide) Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
8	307m SE	Application reference number: 14/00544/HAZ Application status: Pending Application date: 30/07/2014 Address: Syntor Fine Chemicals, Acornfield Road, Knowsley Industrial Park, Kirkby, Knowsley, L33 7UG	Details: Hazardous Substances consent for storage of substances falling within the following categories; very toxic, toxic, flammable, highly flammable, dangerous to environment and reacts violently with water Enforcement: No Details Date of enforcement: No Details Comment: No Details
10	355m NW	Application reference number: 06/00470/HAZ Application status: Pending Application date: 13/06/2006 Address: Knowsley Rail Freight Terminal, Land Bounded By North Perimeter Road And Woodward Road, Knowsley Industrial Park, Kirkby, Knowsley, L33 7UZ	Details: Application For Hazardous Substances Consent For The Storage Of Various Substances Ranging From 'very Toxic' To 'any Classification' Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
N	389m E	Application reference number: 09/00546/HAZ Application status: Approved Application date: 15/12/2009 Address: Syntor Fine Chemicals Ltd, Knowsley Industrial Park, Acornfield Road/Woodward Road, Kirkby, Liverpool, Merseyside, England, L33 7UG	Details: Storage of very toxic, toxic, flammable, highly flammable, dangerous to the environment and reacts violently with water. Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

38

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

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Details	
H	268m S	Operator: Bradman Road Manufacturing Ltd Address: Bradman Road, Knowsley Industrial Park, Liverpool, L33 7UR Process: Inorganic Chemical Processes Permit Number: AQ2664	Original Permit Number: IPCAPP Date Approved: 6-6-1995 Effective Date: 13-6-1995 Status: Superseded By Variation



ID	Location	Details	
H	268m S	Operator: Bradman Road Manufacturing Ltd Address: Bradman Road, Knowsley Industrial Park, Liverpool, L33 7UR Process: Inorganic Chemical Processes Permit Number: AV6043	Original Permit Number: IPCMINVAR Date Approved: 20-5-1996 Effective Date: 21-5-1996 Status: Superseded By Variation
H	268m S	Operator: Bradman Road Manufacturing Ltd Address: Bradman Road, Knowsley Industrial Park, Liverpool, L33 7UR Process: Inorganic Chemical Processes Permit Number: BA1559	Original Permit Number: IPCMINVAR Date Approved: 28-11-1997 Effective Date: 5-12-1997 Status: Superseded By Variation
H	268m S	Operator: Bradman Road Manufacturing Ltd Address: Bradman Road, Knowsley Industrial Park, Liverpool, L33 7UR Process: Inorganic Chemical Processes Permit Number: BE2107	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
H	268m S	Operator: Bradman Road Manufacturing Ltd Address: Bradman Road, Knowsley Industrial Park, Liverpool, L33 7UR Process: Inorganic Chemical Processes Permit Number: BL3749	Original Permit Number: IPCMINVAR Date Approved: 6-9-2001 Effective Date: 10-9-2001 Status: Superseded By Variation
H	268m S	Operator: Bradman Road Manufacturing Ltd Address: Bradman Road, Knowsley Industrial Park, Liverpool, L33 7UR Process: Inorganic Chemical Processes Permit Number: BU1741	Original Permit Number: IPCMAJVAR Date Approved: 1-9-2003 Effective Date: 5-9-2003 Status: Revoked
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BC3145	Original Permit Number: IPCMINVAR Date Approved: - Effective Date: - Status: Refused
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AH1471	Original Permit Number: IPCAPP Date Approved: 21-4-1993 Effective Date: 21-4-1993 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AK9216	Original Permit Number: IPCMINVAR Date Approved: 9-12-1993 Effective Date: 9-12-1993 Status: Superseded By Variation
I	275m E	Operator: Archimica Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Processes Involving Halogens Permit Number: AL8231	Original Permit Number: IPCAIRAPP Date Approved: 15-9-1994 Effective Date: 22-9-1994 Status: Superseded By Variation



ID	Location	Details	
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AN1106	Original Permit Number: IPCAPP Date Approved: 11-7-1994 Effective Date: 18-7-1994 Status: Superseded By Variation
I	275m E	Operator: Archimica Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Processes Involving Halogens Permit Number: AO5328	Original Permit Number: IPCAIRAPP Date Approved: 2-11-1994 Effective Date: 9-11-1994 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AQ2125	Original Permit Number: IPCMINVAR Date Approved: 21-2-1995 Effective Date: 23-2-1995 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AQ8131	Original Permit Number: IPCMINVAR Date Approved: 18-4-1995 Effective Date: 25-4-1995 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AR0713	Original Permit Number: IPCMINVAR Date Approved: 4-5-1995 Effective Date: 10-5-1995 Status: Superseded By Variation
I	275m E	Operator: Archimica Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Processes Involving Halogens Permit Number: AS2220	Original Permit Number: IPCMINVAR Date Approved: 1-8-1995 Effective Date: 7-8-1995 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AT5500	Original Permit Number: IPCMINVAR Date Approved: 21-9-1995 Effective Date: 25-9-1995 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AX6346	Original Permit Number: IPCMINVAR Date Approved: 13-1-1997 Effective Date: 20-1-1997 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: AY3016	Original Permit Number: IPCMINVAR Date Approved: 30-4-1997 Effective Date: 7-5-1997 Status: Superseded By Variation



ID	Location	Details	
I	275m E	Operator: Archimica Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Processes Involving Halogens Permit Number: BC7779	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked
I	275m E	Operator: Archimica Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Processes Involving Halogens Permit Number: BD1822	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BD2985	Original Permit Number: IPCMINVAR Date Approved: 25-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BD9068	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BE7001	Original Permit Number: IPCMINVAR Date Approved: 20-11-1998 Effective Date: 20-11-1998 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BE7931	Original Permit Number: IPCMAJVAR Date Approved: 17-2-1999 Effective Date: 19-2-1999 Status: Superseded By Variation
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BS7226	Original Permit Number: IPCMINVAR Date Approved: 31-3-2003 Effective Date: 1-4-2003 Status: Revoked - Now Ippc
I	275m E	Operator: Organic Intermediates Ltd Address: Woodward Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7UZ Process: Manufacture And Use Of Organic Chemicals Permit Number: BS7269	Original Permit Number: IPCMINVAR Date Approved: 31-3-2003 Effective Date: 1-4-2003 Status: Revoked - Now Ippc
K	331m N	Operator: Baker Petrolite Ltd Address: Kirkby Bank Road, Knowsley Industrial Park (north), Liverpool, Merseyside, L33 7SY Process: Manufacture And Use Of Organic Chemicals Permit Number: AK5946	Original Permit Number: IPCAPP Date Approved: 3-2-1994 Effective Date: 7-2-1994 Status: Superseded By Variation



ID	Location	Details	
K	331m N	Operator: Baker Petrolite Ltd Address: Kirkby Bank Road, Knowsley Industrial Park (north), Liverpool, Merseyside, L33 7SY Process: Manufacture And Use Of Organic Chemicals Permit Number: AS6870	Original Permit Number: IPCAIRAPP Date Approved: 23-11-1995 Effective Date: 28-11-1995 Status: Superseded By Variation
K	331m N	Operator: Baker Petrolite Ltd Address: Kirkby Bank Road, Knowsley Industrial Park (north), Liverpool, Merseyside, L33 7SY Process: Manufacture And Use Of Organic Chemicals Permit Number: AV0541	Original Permit Number: IPCMINVAR Date Approved: 6-3-1996 Effective Date: 13-3-1996 Status: Superseded By Variation
K	331m N	Operator: Baker Petrolite Ltd Address: Kirkby Bank Road, Knowsley Industrial Park (north), Liverpool, Merseyside, L33 7SY Process: Manufacture And Use Of Organic Chemicals Permit Number: BB3760	Original Permit Number: IPCMINVAR Date Approved: 8-6-1998 Effective Date: 8-6-1998 Status: Superseded By Variation
K	331m N	Operator: Baker Petrolite Ltd Address: Kirkby Bank Road, Knowsley Industrial Park (north), Liverpool, Merseyside, L33 7SY Process: Manufacture And Use Of Organic Chemicals Permit Number: BD5321	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc
K	331m N	Operator: Baker Petrolite Ltd Address: Kirkby Bank Road, Knowsley Industrial Park (north), Liverpool, Merseyside, L33 7SY Process: Manufacture And Use Of Organic Chemicals Permit Number: BE4886	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc
M	378m S	Operator: Kidde Products Ltd Address: Ashcroft Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7TS Process: Inorganic Chemical Processes Permit Number: AI3755	Original Permit Number: IPCAPP Date Approved: 26-7-1993 Effective Date: 26-7-1993 Status: Superseded By Variation
M	378m S	Operator: Kidde Products Ltd Address: Ashcroft Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7TS Process: Inorganic Chemical Processes Permit Number: AO0229	Original Permit Number: IPCAIRAPP Date Approved: 1-11-1994 Effective Date: 8-11-1994 Status: Superseded By Variation
M	378m S	Operator: Kidde Products Ltd Address: Ashcroft Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7TS Process: Inorganic Chemical Processes Permit Number: AR5235	Original Permit Number: IPCMINVAR Date Approved: 6-6-1995 Effective Date: 13-6-1995 Status: Superseded By Variation
M	378m S	Operator: Kidde Products Ltd Address: Ashcroft Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7TS Process: Inorganic Chemical Processes Permit Number: BC9321	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked



ID	Location	Details	
M	378m S	Operator: Kidde Products Ltd Address: Ashcroft Road, Knowsley Industrial Park North, Liverpool, Merseyside, L33 7TS Process: Inorganic Chemical Processes Permit Number: BD1547	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	59
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Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Details	
I	275m E	Operator: SYNTOR FINE CHEMICALS LIMITED Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: BU4376IS Original Permit Number: BU4376IS	EPR Reference: EPR/BU4376IS Issue Date: 14/07/2011 Effective Date: 14/07/2011 Last date noted as effective: 29/10/2024 Status: Surrendered
I	275m E	Operator: SYNTOR FINE CHEMICALS LIMITED Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: BU4376IS Original Permit Number: BU4376IS	EPR Reference: EPR/BU4376IS Issue Date: 14/07/2011 Effective Date: 14/07/2011 Last date noted as effective: 29/10/2024 Status: Surrendered
I	275m E	Operator: SYNTOR FINE CHEMICALS LIMITED Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: BU4376IS Original Permit Number: BU4376IS	EPR Reference: EPR/BU4376IS Issue Date: 14/07/2011 Effective Date: 14/07/2011 Last date noted as effective: 29/10/2024 Status: Surrendered
I	275m E	Operator: ORGANIC INTERMEDIATES LTD Installation Name: - Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: BU4376 Original Permit Number: BU4376	EPR Reference: - Issue Date: 17/12/2003 Effective Date: 17/12/2003 Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS

ID	Location	Details	
I	275m E	Operator: ORGANIC INTERMEDIATES LTD Installation Name: - Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: BU4376 Original Permit Number: BU4376	EPR Reference: - Issue Date: 17/12/2003 Effective Date: 17/12/2003 Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
I	275m E	Operator: ORGANIC INTERMEDIATES LTD Installation Name: - Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: BU4376 Original Permit Number: BU4376	EPR Reference: - Issue Date: 17/12/2003 Effective Date: 17/12/2003 Last date noted as effective: 01/10/2004 Status: SUPERSEDED BY PAS
I	275m E	Operator: SYNTOR FINE CHEMICALS LTD Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; DYES AND PIGMENTS Permit Number: UP3634MC Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 03/10/2007 Status: DETERMINATION
I	275m E	Operator: SYNTOR FINE CHEMICALS LTD Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: UP3634MC Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 03/10/2007 Status: DETERMINATION
I	275m E	Operator: SYNTOR FINE CHEMICALS LTD Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: UP3634MC Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 03/10/2007 Status: DETERMINATION
I	275m E	Operator: SYNTOR FINE CHEMICALS LTD Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: UP3634MC Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 03/10/2007 Status: DETERMINATION
I	275m E	Operator: SYNTOR FINE CHEMICALS LTD Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: UP3634MC Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 03/10/2007 Status: DETERMINATION



ID	Location	Details	
I	275m E	Operator: Syntor Fine Chemicals Ltd Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: JP3933BA Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 24/06/2005 Effective Date: 24/06/2005 Last date noted as effective: 21/03/2023 Status: Superseded
I	275m E	Operator: Syntor Fine Chemicals Ltd Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; DYES AND PIGMENTS Permit Number: JP3933BA Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 24/06/2005 Effective Date: 24/06/2005 Last date noted as effective: 21/03/2023 Status: Superseded
I	275m E	Operator: Syntor Fine Chemicals Ltd Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: JP3933BA Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 24/06/2005 Effective Date: 24/06/2005 Last date noted as effective: 21/03/2023 Status: Superseded
I	275m E	Operator: Syntor Fine Chemicals Ltd Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: JP3933BA Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 24/06/2005 Effective Date: 24/06/2005 Last date noted as effective: 21/03/2023 Status: Superseded
I	275m E	Operator: Syntor Fine Chemicals Ltd Installation Name: ORGANIC INTERMEDIATES LTD Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: JP3933BA Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 24/06/2005 Effective Date: 24/06/2005 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: SYNTOR FINE CHEMICALS LIMITED Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; DYES AND PIGMENTS Permit Number: BU4376IS Original Permit Number: BU4376IS	EPR Reference: EPR/BU4376IS Issue Date: 14/07/2011 Effective Date: 14/07/2011 Last date noted as effective: 29/10/2024 Status: Surrendered
N	387m E	Operator: SYNTOR FINE CHEMICALS LIMITED Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: BU4376IS Original Permit Number: BU4376IS	EPR Reference: EPR/BU4376IS Issue Date: 14/07/2011 Effective Date: 14/07/2011 Last date noted as effective: 29/10/2024 Status: Surrendered
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; DYES AND PIGMENTS Permit Number: CP3235XQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 04/02/2009 Effective Date: 04/02/2009 Last date noted as effective: 21/03/2023 Status: Superseded



ID	Location	Details	
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: TP3633HM Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: 14/07/2011 Last date noted as effective: 21/03/2023 Status: Surrender Effective
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: TP3633HM Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: 14/07/2011 Last date noted as effective: 21/03/2023 Status: Surrender Effective
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; DYES AND PIGMENTS Permit Number: CP3633TQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 22/03/2010 Effective Date: 22/03/2010 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: CP3235XQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 04/02/2009 Effective Date: 04/02/2009 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: CP3235XQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 04/02/2009 Effective Date: 04/02/2009 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; ANY OTHER ORGANIC COMPOUNDS (NOT DESCRIBED 4.1 A(1)(A)) Permit Number: CP3633TQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 22/03/2010 Effective Date: 22/03/2010 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; HALOGEN CONTAINING COMPOUNDS EG HALOCARBONS Permit Number: CP3633TQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 22/03/2010 Effective Date: 22/03/2010 Last date noted as effective: 21/03/2023 Status: Superseded



