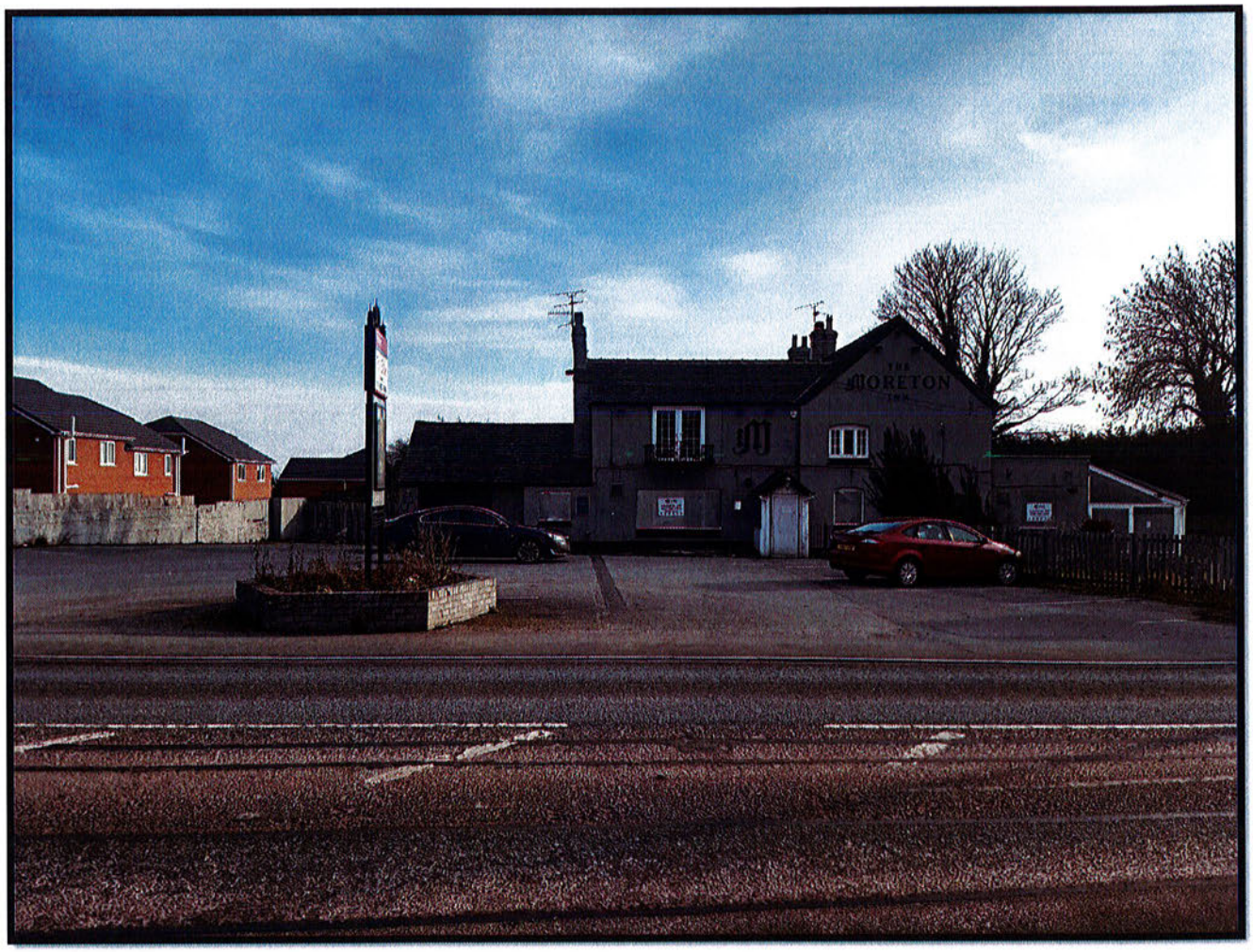
Moreton Inn, Rhosllanerchrugog

Proposed Housing

Geo-Environmental Report

Nunndale Ltd



GroundSolve Ltd
Consulting Geotechnical, Engineering Geology and Environmental Engineers

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1.0 INTRODUCTION

Nunndale Ltd (NL) have purchased a plot of land off Ruabon Road, in Rhosllanerchrugog, which is currently occupied by the Moreton Inn, which is disused. It is proposed to re-develop the site by demolishing the existing building and constructing nine houses on site.

NL have appointed GroundSolve Ltd (GSL) to undertake a Phase I desk study and Phase II site investigation, and produce and interpretive geo-environmental report for the development.

This report presents the finding of the desk study and site investigation and gives firm geotechnical recommendations for the development. In addition, conceptual ground models and environmental risk assessments are given.

2.0 THE SITE

2.1 Site Location and Description

The site is located on Ruabon Road in Rhosllanerchrugog, at National Grid Reference SJ 301 454, see Figure 1.

It is bounded to the west by Ruabon Road, to the north and east by a recently completed housing development, and to the south by Moreton House, see Figure 2.

The existing building is a two-storey structure, with a small basement at the rear of the building. Several outbuildings and conservatories surround the main Inn building. The north half of the site is predominately tarmac, forming the car park. The southern section of the site is predominantly grassed, with a hard standing surrounding building. Vehicle and pedestrian access are off Ruabon Road, with access to the south of the site through an access gate on the western side of the building.

The site boundary is generally defined by brick/block walls, which continue along the southern site boundary, with several mature trees located in the south east corner of the site. The eastern site boundary is a wall mainly built from brick, apart from a section at the north west corner, which is constructed in masonry.

A topographical survey of the site has been provided, which confirms the site elevation falling from 11.43mOD in the northwest, to 10.24mOD in the south /southeast. The site is some 112m long and 85m wide.

Photographs of the site are presented in Appendix A.

2.2 Geology and Hydrogeology

The geology of the site has been studied on the British Geological Survey (BGS) 1:50,000 scale geology plan, Sheet 121, Wrexham, along with the associated memoirs, Reference 1.

In addition, the Wrexham study has also been researched, Reference 2.

The geology plan shows the site to be underlain by glacial till (Diamicton), overlying the Etruria Formation (formally known as the Ruabon Marl Formation), which comprises Mudstone. However, to the west of Ruabon