ID	Location	Details	
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: CP3633TQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 22/03/2010 Effective Date: 22/03/2010 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; DYES AND PIGMENTS Permit Number: TP3633HM Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: 14/07/2011 Last date noted as effective: 21/03/2023 Status: Surrender Effective
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: CP3235XQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 04/02/2009 Effective Date: 04/02/2009 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: CP3235XQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 04/02/2009 Effective Date: 04/02/2009 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: CP3633TQ Original Permit Number: BU4376IS	EPR Reference: - Issue Date: 22/03/2010 Effective Date: 22/03/2010 Last date noted as effective: 21/03/2023 Status: Superseded
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: TP3633HM Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: 14/07/2011 Last date noted as effective: 21/03/2023 Status: Surrender Effective
N	387m E	Operator: Syntor Fine Chemicals Ltd Installation Name: Kirkby Intermediates Process: ORGANIC CHEMICALS; NITROGEN CONTAINING COMPOUNDS EG AMINES Permit Number: TP3633HM Original Permit Number: BU4376IS	EPR Reference: - Issue Date: - Effective Date: 14/07/2011 Last date noted as effective: 21/03/2023 Status: Surrender Effective



ID	Location	Details	
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 13/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 23/11/2023 Status: Effective
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: ASSOCIATED PROCESS Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 13/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 23/11/2023 Status: Effective
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: TEMPORARY STORAGE OF HAZ WASTE NOT UNDER S 5.2 PENDING ACTIVITIES LISTED IN S 5.1, 5.2, 5.3 AND PARAGRAPH (B) OF THIS SECTION WITH A TOTAL CAPACITY > 50 TONNES, EXCL TEMP STORAGE WHERE GENERATED Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 13/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 23/11/2023 Status: Effective
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: DP3040QM Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 21/03/2023 Status: Effective
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: TEMPORARY STORAGE OF HAZ WASTE NOT UNDER S 5.2 PENDING ACTIVITIES LISTED IN S 5.1, 5.2, 5.3 AND PARAGRAPH (B) OF THIS SECTION WITH A TOTAL CAPACITY > 50 TONNES, EXCL TEMP STORAGE WHERE GENERATED Permit Number: DP3040QM Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 21/03/2023 Status: Effective

ID	Location	Details	
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: ASSOCIATED PROCESS Permit Number: DP3040QM Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 21/03/2023 Status: Effective
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: ASSOCIATED PROCESS Permit Number: NP3537RN Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 09/06/2016 Effective Date: 09/06/2016 Last date noted as effective: 21/03/2023 Status: Superseded
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: NP3537RN Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 09/06/2016 Effective Date: 09/06/2016 Last date noted as effective: 21/03/2023 Status: Superseded
O	389m SE	Operator: SRCL Limited Installation Name: Knowsley Treatment and Transfer Station - EPR/KP3436NL Process: ASSOCIATED PROCESS Permit Number: NP3439DS Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 09/08/2016 Effective Date: 09/08/2016 Last date noted as effective: 21/03/2023 Status: Superseded
O	389m SE	Operator: SRCL Limited Installation Name: Knowsley Treatment and Transfer Station - EPR/KP3436NL Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: NP3439DS Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 09/08/2016 Effective Date: 09/08/2016 Last date noted as effective: 21/03/2023 Status: Superseded
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: ASSOCIATED PROCESS Permit Number: TP3537QR Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 21/05/2019 Effective Date: 21/05/2019 Last date noted as effective: 21/03/2023 Status: Superseded



ID	Location	Details	
O	389m SE	Operator: SRCL Limited Installation Name: Knowsley Treatment and Transfer Station - EPR/KP3436NL Process: TEMPORARY STORAGE OF HAZ WASTE NOT UNDER S 5.2 PENDING ACTIVITIES LISTED IN S 5.1, 5.2, 5.3 AND PARAGRAPH (B) OF THIS SECTION WITH A TOTAL CAPACITY > 50 TONNES, EXCL TEMP STORAGE WHERE GENERATED Permit Number: NP3439DS Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 09/08/2016 Effective Date: 09/08/2016 Last date noted as effective: 21/03/2023 Status: Superseded
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: TEMPORARY STORAGE OF HAZ WASTE NOT UNDER S 5.2 PENDING ACTIVITIES LISTED IN S 5.1, 5.2, 5.3 AND PARAGRAPH (B) OF THIS SECTION WITH A TOTAL CAPACITY > 50 TONNES, EXCL TEMP STORAGE WHERE GENERATED Permit Number: NP3537RN Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 09/06/2016 Effective Date: 09/06/2016 Last date noted as effective: 21/03/2023 Status: Superseded
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: TP3537QR Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 21/05/2019 Effective Date: 21/05/2019 Last date noted as effective: 21/03/2023 Status: Superseded
O	389m SE	Operator: SRCL Limited Installation Name: SRCL Knowsley Treatment and Transfer Station Process: TEMPORARY STORAGE OF HAZ WASTE NOT UNDER S 5.2 PENDING ACTIVITIES LISTED IN S 5.1, 5.2, 5.3 AND PARAGRAPH (B) OF THIS SECTION WITH A TOTAL CAPACITY > 50 TONNES, EXCL TEMP STORAGE WHERE GENERATED Permit Number: TP3537QR Original Permit Number: KP3436NL	EPR Reference: - Issue Date: 21/05/2019 Effective Date: 21/05/2019 Last date noted as effective: 21/03/2023 Status: Superseded
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective



ID	Location	Details	
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DISPOSAL OR RECOVERY OF HAZ WASTE WITH CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING REPACKAGING PRIOR TO SUBMISSION TO ANY OF THE OTHER ACTIVITIES LISTED IN THIS SECTION OR IN SECTION 5.1 Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: TEMPORARY STORAGE OF HAZ WASTE NOT UNDER S5.2 PENDING ACTIVITIES LISTED IN S5.1, 5.2, 5.3 AND PARAGRAPH (B) OF THIS SECTION WITH A TOTAL CAPACITY > 50 TONNES, EXCL TEMP STORAGE WHERE GENERATED Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DIRECTLY ASSOCIATED ACTIVITY (INCLUDED) Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DIRECTLY ASSOCIATED ACTIVITY (INCLUDED) Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DIRECTLY ASSOCIATED ACTIVITY (INCLUDED) Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DIRECTLY ASSOCIATED ACTIVITY (INCLUDED) Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective



ID	Location	Details	
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective
O	389m SE	Operator: SRCL LIMITED Installation Name: SRCL Knowsley Treatment and Transfer Station Process: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT Permit Number: KP3436NL Original Permit Number: KP3436NL	EPR Reference: EPR/KP3436NL Issue Date: 04/10/2022 Effective Date: 13/10/2022 Last date noted as effective: 29/10/2024 Status: Effective
P	395m SW	Operator: KIDDE PRODUCTS LIMITED Installation Name: Kirkby Firefighting Allophanate Plant Process: CARBON DISULPHIDE OR AMMONIA; AMMONIA RELEASE TO AIR (ANY CHEMICAL MANUFACTURE NOT REFRIDGERANT USE) Permit Number: BU5518IU Original Permit Number: BU5518IU	EPR Reference: EPR/BU5518IU Issue Date: 14/02/2014 Effective Date: 14/02/2014 Last date noted as effective: 29/10/2024 Status: Surrendered
P	395m SW	Operator: Kidde Products Ltd Installation Name: Kirkby Firefighting Allophanate Plant Process: CARBON DISULPHIDE OR AMMONIA; AMMONIA RELEASE TO AIR (ANY CHEMICAL MANUFACTURE NOT REFRIDGERANT USE) Permit Number: KP3839EK Original Permit Number: BU5518IU	EPR Reference: - Issue Date: - Effective Date: 14/02/2014 Last date noted as effective: 21/03/2023 Status: Surrender Effective

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

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

Records within 500m

4

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

Features are displayed on the Current industrial land use map on [page 42 >](#)



ID	Location	Address	Details	
E	129m S	North West Fencing Products, Bradman Road, Knowsley Industrial Estate, Kirkby, L33 7UR	Process: Use of Bulk Cement Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
E	173m S	Boundary Plant, Bradman Road, Knowsley Industrial Park, Kirkby, L33 7YB	Process: Respraying of Road Vehicles Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
F	185m SW	DAMS International, Marl Road, Knowsley Industrial Park, Kirkby, L33 7UH	Process: Combustion & Incineration Status: Revoked Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
G	193m S	Boundary Plant Ltd, Hammond Rd, Liverpool, L33 7UL	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

2

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

Features are displayed on the Current industrial land use map on [page 42](#) >

ID	Location	Address	Details	
L	360m N	KNOWSLEYRAILTRANSFERLOADING STN,WOODWARDROAD,KNOWSLEY INDUSTRIALPARK,LIVERPOOL,ME RSEYSIDE,L337UZ	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: EPRCB3995VZ Permit Version: 1 Receiving Water: 2 OUTLETS 2 WATERCOURSES	Status: REVOKED UNDER EPR 2010 Issue date: 14/09/2015 Effective Date: 14/09/2015 Revocation Date: 13/06/2016



ID	Location	Address	Details	
L	360m N	KNOWSLEYRAILTRANSFERLOADING STN,WOODWARDROAD,KNOWSLEY INDUSTRIALPARK,LIVERPOOL,ME RSEYSIDE,L337UZ	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: EPRCB3995VZ Permit Version: 1 Receiving Water: 2 OUTLETS 2 WATERCOURSES	Status: REVOKED UNDER EPR 2010 Issue date: 14/09/2015 Effective Date: 14/09/2015 Revocation Date: 13/06/2016

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0
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Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m	0
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Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	2
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Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Name	Status	Receiving Water	Authorised Substances
I	280m E	Syntor Fine Chemicals, Knowsley Industrial L33 7uz	Active	Stw Partcons	Hexachlorocyclohexane, para-para-DDT, Pentachlorophenol, Aldrin, Dieldrin, Endrin, Isodrin, Hexachlorobenzene, Hexachlorobutadiene, Total DDT
I	280m E	Syntor Fine Chemicals, Knowsley Industrial L33 7uz	Active	Stw Partcons	Mercury (other), Cadmium, Carbon tetrachloride, Chloroform, 1,2-dichloroethane, Trichloroethylene, Perchloroethylene, Trichlorobenzene

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

4.17 List 2 Dangerous Substances

Records within 500m	4
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Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Name	Status	Receiving Water	Authorised Substances
D	151m E	Nipa Laboratories Ltd, Woodyard Road	Not Active	River Alt	Toluene
D	151m E	Archimica Ltd, Knowsley Industrial Park	Not Active	-	Toluene
D	151m E	Organic Intermediates, Knowsley Industrial	Not Active	-	Toluene, Xylene
I	280m E	Syntor Fine Chemicals, Knowsley Industrial L33 7uz	Active	-	Toluene, Xylene

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	7
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Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Details	
D	109m E	Incident Date: 08/11/2002 Incident Identification: 119566 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
F	193m SW	Incident Date: 07/08/2003 Incident Identification: 179912 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
5	222m NE	Incident Date: 08/03/2002 Incident Identification: 62620 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other Animal Matter	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)



ID	Location	Details	
9	316m E	Incident Date: 07/08/2001 Incident Identification: 22482 Pollutant: Inorganic Chemicals/Products Pollutant Description: Other Inorganic Chemical or Product	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
L	356m N	Incident Date: 18/03/2002 Incident Identification: 64817 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
M	400m S	Incident Date: 18/08/2003 Incident Identification: 182970 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
11	435m E	Incident Date: 17/07/2002 Incident Identification: 92300 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m

0

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

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

4.20 Pollution inventory waste transfers

Records within 500m

1

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

Features are displayed on the Current industrial land use map on [page 42 >](#)



ID: O, Location: 389m SE, Permit: KP3436NL
 Operator: Srcl Limited
 Activity: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING PHYSICO-CHEMICAL TREATMENT
 Address: SRCL Knowsley Treatment and Transfer Station Bradman Road L33 7UR
 Sector: Waste Treatment, Sub-sector: Hazardous Waste
 Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D1	Deposit into or onto land (eg landfill, etc.)	876.77	Absolute Value	18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)	No
D10	Incineration on Land	5.62	Absolute Value	18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)	No
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	8.68	Absolute Value	18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	296.83	Absolute Value	18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)	No
D10	Incineration on Land	86.92	Absolute Value	18 01 09	medicines other than those mentioned in 18 01 08	No
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	101.64	Absolute Value	18 01 09	medicines other than those mentioned in 18 01 08	No
D10	Incineration on Land	17.62	Absolute Value	18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection	No



Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D10	Incineration on Land	14.44	Absolute Value	18 02 08	medicines other than those mentioned in 18 02 07	No
R3	Recycling/Reclamation of organic substances which are not used as solvents (including composting and other biological transformatin processes)	7681	Absolute Value	19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09	No
R1	Use principally as a fuel or other means to generate energy	2241.62	Absolute Value	19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09	No
D10	Incineration on Land	8.75	Absolute Value	20 01 32	medicines other than those mentioned in 20 01 31	No
D10	Incineration on Land	5.17	Absolute Value	20 01 99	other fractions not otherwise specified	No
D1	Deposit into or onto land (eg landfill, etc.)	234.28	Absolute Value	18 01 03	wastes whose collection and disposal is subject to special requirements in order to prevent infection	Yes
D9	Physio-chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations numberes D1 to D12 (eg evaporation, drying, calcination, etc.)	45.7	Absolute Value	18 01 03	wastes whose collection and disposal is subject to special requirements in order to prevent infection	Yes
D10	Incineration on Land	1444.68	Absolute Value	18 01 03	wastes whose collection and disposal is subject to special requirements in order to prevent infection	Yes
D10	Incineration on Land	99.1	Absolute Value	18 01 08	cytotoxic and cytostatic medicines	Yes
D10	Incineration on Land	27.15	Absolute Value	18 02 02	wastes whose collection and disposal is subject to special requirements in order to prevent infection	Yes

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



4.21 Pollution inventory radioactive waste

Records within 500m

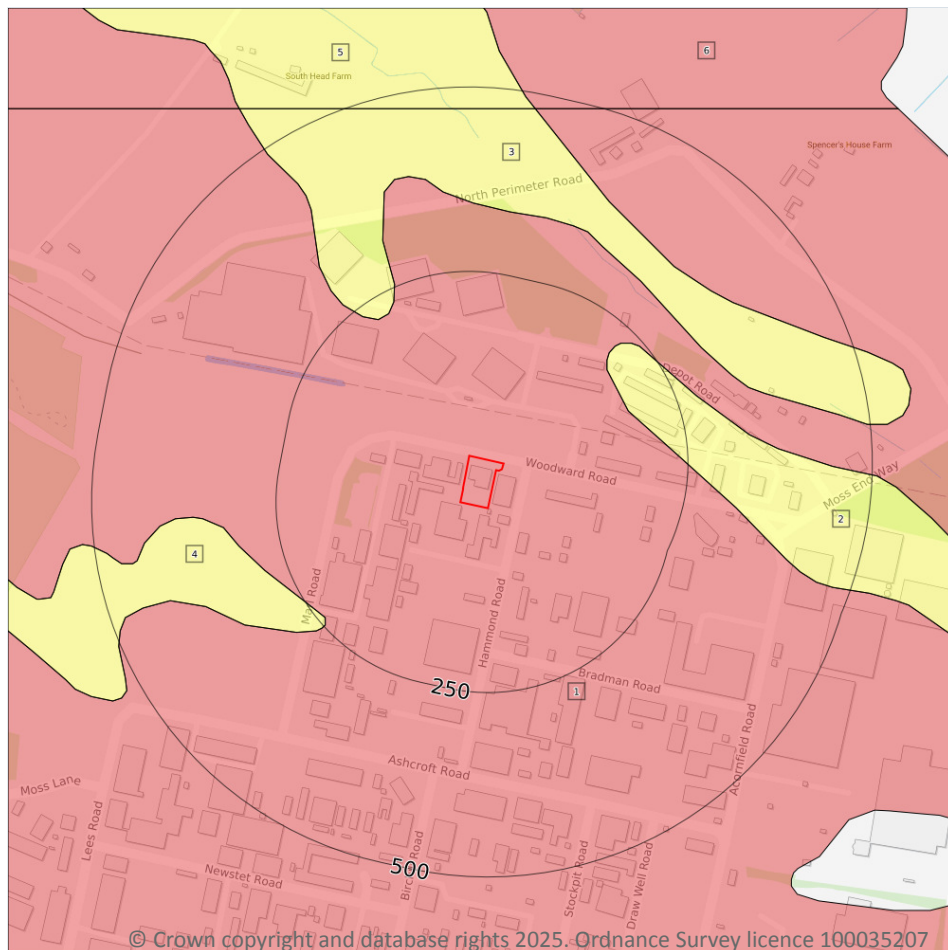
0

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

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



5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

6

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 70 >](#)

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	183m NE	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

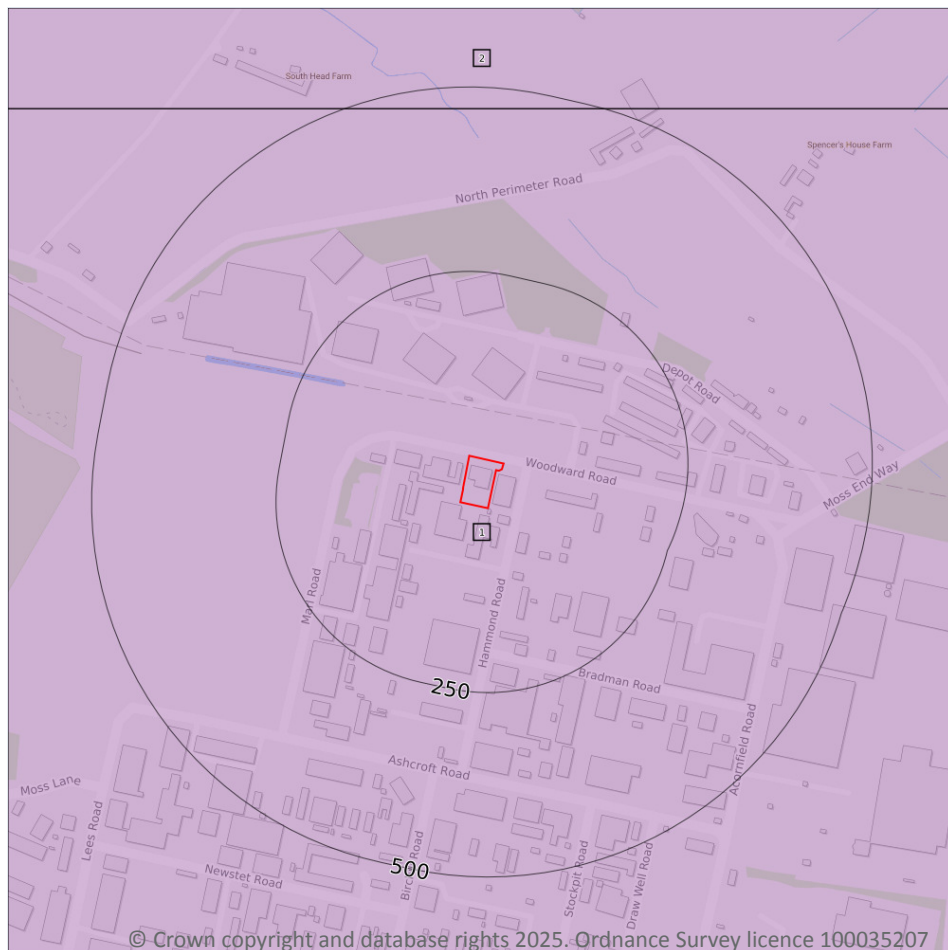


ID	Location	Designation	Description
3	221m NW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	241m SW	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
5	471m 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
6	479m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 72 >](#)

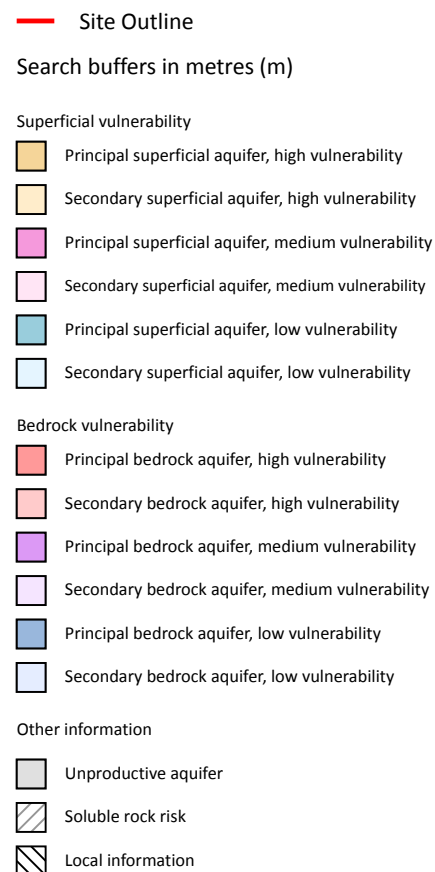
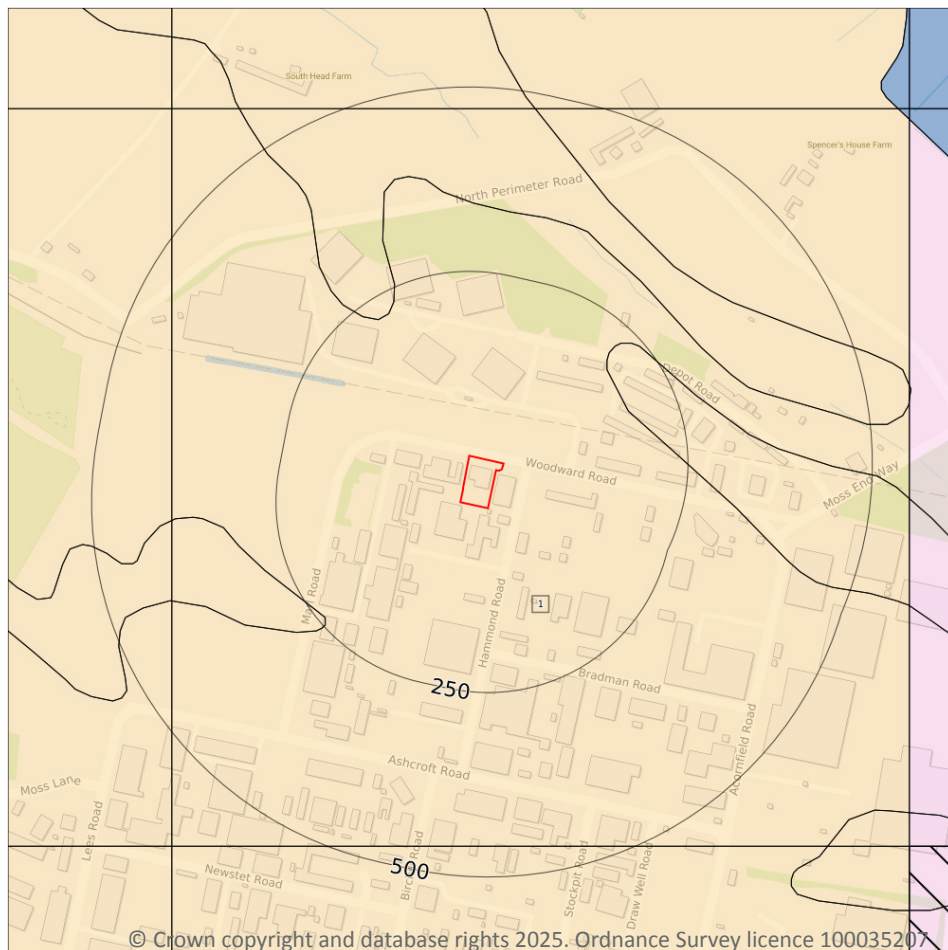
ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	471m N	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers



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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

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

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

Features are displayed on the Groundwater vulnerability map on [page 74 >](#)

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed

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

5.4 Groundwater vulnerability- soluble rock risk

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

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

5.5 Groundwater vulnerability- local information

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

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

Abstractions and Source Protection Zones



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

5.6 Groundwater abstractions

Records within 2000m

41

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 76 >](#)

ID	Location	Details	
A	436m SW	Status: Historical Licence No: 2569031146 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: SONAE BOREHOLE, KNOWSLEY, MERSEYSIDE Data Type: Point Name: Sonae (UK) Limited Easting: 342984 Northing: 399310	Annual Volume (m ³): 129600 Max Daily Volume (m ³): 356.53 Original Application No: - Original Start Date: 17/10/2008 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 17/10/2008 Version End Date: -
A	436m SW	Status: Historical Licence No: 2569031146 Details: Process Water Direct Source: Ground Water - North West Region Point: SONAE BOREHOLE, KNOWSLEY, MERSEYSIDE Data Type: Point Name: Sonae (UK) Limited Easting: 342984 Northing: 399310	Annual Volume (m ³): 129600 Max Daily Volume (m ³): 356.53 Original Application No: - Original Start Date: 17/10/2008 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 17/10/2008 Version End Date: -
A	436m SW	Status: Historical Licence No: 2569031146 Details: Dust Suppression Direct Source: Ground Water - North West Region Point: SONAE BOREHOLE, KNOWSLEY, MERSEYSIDE Data Type: Point Name: Sonae (UK) Limited Easting: 342984 Northing: 399310	Annual Volume (m ³): 129600 Max Daily Volume (m ³): 356.53 Original Application No: - Original Start Date: 17/10/2008 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 17/10/2008 Version End Date: -
B	658m SE	Status: Historical Licence No: 2569031011 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT KIRKBY INDUSTRIAL ESTATE KIRKBY, MERSEYSIDE" Data Type: Point Name: PILKINGTON BROTHERS LTD Easting: 343900 Northing: 399000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/01/1966 Version End Date: -
B	658m SE	Status: Historical Licence No: 2569031011 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT KIRKBY INDUSTRIAL ESTATE KIRKBY, MERSEYSIDE" Data Type: Point Name: PILKINGTON BROTHERS LTD Easting: 343900 Northing: 399000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/01/1966 Version End Date: -



ID	Location	Details	
B	658m SE	Status: Historical Licence No: 2569031011 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE KIRKBY, MERSEYSIDE Data Type: Point Name: PILKINGTON BROTHERS LTD Easting: 343900 Northing: 399000	Annual Volume (m ³): 1591135 Max Daily Volume (m ³): 5237.11 Original Application No: - Original Start Date: 28/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/01/1966 Version End Date: -
B	658m SE	Status: Historical Licence No: 2569031011 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE KIRKBY, MERSEYSIDE Data Type: Point Name: PILKINGTON BROTHERS LTD Easting: 343900 Northing: 399000	Annual Volume (m ³): 1591135 Max Daily Volume (m ³): 5237.11 Original Application No: - Original Start Date: 28/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/01/1966 Version End Date: -
-	722m SW	Status: Active Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY 2 Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342734 Northing: 399168	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: NPS/WR/027992 Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	756m SE	Status: Active Licence No: 2569031089 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: AMES GOLDSMITH UK LTD Easting: 343800 Northing: 398800	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 340.95 Original Application No: NPS/WR/023235 Original Start Date: 01/07/1988 Expiry Date: - Issue No: 102 Version Start Date: 26/07/2016 Version End Date: -



ID	Location	Details	
-	756m SE	Status: Historical Licence No: 2569031089 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: AMES GOLDSMITH UK LTD Easting: 343800 Northing: 398800	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 340.95 Original Application No: - Original Start Date: 01/07/1988 Expiry Date: - Issue No: 101 Version Start Date: 10/11/2006 Version End Date: -
-	759m S	Status: Active Licence No: 2569031090 Details: Boiler Feed Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 20/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	759m S	Status: Active Licence No: 2569031090 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 20/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	759m S	Status: Active Licence No: 2569031090 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 20/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -



ID	Location	Details	
-	1276m SW	Status: Active Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: NPS/WR/027992 Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	1276m SW	Status: Active Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: NPS/WR/027992 Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	1276m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 432 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 2 Version Start Date: 23/10/2014 Version End Date: -
-	1276m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -

ID	Location	Details	
-	1276m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY Data Type: Point Name: Liverpool Football Club & Athletic Grounds Limited Easting: 342445 Northing: 398610	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 792 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 3 Version Start Date: 19/11/2019 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLE ""B""AT KIRKBY" Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE ""B""AT KIRKBY" Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE "B"AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -

ID	Location	Details	
-	1293m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE "B" AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE B AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE B AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342460 Northing: 398570	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE A AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE ""A"" AT KIRKBY" Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -



ID	Location	Details	
-	1293m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLE ""A""AT KIRKBY" Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE "A"AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE "A"AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1293m SW	Status: Historical Licence No: 2569031131 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE A AT KIRKBY Data Type: Point Name: LIVERPOOL FOOTBALL CLUB SOCCER ACADEMY Easting: 342450 Northing: 398580	Annual Volume (m ³): 150000 Max Daily Volume (m ³): 600 Original Application No: - Original Start Date: 28/09/1999 Expiry Date: - Issue No: 1 Version Start Date: 28/09/1999 Version End Date: -
-	1374m N	Status: Historical Licence No: 2569031137 Details: Dust Suppression Direct Source: Ground Water - North West Region Point: PERMO TRIASSIC SANDSTONE AT SIMONSWOOD Data Type: Point Name: CITY CENTRE COMMERCIALS LTD Easting: 343750 Northing: 400860	Annual Volume (m ³): 7000 Max Daily Volume (m ³): 39 Original Application No: - Original Start Date: 09/10/2001 Expiry Date: - Issue No: 1 Version Start Date: 01/04/2008 Version End Date: -



ID	Location	Details	
-	1478m N	Status: Active Licence No: 2569031122 Details: Dust Suppression Direct Source: Ground Water - North West Region Point: UNDERGROUND STRATA IN SIMONSWOOD LIVERPOOL Data Type: Point Name: Simonswood Properties Limited Easting: 343820 Northing: 400950	Annual Volume (m ³): 12000 Max Daily Volume (m ³): 100 Original Application No: NPS/WR/030055 Original Start Date: 12/08/1996 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2021 Version End Date: -
-	1484m N	Status: Active Licence No: 2569031095 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT STOPGATE LANE, SIMONSWOOD, KIRKBY Data Type: Point Name: Simonswood Properties Limited Easting: 343600 Northing: 401000	Annual Volume (m ³): 4546 Max Daily Volume (m ³): 113.65 Original Application No: NPS/WR/030056 Original Start Date: 04/11/1991 Expiry Date: - Issue No: 102 Version Start Date: 18/12/2018 Version End Date: -
-	1484m N	Status: Historical Licence No: 2569031095 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLE AT STOPGATE LANE,SIMONSWOOD KIRKBY" Data Type: Point Name: EAGERSIGNAL LTD. Easting: 343600 Northing: 401000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/11/1991 Expiry Date: - Issue No: 101 Version Start Date: 01/12/1999 Version End Date: -
-	1484m N	Status: Historical Licence No: 2569031095 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT STOPGATE LANE,SIMONSWOOD KIRKBY Data Type: Point Name: EAGERSIGNAL LTD. Easting: 343600 Northing: 401000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/11/1991 Expiry Date: - Issue No: 101 Version Start Date: 01/12/1999 Version End Date: -



ID	Location	Details	
-	1522m N	Status: Historical Licence No: 2569031122 Details: Dust suppression Direct Source: Ground Water - North West Region Point: UNDERGROUND STRATA IN SIMONSWOOD LIVERPOOL Data Type: Point Name: S J DOYLE & COMPANY DEMOLITION LTD Easting: 343800 Northing: 401000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 12/08/1996 Expiry Date: - Issue No: 100 Version Start Date: 12/08/1996 Version End Date: -
-	1522m N	Status: Historical Licence No: 2569031122 Details: Dust Suppression Direct Source: Ground Water - North West Region Point: UNDERGROUND STRATA IN SIMONSWOOD LIVERPOOL Data Type: Point Name: Simonswood Properties Limited Easting: 343800 Northing: 401000	Annual Volume (m ³): 12000 Max Daily Volume (m ³): 100 Original Application No: - Original Start Date: 12/08/1996 Expiry Date: - Issue No: 101 Version Start Date: 18/12/2018 Version End Date: -
-	1640m N	Status: Active Licence No: NW/069/0031/008 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE - SHERWOOD SANDTONE - SIMONSWOOD Data Type: Point Name: United Utilities Water Ltd Easting: 343580 Northing: 401160	Annual Volume (m ³): 1464000 Max Daily Volume (m ³): 8000 Original Application No: NPS/WR/010887 Original Start Date: 09/11/2017 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 26/11/2018 Version End Date: -
-	1802m N	Status: Active Licence No: 2569031093 Details: Dust Suppression Direct Source: Ground Water - North West Region Point: BOREHOLE AT NEWBRIDGE FARM, SIMONSWOOD Data Type: Point Name: R DRAPER LTD Easting: 344100 Northing: 401200	Annual Volume (m ³): 36368 Max Daily Volume (m ³): 100 Original Application No: C2813 FV2 Original Start Date: 12/06/1991 Expiry Date: - Issue No: 101 Version Start Date: 12/12/2005 Version End Date: -



ID	Location	Details	
-	1802m N	Status: Active Licence No: 2569031093 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT NEWBRIDGE FARM, SIMONSWOOD Data Type: Point Name: R DRAPER LTD Easting: 344100 Northing: 401200	Annual Volume (m ³): 36368 Max Daily Volume (m ³): 100 Original Application No: C2813 FV2 Original Start Date: 12/06/1991 Expiry Date: - Issue No: 101 Version Start Date: 12/12/2005 Version End Date: -
-	1802m N	Status: Historical Licence No: 2569031093 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT NEWBRIDGE FARM, SIMONSWOOD" Data Type: Point Name: R DRAPER LTD Easting: 344100 Northing: 401200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 12/06/1991 Expiry Date: - Issue No: 100 Version Start Date: 02/08/1996 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	5
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Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 76 >](#)

ID	Location	Details	
-	661m E	Status: Historical Licence No: 2569031068 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: UNNAMED TRIB OF SIMONSWOOD BRK AT KIRKBY Data Type: Line Name: BERRY BROS FARMS LTD Easting: 344100 Northing: 399400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/06/1984 Expiry Date: - Issue No: 100 Version Start Date: 14/06/1984 Version End Date: -



ID	Location	Details	
-	661m E	Status: Historical Licence No: 2569031068 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: UNNAMED TRIBUTARY OF SIMONSWOOD BROOK AT KIRKBY Data Type: Line Name: BERRY BROS FARMS LTD Easting: 344100 Northing: 399400	Annual Volume (m ³): 45460 Max Daily Volume (m ³): 1000.12 Original Application No: 2668 Original Start Date: 14/06/1984 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2021 Version End Date: -
-	1873m N	Status: Historical Licence No: 2569031048 Details: Spray Irrigation - Direct Direct Source: "Surface, Non-Tidal - North West Region" Point: "SIMONSWOOD BRK AT DAIRY FARM, RAINFORD, ST HELENS," Data Type: Line Name: B HEYES & SON Easting: 343500 Northing: 401400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/08/1980 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1990 Version End Date: -
-	1873m N	Status: Historical Licence No: 2569031048 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: SIMONSWOOD BRK AT DAIRY FARM, RAINFORD, ST HELENS Data Type: Line Name: B HEYES & SON Easting: 343500 Northing: 401400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/08/1980 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1990 Version End Date: -
-	1873m N	Status: Historical Licence No: 2569031048 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: SIMONSWOOD BROOK AT DAIRY FARM RAINFORD ST HELENS Data Type: Line Name: B HEYES & SON Easting: 343500 Northing: 401400	Annual Volume (m ³): 100157.472 Max Daily Volume (m ³): 654.624 Original Application No: - Original Start Date: 14/08/1980 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1990 Version End Date: -

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



5.8 Potable abstractions

Records within 2000m

2

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 76 >](#)

ID	Location	Details	
-	759m S	Status: Active Licence No: 2569031090 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT KIRKBY INDUSTRIAL ESTATE Data Type: Point Name: Baker Hughes Limited Easting: 343400 Northing: 398700	Annual Volume (m ³): 250030 Max Daily Volume (m ³): 818.28 Original Application No: NPS/WR/006045 Original Start Date: 20/01/1989 Expiry Date: - Issue No: 101 Version Start Date: 18/03/2011 Version End Date: -
-	1640m N	Status: Active Licence No: NW/069/0031/008 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE - SHERWOOD SANDTONE - SIMONSWOOD Data Type: Point Name: United Utilities Water Ltd Easting: 343580 Northing: 401160	Annual Volume (m ³): 1464000 Max Daily Volume (m ³): 8000 Original Application No: NPS/WR/010887 Original Start Date: 09/11/2017 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 26/11/2018 Version End Date: -

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

5.9 Source Protection Zones

Records within 500m

1

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 76 >](#)

ID	Location	Type	Description
1	On site	3	Total catchment

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



5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

1

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



Features are displayed on the Hydrology map on [page 90 >](#)

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1
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The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on [page 90 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Simonswood Brook	GB112069060630	Alt	Alt and Crossens

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

6.4 WFD Surface water bodies

Records identified	1
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Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 90 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1866m N	River	Simonswood Brook	GB112069060630 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site

1

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

Features are displayed on the Hydrology map on [page 90](#) >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Lower Mersey Basin and North Merseyside Permo-Triassic Sandstone Aquifers	GB41201G101700 ↗	Poor	Poor	Poor	2019

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



7 River and coastal flooding



— Site Outline
Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m

2

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

Features are displayed on the River and coastal flooding map on [page 93](#) >

Distance	Flood risk category
On site	Medium
0 - 50m	Medium

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

7.2 Historical Flood Events

Records within 250m	0
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Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

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

7.3 Flood Defences

Records within 250m	0
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Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0
----------------------------	----------

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

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

7.5 Flood Storage Areas

Records within 250m	0
----------------------------	----------

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

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

River and coastal flooding - Flood Zones



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

7.6 Flood Zone 2

Records within 50m

1

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

Features are displayed on the River and coastal flooding map on [page 93](#) >

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m

1

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

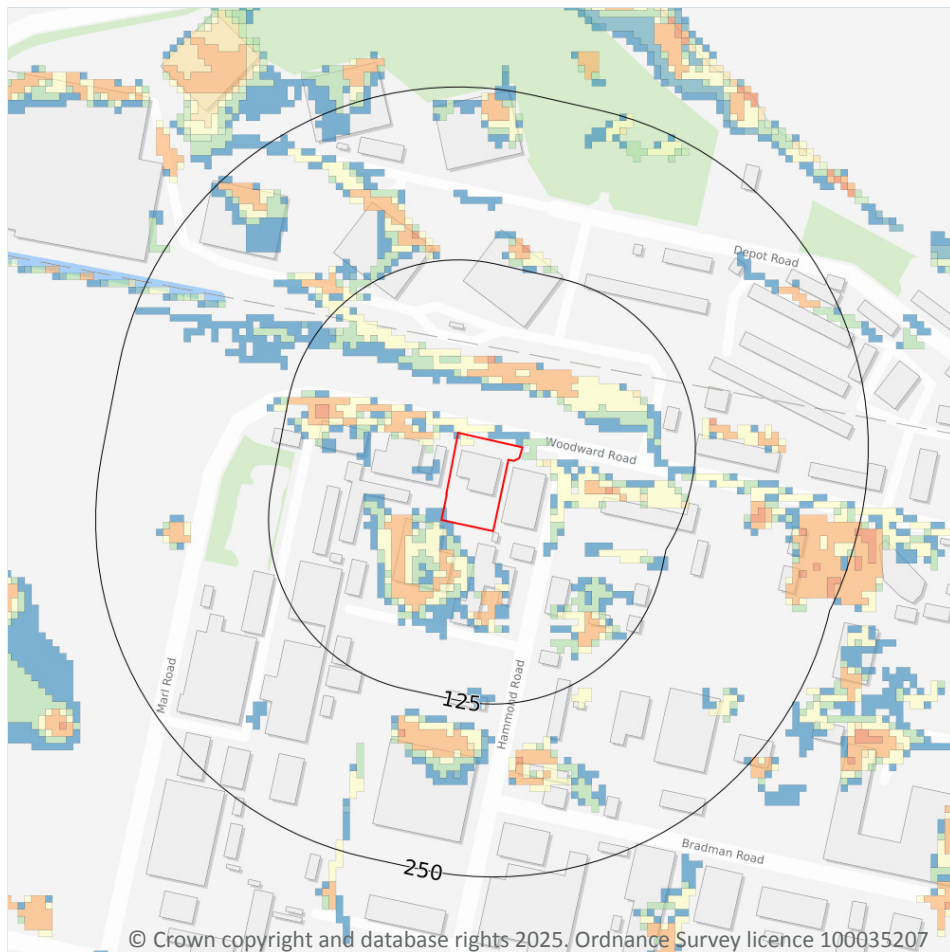
Features are displayed on the River and coastal flooding map on [page 93](#) >

Location	Type
On site	Zone 3 - (Fluvial Models)

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



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

1 in 100 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.1m - 0.3m

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

Features are displayed on the Surface water flooding map on [page 97 >](#)

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

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

Return period	Maximum modelled depth
1 in 1000 year	Between 0.1m and 0.3m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

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

9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

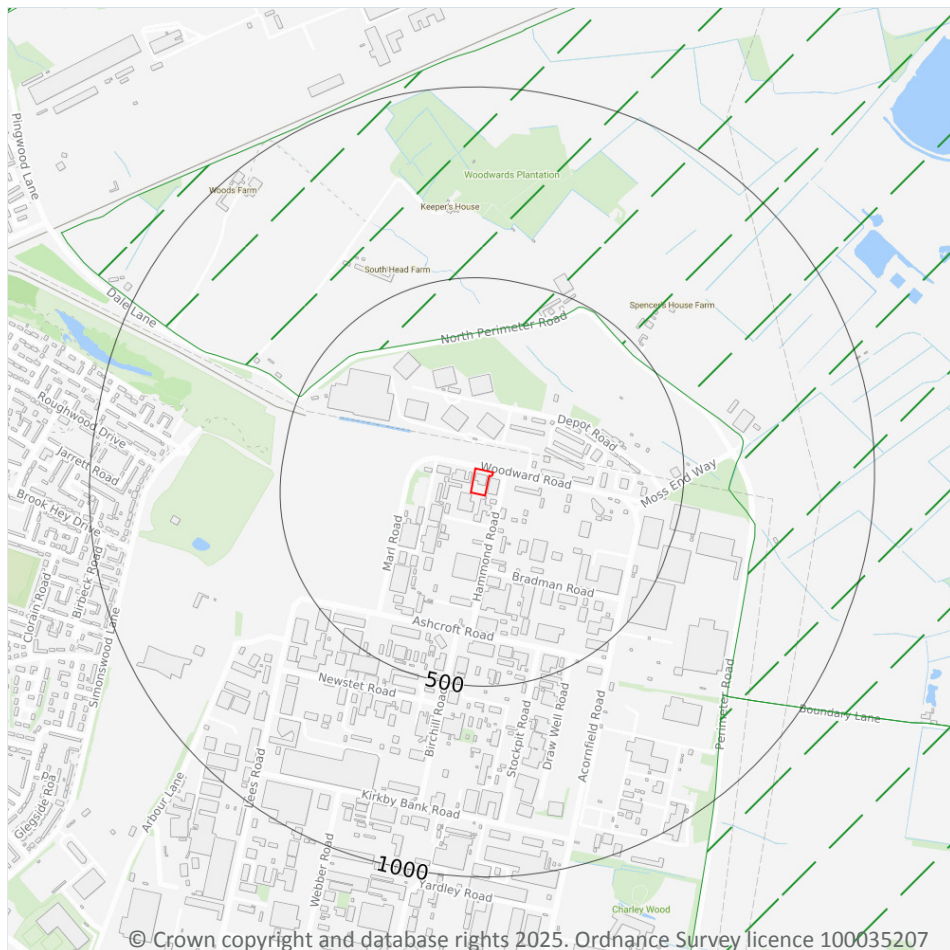
Low

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

Features are displayed on the Groundwater flooding map on [page 99](#) >

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



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

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 100 >](#)

ID	Location	Name	Data source
-	1442m S	Acornfield Plantation	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m

0

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

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

10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.



10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

3

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

Features are displayed on the Environmental designations map on [page 100](#) >

ID	Location	Name	Local Authority name
1	350m N	Merseyside and Greater Manchester Green Belt	West Lancashire
2	815m SE	Merseyside and Greater Manchester Green Belt	Knowsley
-	1954m E	Merseyside and Greater Manchester Green Belt	St. Helens

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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



10.14 Potential Special Protection Areas (pSPA)

Records within 2000m**0**

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m**0**

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m**2**

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

Location	Name	Type	NVZ ID	Status
On site	ALT NVZ	Surface Water	642	Existing
642m E	ALT NVZ	Surface Water	642	Existing

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



SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site

0

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

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

0

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

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



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

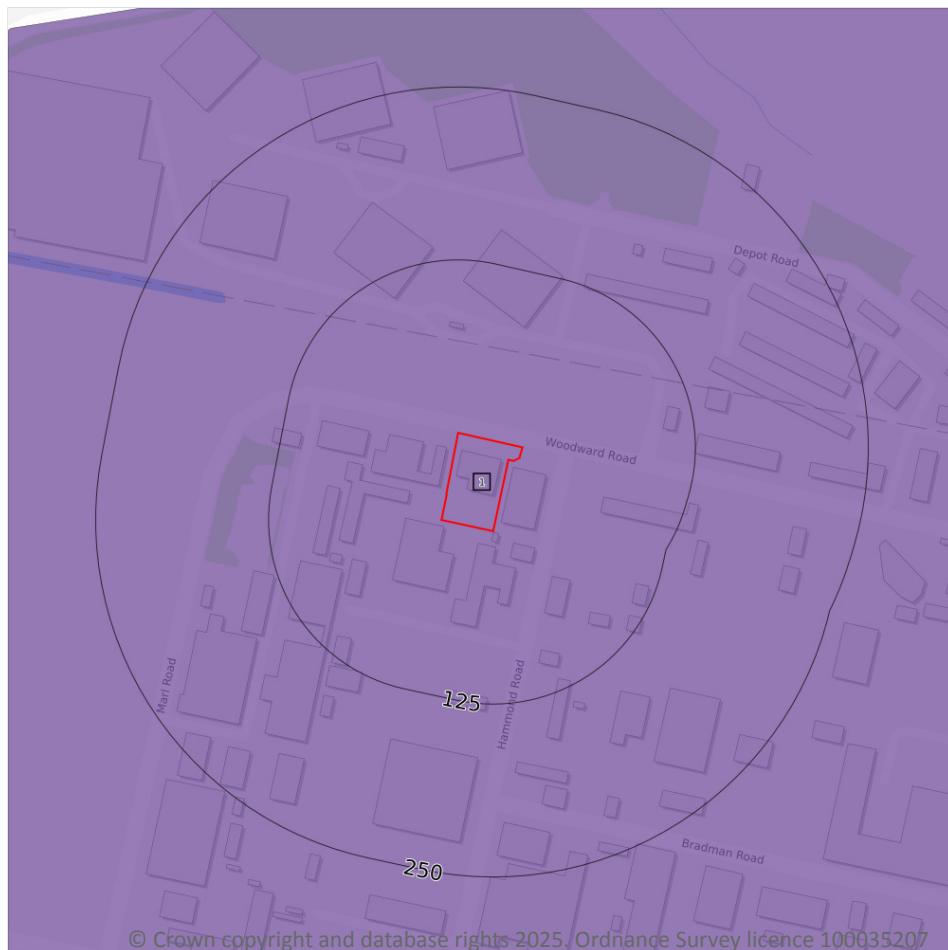
Records within 250m

0

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

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

12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

1

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

Features are displayed on the Agricultural designations map on [page 108](#) >

ID	Location	Classification	Description
1	On site	Urban	Non-agricultural/no quality assigned

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m

0

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

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

12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

13 Habitat designations



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

13.1 Priority Habitat Inventory

Records within 250m

1

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

Features are displayed on the Habitat designations map on [page 110](#) >

ID	Location	Main Habitat	Other habitats
1	218m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.



13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 112](#) >

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

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock

14.5 Bedrock geology (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

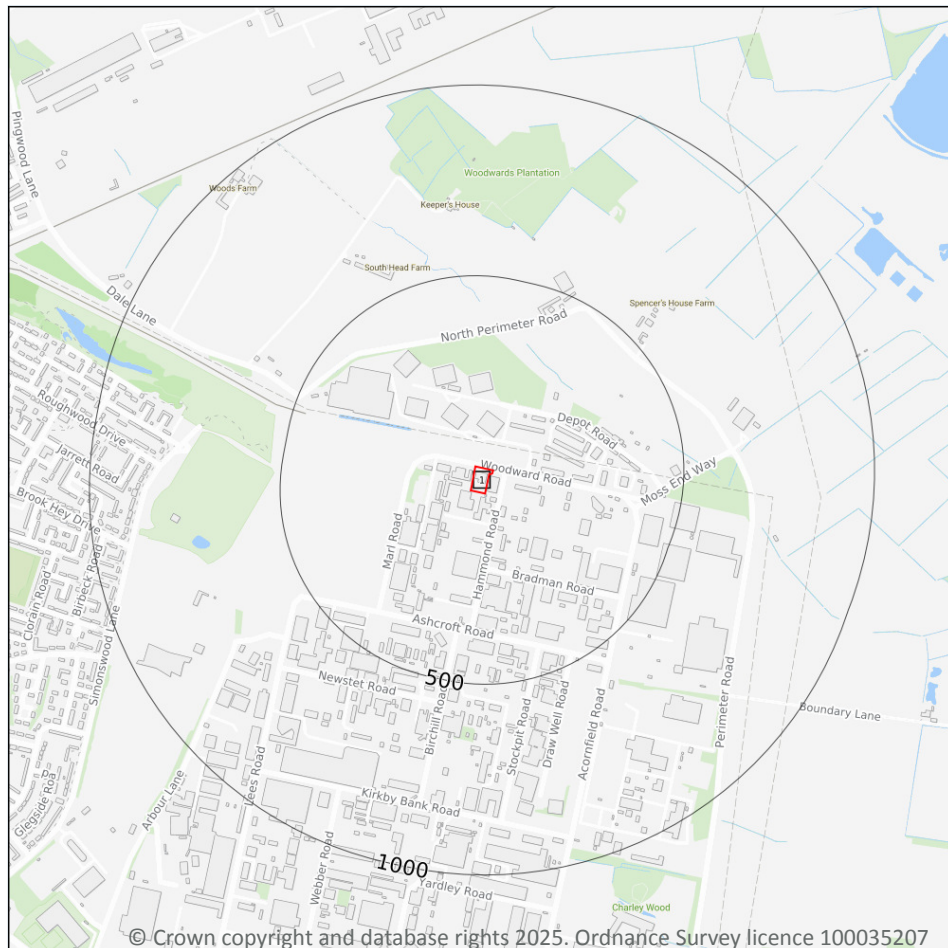
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Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

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

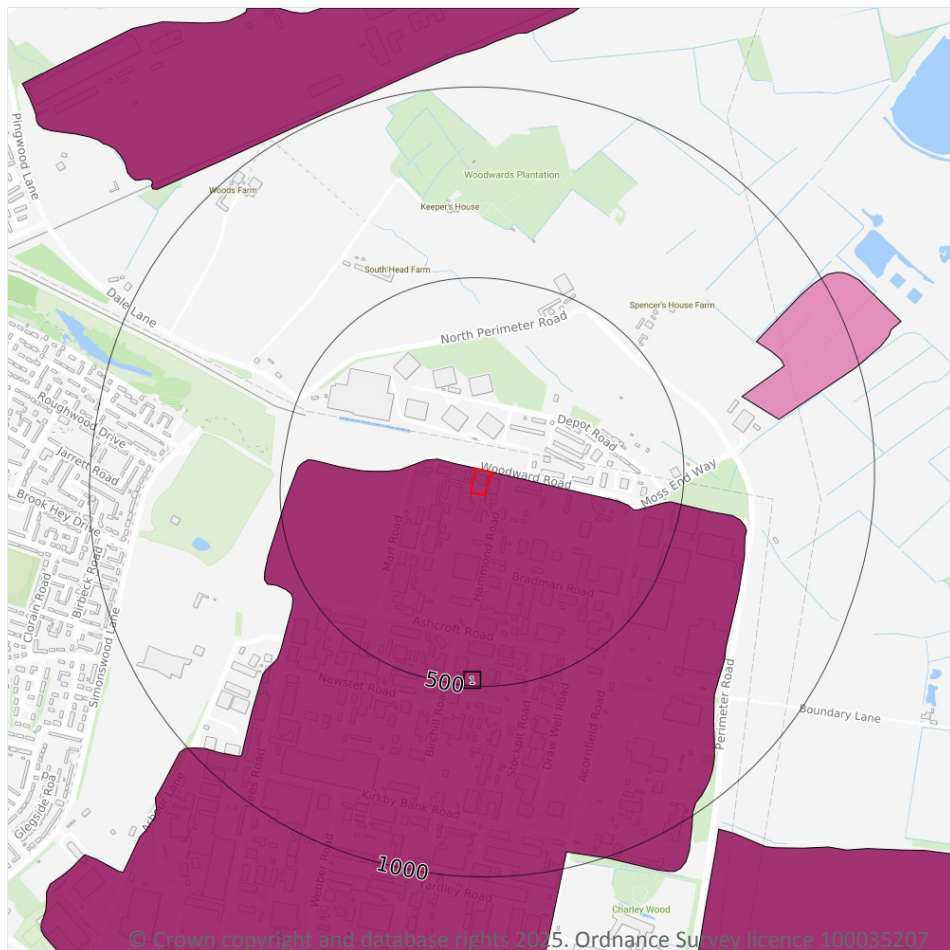
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 116](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW084_wigan_v4

This data is sourced from the British Geological Survey.



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



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

15.2 Artificial and made ground (50k)

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 117](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m

1

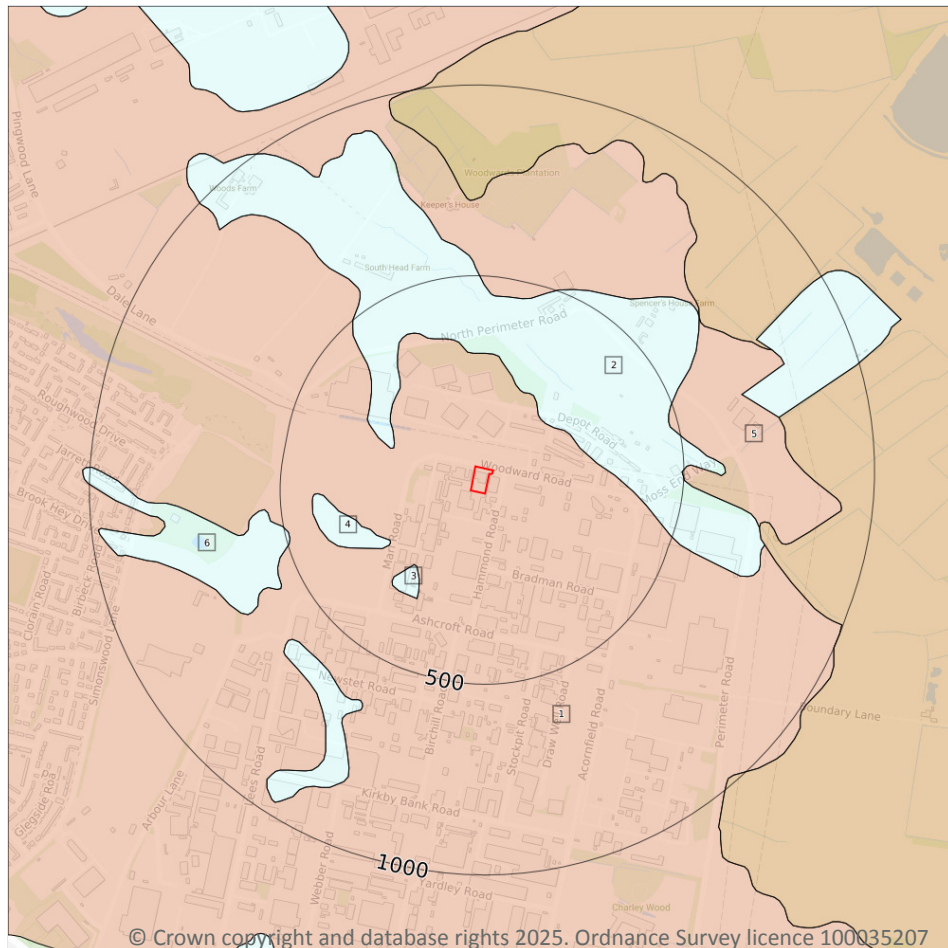
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

6

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 119](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	SSA-S	SHIRDLEY HILL SAND FORMATION	SAND
2	184m NE	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
3	244m SW	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
4	249m SW	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON



ID	Location	LEX Code	Description	Rock description
5	477m E	SSA-S	SHIRDLEY HILL SAND FORMATION	SAND
6	491m W	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

1

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	High

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

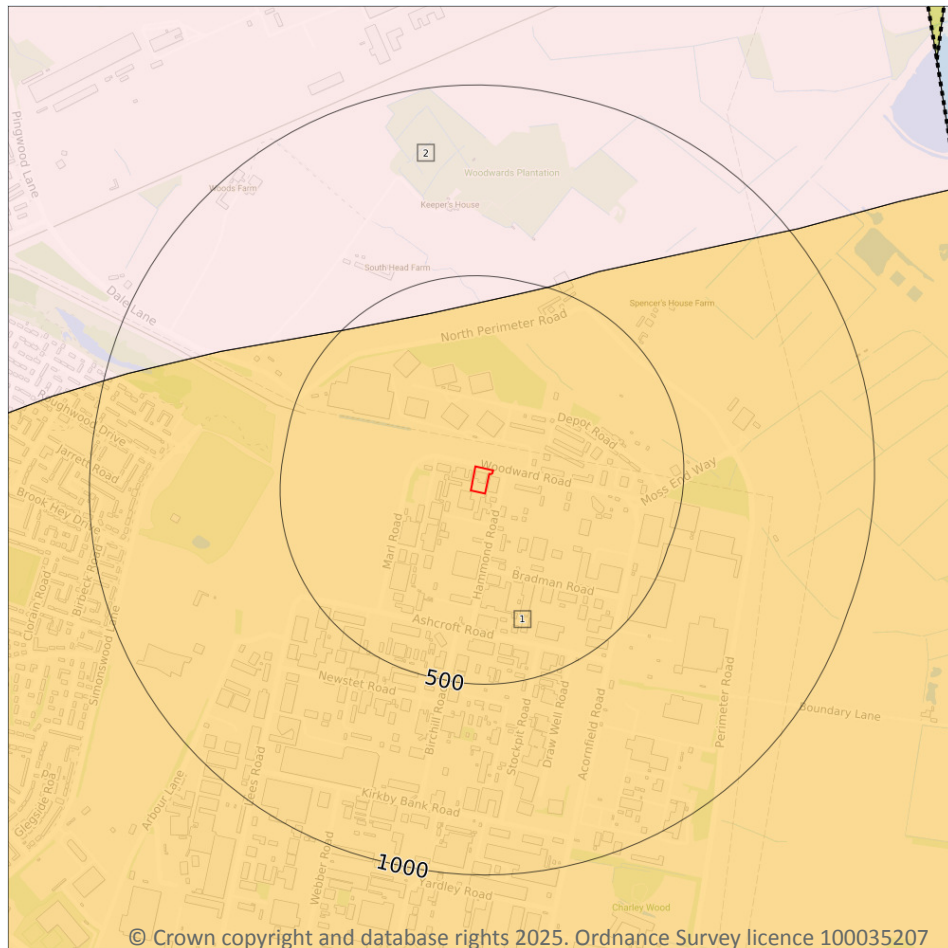
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

15.8 Bedrock geology (50k)

Records within 500m

2

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 121](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
2	417m N	WLSF-SDST	WILMSLOW SANDSTONE FORMATION - SANDSTONE	-

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m

1

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

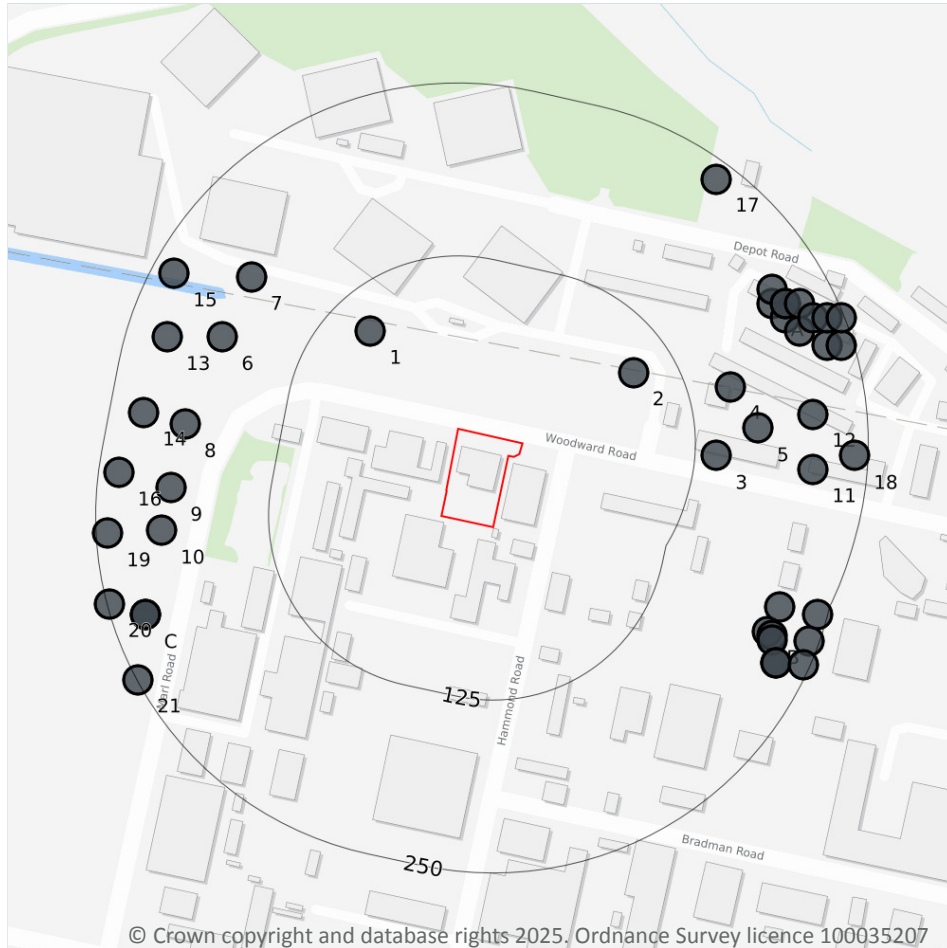
0

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

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m

44

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

Features are displayed on the Boreholes map on [page 123 >](#)

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	95m NW	343340 399600	MERSEYSIDE COUNCIL 4	-	Y	N/A
2	95m NE	343530 399570	MERSEYSIDE COUNCIL 5	-	Y	N/A
3	141m E	343590 399510	KNOWSLEY INDUSTRIAL PARK NORTH 9	-	Y	N/A

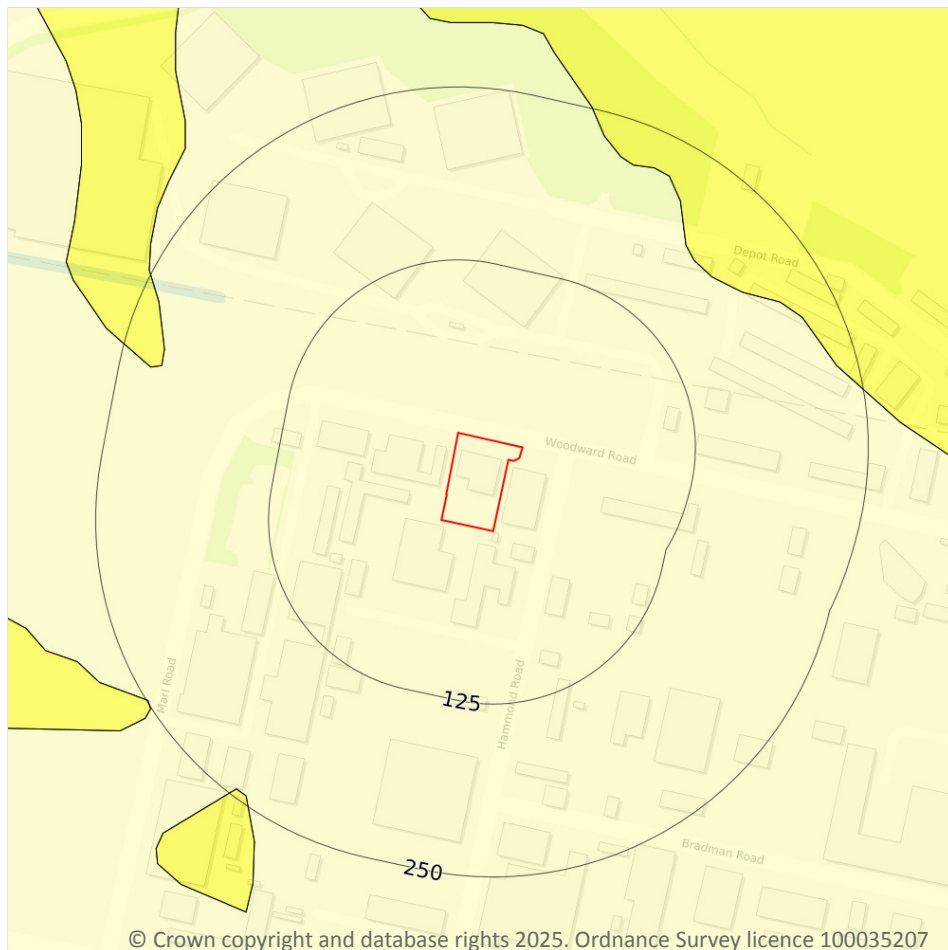
ID	Location	Grid reference	Name	Length	Confidential	Web link
4	156m E	343600 399560	KNOWSLEY INDUSTRIAL PARK NORTH 8	-	Y	N/A
5	171m E	343620 399530	KNOWSLEY INDUSTRIAL PARK NORTH 10	-	Y	N/A
6	183m NW	343233 399596	STAMFORD PARK 28	-	Y	N/A
7	185m NW	343254 399639	STAMFORD PARK 17	-	Y	N/A
8	194m W	343206 399533	STAMFORD PARK 37	-	Y	N/A
9	196m W	343196 399487	STAMFORD PARK 45	-	Y	N/A
10	203m W	343189 399456	STAMFORD PARK 52	-	Y	N/A
A	207m NE	343630 399620	NORTH MERSEY BUSINESS CENTRE 1	-	Y	N/A
A	211m NE	343640 399610	NORTH MERSEY BUSINESS CENTRE 3	-	Y	N/A
11	211m E	343660 399500	KNOWSLEY INDUSTRIAL PARK NORTH 12	-	Y	N/A
12	211m E	343660 399540	KNOWSLEY INDUSTRIAL PARK NORTH 11	-	Y	N/A
A	212m NE	343630 399630	NORTH MERSEY BUSINESS CENTRE TP 6	-	Y	N/A
B	212m SE	343627 399383	Syntor Knowsley Part 2a EWS502B	-	Y	N/A
B	215m SE	343636 399401	Syntor Knowsley Part 2a EWS501	-	Y	N/A
A	215m NE	343640 399620	NORTH MERSEY BUSINESS CENTRE TP 5	-	Y	N/A
A	215m NE	343640 399620	NORTH MERSEY BUSINESS CENTRE B	-	Y	N/A
A	216m NE	343650 399600	NORTH MERSEY BUSINESS CENTRE TP 4	-	Y	N/A
B	216m SE	343630 399380	Syntor Knowsley Part 2a EWS502	-	Y	N/A
B	217m SE	343630 399377	Syntor Knowsley Part 2a EWS502A	-	Y	N/A
13	221m NW	343193 399596	STAMFORD PARK 27	-	Y	N/A
A	224m NE	343650 399620	NORTH MERSEY BUSINESS CENTRE 2	-	Y	N/A
14	225m W	343176 399541	STAMFORD PARK 36	-	Y	N/A
C	226m SW	343177 399395	STAMFORD PARK 59	-	Y	N/A
C	226m SW	343177 399395	STAMFORD PARK 59A	-	Y	N/A
B	227m SE	343633 399360	Syntor Knowsley Part 2a EWS503	-	Y	N/A
B	227m SE	343633 399360	Syntor Knowsley Part 2a EWS503A	-	Y	N/A
A	229m NE	343660 399610	NORTH MERSEY BUSINESS CENTRE 4	-	Y	N/A
A	231m E	343670 399590	NORTH MERSEY BUSINESS CENTRE 6	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
15	234m NW	343198 399642	STAMFORD PARK 16	-	Y	N/A
16	235m W	343158 399498	STAMFORD PARK 44	-	Y	N/A
17	237m NE	343590 399710	MERSEYSIDE COUNCIL 9	-	Y	N/A
A	238m NE	343670 399610	NORTH MERSEY BUSINESS CENTRE TP 3	-	Y	N/A
18	240m E	343690 399510	KNOWSLEY INDUSTRIAL PARK NORTH 13	-	Y	N/A
A	241m E	343680 399590	NORTH MERSEY BUSINESS CENTRE TP 2	-	Y	N/A
19	242m W	343150 399454	STAMFORD PARK 51	-	Y	N/A
B	243m SE	343657 399376	Syntor Knowsley Part 2a EWS505	-	Y	N/A
B	243m E	343663 399395	Syntor Knowsley Part 2a EWS504	-	Y	N/A
B	245m SE	343653 399359	Syntor Knowsley Part 2a EWS506	-	Y	N/A
A	248m NE	343680 399610	NORTH MERSEY BUSINESS CENTRE 5	-	Y	N/A
20	249m W	343151 399403	STAMFORD PARK 58	-	Y	N/A
21	249m SW	343172 399348	STAMFORD PARK 66	-	Y	N/A

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

1

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

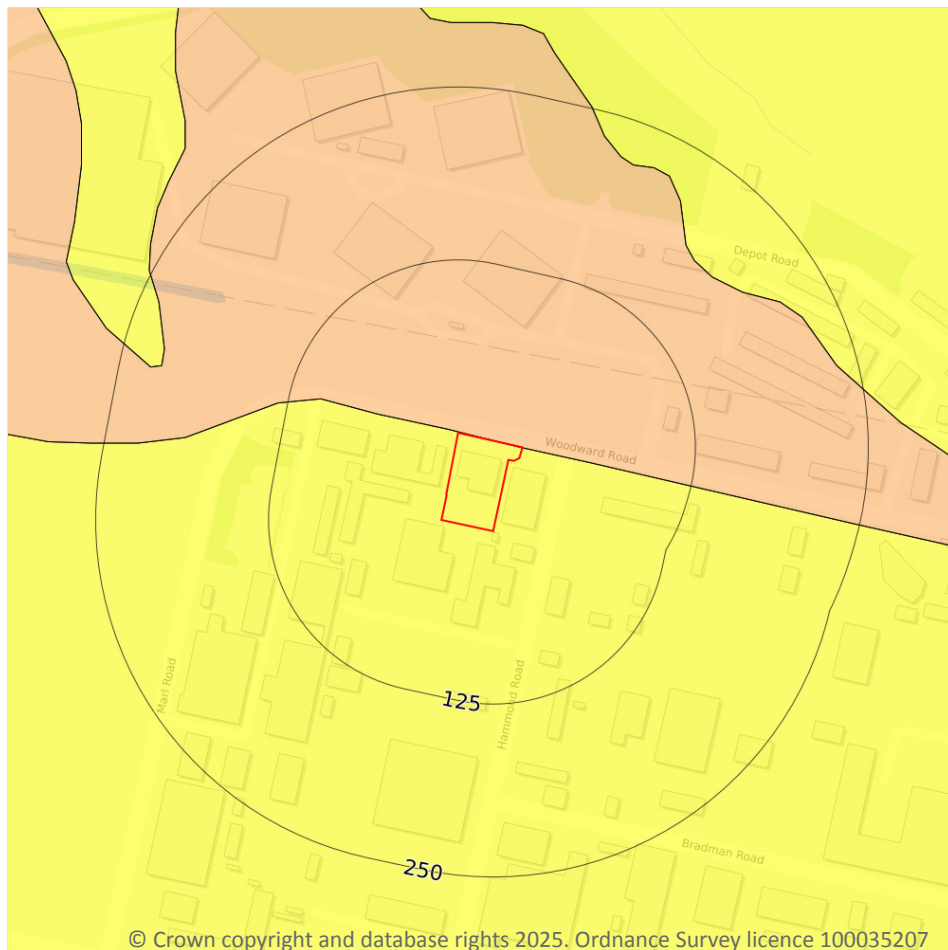
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 126 >](#)

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



— Site Outline
Search buffers in metres (m)

- ☐ No data
- ☐ Negligible
- ☐ Very low
- ☐ Low
- ☐ Moderate
- ☐ High

17.2 Running sands

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Running sands map on [page 127 >](#)

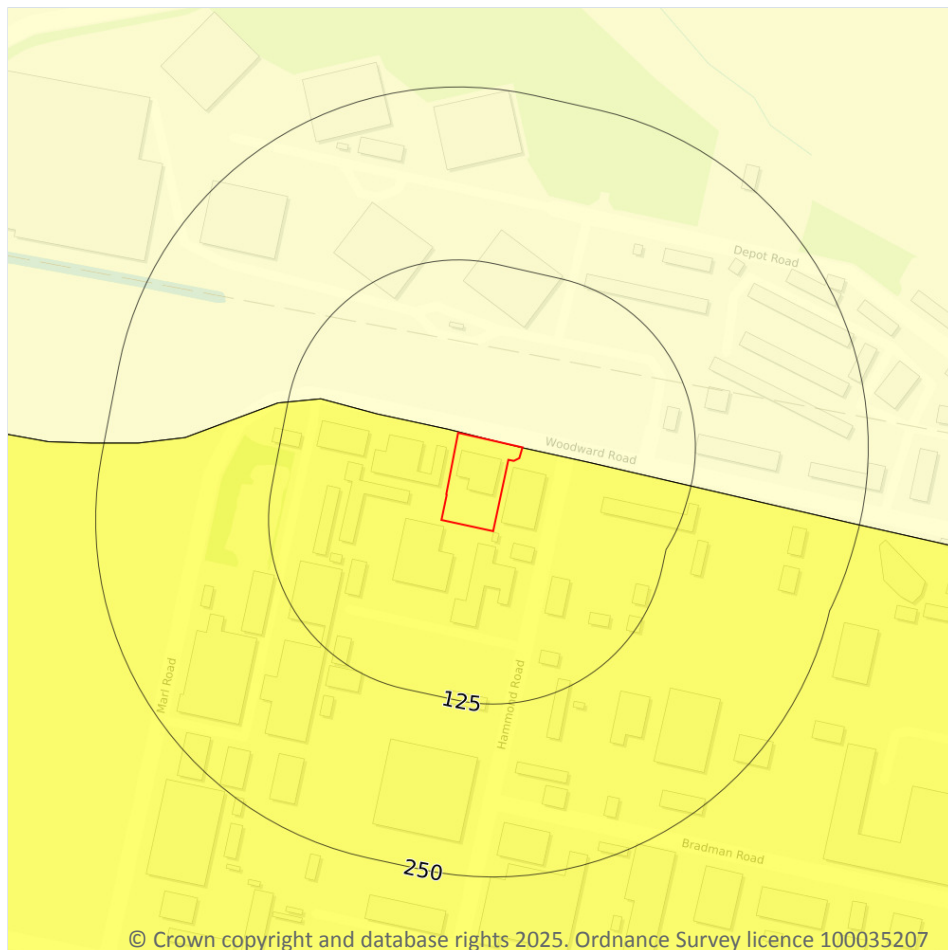
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

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17.3 Compressible deposits

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 129 >](#)

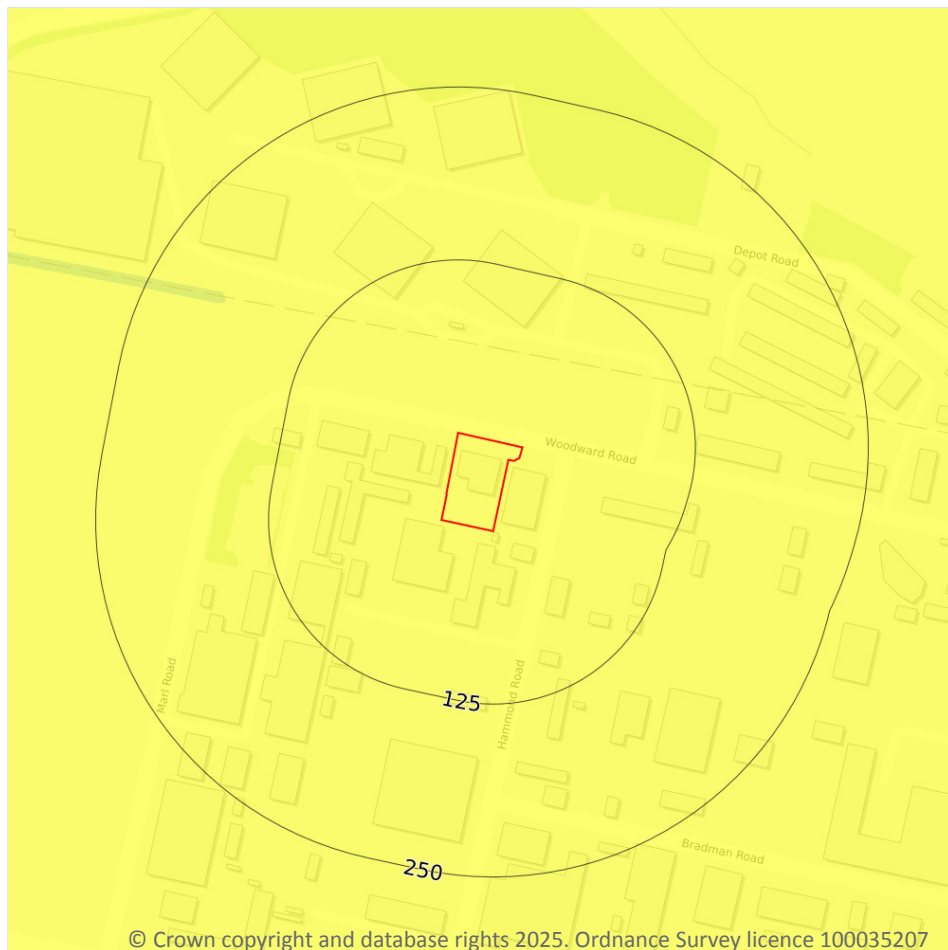
Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.



This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

1

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

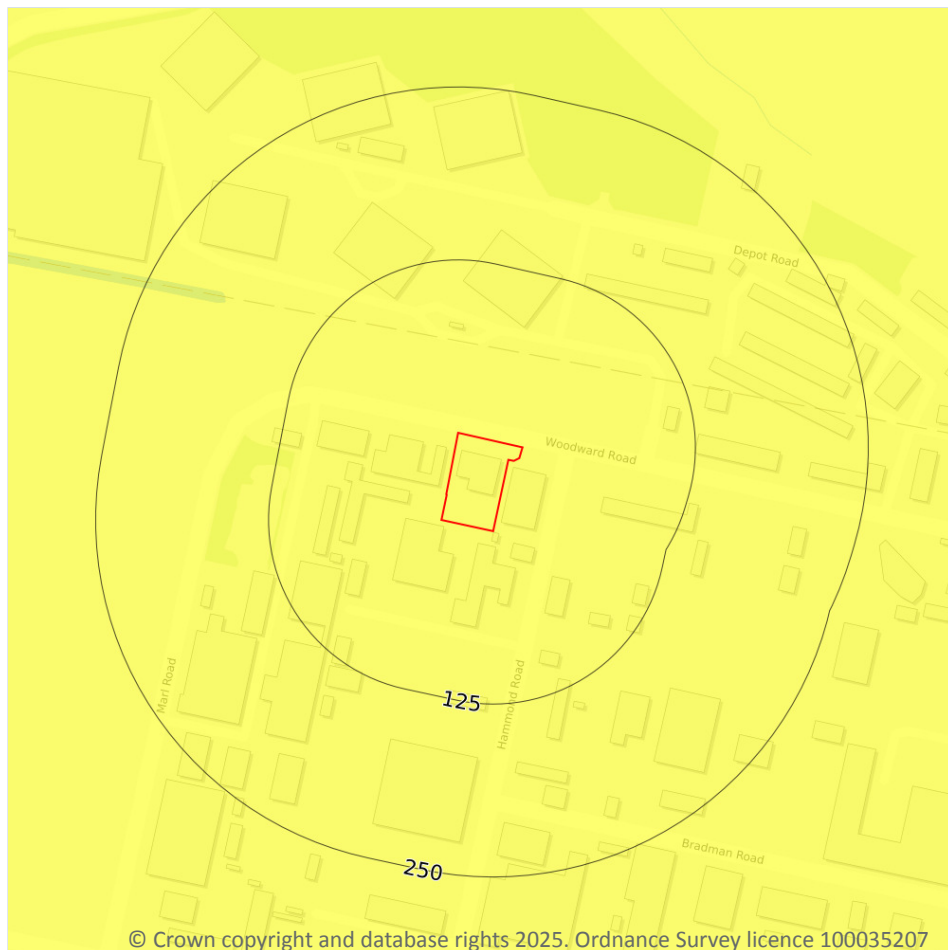
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 131](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



— Site Outline
Search buffers in metres (m)

- ☐ No data
- ☐ Negligible
- ☐ Very low
- ☐ Low
- ☐ Moderate
- ☐ High

17.5 Landslides

Records within 50m

1

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

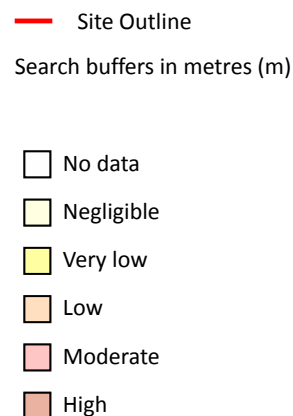
Features are displayed on the Natural ground subsidence - Landslides map on [page 132 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 133](#) >

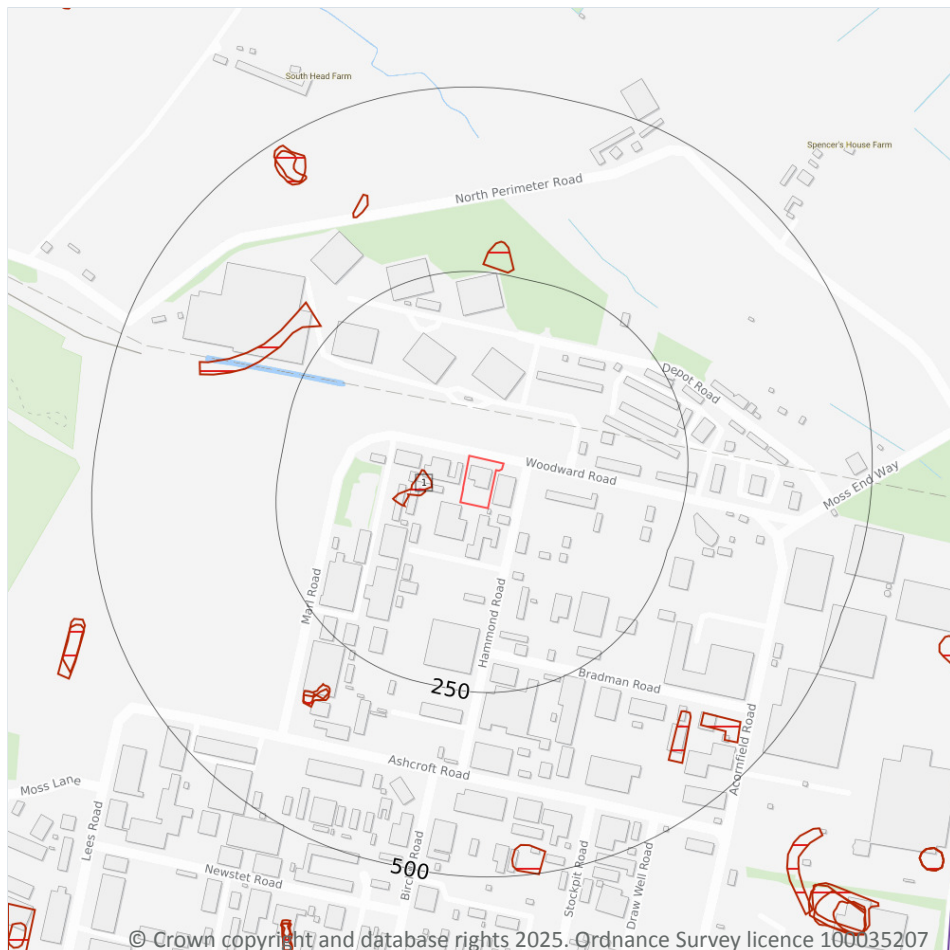
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



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

18.1 BritPits

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

1

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

Features are displayed on the Mining and ground workings map on [page 135 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
1	42m W	Ponds	1890	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

0

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

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

0

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

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

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

This data is sourced from Groundsure.



18.10 Mining record office plans

Records within 500m**0**

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m**0**

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site**0**

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site**0**

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

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

18.14 Gypsum areas

Records on site**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.



18.15 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0
-----------------	---

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

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

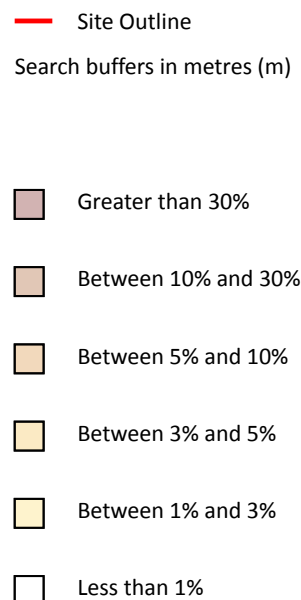
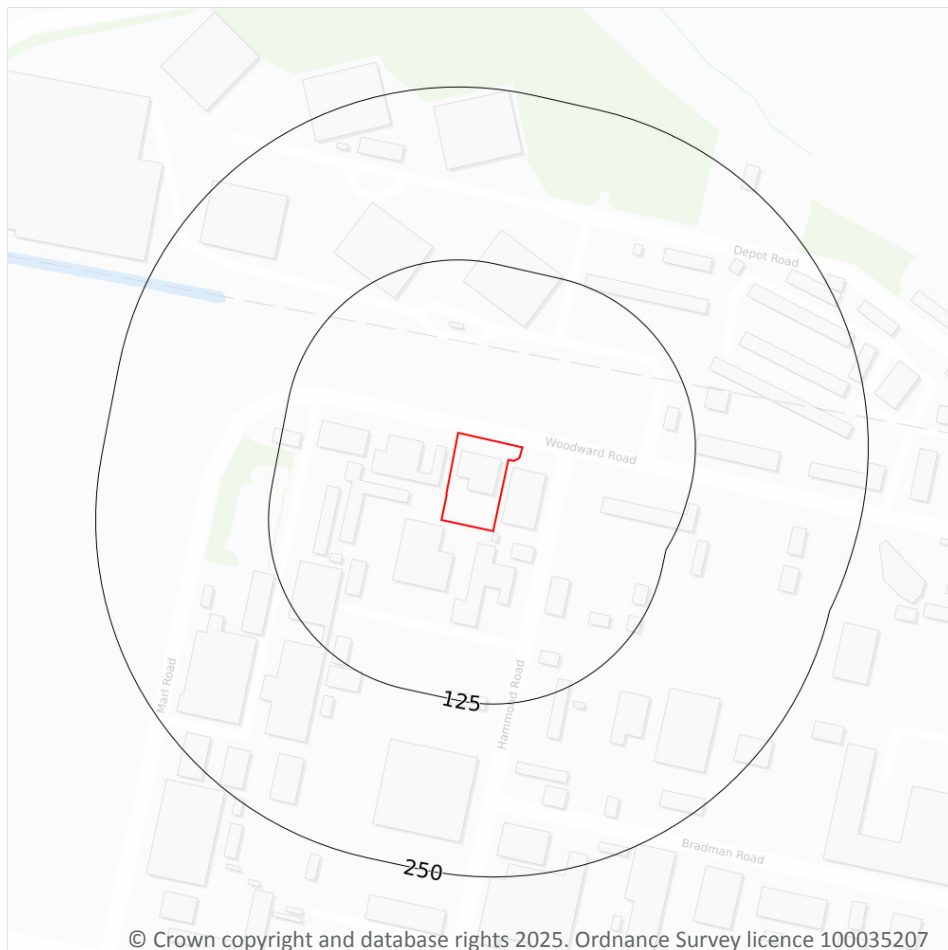
Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

1

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

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

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



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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

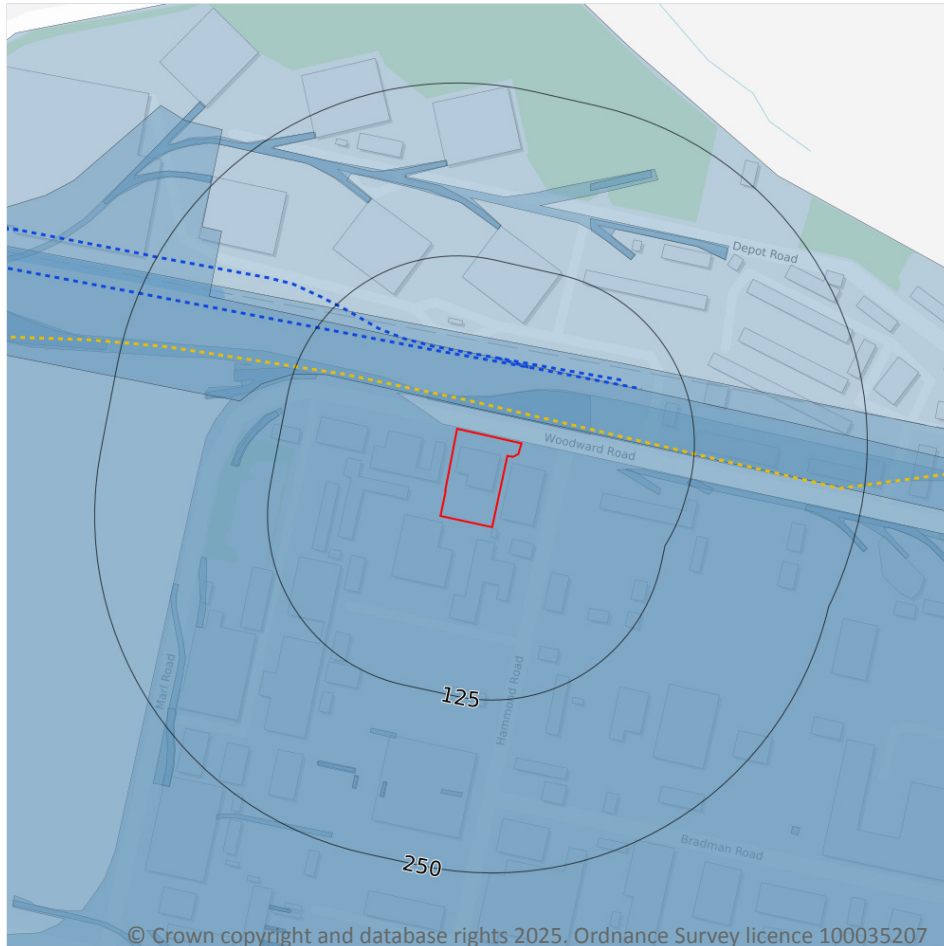
0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



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

22.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

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



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

27

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

Features are displayed on the Railway infrastructure and projects map on [page 145 >](#)

Location	Land Use	Year of mapping	Mapping scale
On site	Railway Sidings	1962	2500
On site	Railway Sidings	1966	10560
On site	Railway Sidings	1978	10000
17m N	Railway Sidings	1962	1250
18m N	Railway Sidings	1956	10560
72m E	Railway Sidings	1962	1250
77m E	Railway Sidings	1971	1250
108m NW	Railway Sidings	1962	1250
123m E	Railway Sidings	1962	1250
126m W	Railway Sidings	1962	2500
128m W	Railway Sidings	1962	1250
147m N	Railway Sidings	1962	1250
155m NE	Railway Sidings	1962	1250
160m S	Railway Sidings	1962	1250
172m W	Railway Sidings	1962	1250
189m N	Railway Sidings	1962	1250
192m S	Railway Sidings	1962	2500



Location	Land Use	Year of mapping	Mapping scale
193m SW	Railway Sidings	1962	1250
193m S	Railway Sidings	1962	1250
196m W	Railway Sidings	1971	1250
196m S	Railway Sidings	1962	2500
196m S	Railway Sidings	1962	1250
197m S	Railway Sidings	1962	2500
197m S	Railway Sidings	1962	1250
211m E	Railway Sidings	1962	1250
237m SW	Railway Sidings	1962	1250
242m S	Railway Sidings	1962	1250

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

1

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

Features are displayed on the Railway infrastructure and projects map on [page 145 >](#)

Location	Description
21m NE	Razed

This data is sourced from OpenStreetMap.



22.7 Railways

Records within 250m

3

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on [page 145 >](#)

Location	Name	Type
53m N		rail
55m NE		rail
56m N		rail

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

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



APPENDIX C: NATIONAL PLANNING POLICY FRAMEWORK TABLE 1 – 3

Note: These flood zones refer to the probability of river and sea flooding, ignoring the presence of defences

TABLE 1: FLOOD ZONES

Zone 1 - low probability

Definition

This zone comprises land assessed as having a less than 1:1 000 annual probability of river or sea flooding (<0.1%).

Appropriate uses

All uses of land are appropriate in this zone.

Flood risk assessment requirements

For development proposals on sites comprising one hectare or above the vulnerability to flooding from other sources as well as from river and sea flooding, and the potential to increase flood risk elsewhere through the addition of hard surfaces and the effect of the new development on surface water run-off, should be incorporated in a flood risk assessment. This need only be brief unless the factors above or other local considerations require particular attention.

Policy aims

In this zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area and beyond through the layout and form of the development, and the appropriate application of sustainable drainage systems².

Zone 2 - medium probability

Definition

This zone comprises land assessed as having between a 1:100 and 1:1,000 annual probability of river flooding (1% – 0.1%), or between a 1:200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year.

Appropriate uses

Essential infrastructure and the water-compatible, less vulnerable, and more vulnerable uses, as set out in table 2, are appropriate in this zone. The highly vulnerable uses are only appropriate in this zone if the Exception Test is passed.

Flood risk assessment requirements

All development proposals in this zone should be accompanied by a flood risk assessment.

Policy aims

In this zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area through the layout and form of the development, and the appropriate application of sustainable drainage systems.

Zone 3a - high probability

Definition

This zone comprises land assessed as having a 1:100 or greater annual probability of river flooding (>1%), or a 1:200 or greater annual probability of flooding from the sea (>0.5%) in any year.

Appropriate uses

The water-compatible and less vulnerable uses of land (table 2) are appropriate in this zone. The highly vulnerable uses should not be permitted in this zone.

The more vulnerable uses and essential infrastructure should only be permitted in this zone if the Exception Test is passed. Essential infrastructure permitted in this zone should be designed and constructed to remain operational and safe for users in times of flood.

Flood risk assessment requirements

All development proposals in this zone should be accompanied by a flood risk assessment.

Policy aims

In this zone, developers and local authorities should seek opportunities to:

- Reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage systems;
- Relocate existing development to land in zones with a lower probability of flooding; and
- Create space for flooding to occur by restoring functional floodplain and flood flow pathways and by identifying, allocating and safeguarding open space for flood storage.

Zone 3b - the functional floodplain

Definition

This zone comprises land where water has to flow or be stored in times of flood.

Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency.

The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. But land which would flood with an annual probability of 1:20 (5%) or greater in any year or is designed to flood in an extreme (0.1%) flood, should provide a starting point for consideration and discussions to identify the functional floodplain.

Appropriate uses

Only the water-compatible uses and the essential infrastructure listed in table 2 that has to be there should be permitted in this zone. It should be designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows; and
- not increase flood risk elsewhere.

Essential infrastructure in this zone should pass the Exception Test.

Flood risk assessment requirements

All development proposals in this zone should be accompanied by a flood risk assessment.

Policy aims

In this zone, developers and local authorities should seek opportunities to:

- reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage systems;
- relocate existing development to land with a lower probability of flooding.

TABLE 2: FLOOD RISK VULNERABILITY CLASSIFICATION

Essential infrastructure

- Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk.
- Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood.
- Wind turbines.

Highly vulnerable

- Police stations, ambulance stations and fire stations and command centres and telecommunications installations required to be operational during flooding.
- Emergency dispersal points.
- Basement dwellings.
- Caravans, mobile homes, and park homes intended for permanent residential use³.
- Installations requiring hazardous substances consent⁴. (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as “essential infrastructure”)⁵

More vulnerable

- Hospitals.
- Residential institutions such as residential care homes, children’s homes, social services homes, prisons, and hostels.
- Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs, and hotels.
- Non-residential uses for health services, nurseries, and educational establishments.
- Landfill and sites used for waste management facilities for hazardous waste⁶.
- Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan⁷

³ For any proposal involving a change of use of land to a caravan, camping or chalet site, or to a mobile home site or park home site, the Sequential and Exception Tests should be applied.

⁴ See Circular 04/00: Planning controls for hazardous substances (paragraph 18) at:

www.communities.gov.uk/publications/planningandbuilding/circularplanningcontrols

⁵ In considering any development proposal for such an installation, local planning authorities should have regard to planning policy on pollution in the National Planning Policy Framework.

⁶ For definition, see Planning for Sustainable Waste Management: Companion Guide to Planning Policy Statement 10 at www.communities.gov.uk/publications/planningandbuilding/planningsustainable

⁷ See footnote 3.

Less vulnerable

- Police, ambulance, and fire stations which are not required to be operational during flooding.
- Buildings used for shops, financial, professional, and other services, restaurants and cafes, hot food takeaways, offices, general industry, storage, and distribution, non-residential institutions not included in “more vulnerable”, and assembly and leisure.
- Land and buildings used for agriculture and forestry.
- Waste treatment (except landfill and hazardous waste facilities).
- Minerals working and processing (except for sand and gravel working).
- Water treatment works which do not need to remain operational during times of flood.
- Sewage treatment works (if adequate measures to control pollution and manage sewage during flooding events are in place).

Water-compatible development

- Flood control infrastructure.
- Water transmission infrastructure and pumping stations.
- Sewage transmission infrastructure and pumping stations.
- Sand and gravel working.
- Docks, marinas, and wharves.
- Navigation facilities.
- Ministry of Defence defence installations.
- Ship building, repairing, and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location.
- Water-based recreation (excluding sleeping accommodation).
- Lifeguard and coastguard stations.
- Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms.
- Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.

Notes to table 2:

1. This classification is based partly on Department for Environment, Food and Rural Affairs and Environment Agency research on Flood Risks to People (FD2321/TR2)8 and on the need of some uses to keep functioning during flooding.
2. Buildings that combine a mixture of uses should be placed into the higher of the relevant classes of flood risk sensitivity. Developments that allow uses to be distributed over the site may fall within several classes of flood risk sensitivity.
3. The impact of a flood on the uses identified within this flood risk vulnerability classification will vary within each vulnerability class. Therefore, the flood risk management infrastructure and other risk mitigation measures needed to ensure the development is safe may differ between uses within a vulnerability classification.

⁸ See website for further details. www.defra.gov.uk/science/Project_Data/DocumentLibrary/FD2320_3364_TRP.pdf

TABLE 3: FLOOD RISK VULNERABILITY AND FLOOD ZONE COMPATIBILITY						
VULNERABILITY CLASSIFICATION (TABLE 2)		ESSENTIAL INFRASTRUCTURE	WATER COMPATIBLE	HIGHLY VULNERABLE	MORE VULNERABLE	LESS VULNERABLE
FLOOD ZONE (TABLE 1)	Zone 1	√	√	√	√	√
	Zone 2	√	√	Exception Test Required	√	√
	Zone 3a	Exception Test Required	√	*	Exception Test Required	√
	Zone 3b Functional Floodplain	Exception Test Required	√	*	*	*

Key:

√ Development is appropriate

* Development should not be permitted

Notes on Table 3;

- The application of the Sequential Test which guides development to Flood Zone 1 first, then Zone 2, and then Zone 3;
- Flood risk assessment requirements; or
- The policy aims for each flood zone.

APPENDIX D: GREENFIELD CALCULATIONS



Site: No. 16 Woodward Road, Kirkby, L33
Job Number: 25-15323
Client: Mr. D. Donald
Completed By: T. Gerrard
Authorised By: Chris Bolan
Date Assessed: 03/2025

Wallingford Procedure Runoff Calculations

Total Site Area	2579	m ²		
Previous Impermeable Area	1649	m ²	PIMP	64 %
Post Developmet Imp Area	2478	m ²	PIMP	96 %
Soil Value	2		%age Runoff Before	54 %
Average Rainfall	866		%age Runoff After	81 %
M5-60	19			
UCWI	138			

Return Period	100	30	20	5	2	1		100	30	20	5	2	1
r	0.4	0.4	0.4	0.4	0.4	0.4		Cv	0.84	0.84	0.85	0.85	0.85
Z1	0.47	0.47	0.47	0.47	0.47	0.47		Cr	1.40	1.40	1.40	1.40	1.40
M5-10	8.93	8.93	8.93	8.93	8.46	8.93		Area	0.26	0.26	0.26	0.26	0.26
Z2	2.03	1.55	1.45	1.03	0.78	0.64		Q	88.40	67.28	63.35	45.00	32.46
Rainfall Intensity	108.7674	83.05	77.69	55.19	39.59	34.29							

Q100year+ Climate Change (40%) 123.75 l/s

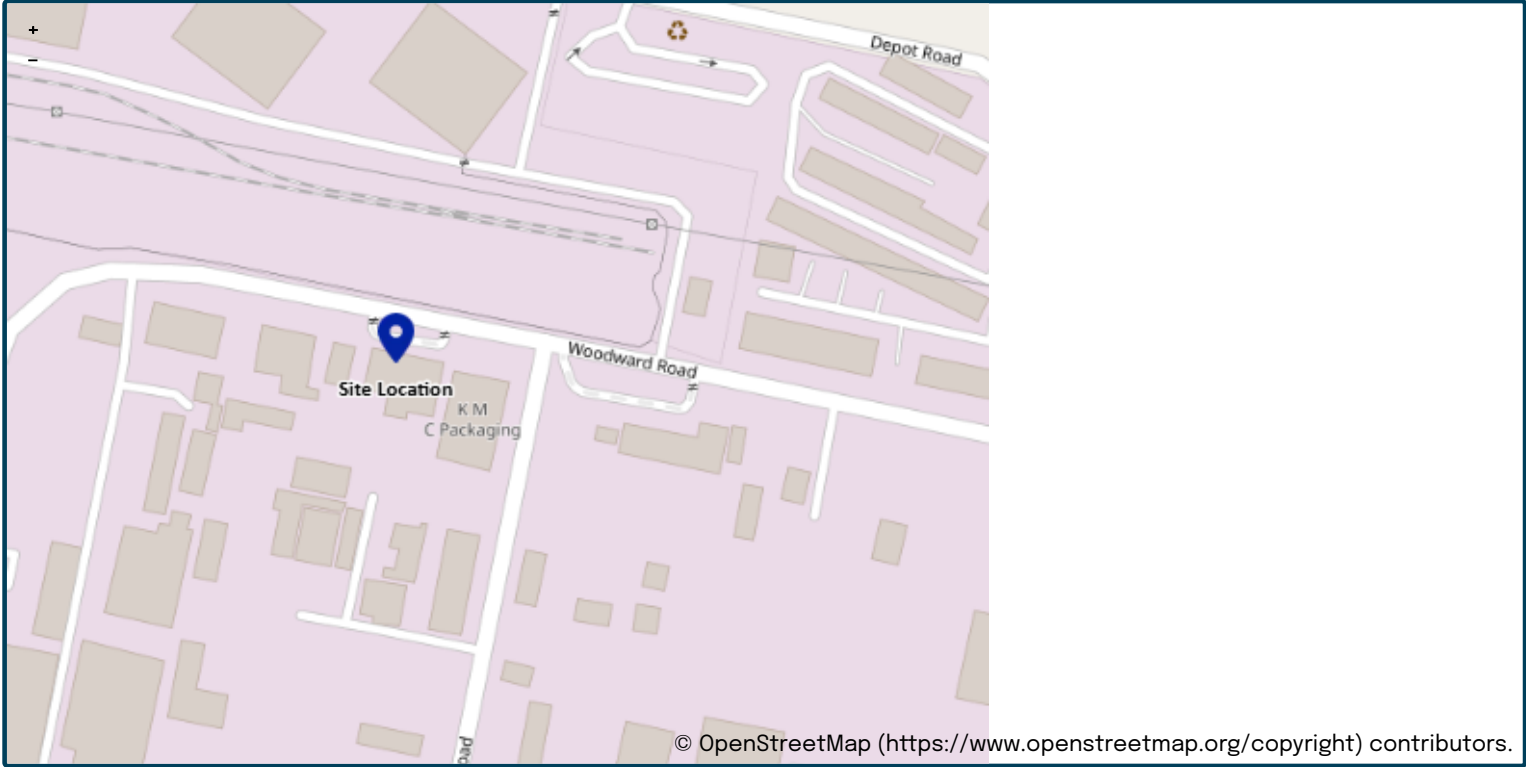
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	20/03/2025
Calculated by	Tony Gerrard
Reference	Woodward Road, Kirkby
Model version	0.6.5

Location

Site name	Woodward Road
Site location	Kirkby, Merseyside



Site easting	343417
Site northing	399501

Site details

Total site area (ha)	0.26	ha
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Greenfield runoff

Method

Method	FEH statistical
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FEH statistical

	<u>My value</u>		<u>Map value</u>
SAAR (mm)	866	mm	866
BFIHOST	2		
QMed-QBar conversion	1.075		1.075
QMed (l/s)	0.0000123	l/s	
QBar (FEH statistical) (l/s)	0.000013	l/s	

Growth curve factors

	<u>My value</u>		<u>Map value</u>
Hydrological region	10		10
1 year growth factor	0.87		
2 year growth factor	0.93		
10 year growth factor	1.38		
30 year growth factor	1.7		
100 year growth factor	2.08		
200 year growth factor	2.37		

Results

Method	FEH statistical	
Flow rate 1 year (l/s)	0.000012	l/s
Flow rate 2 year (l/s)	0.000012	l/s
Flow rate 10 years (l/s)	0.000018	l/s
Flow rate 30 years (l/s)	0.000023	l/s
Flow rate 100 years (l/s)	0.000028	l/s
Flow rate 200 years (l/s)	0.000031	l/s

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (0.6.5) developed by HR Wallingford and available at uksuds.com (<https://www.uksuds.com/>).

The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [uksuds.com/terms-conditions](https://www.uksuds.com/terms-conditions) (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.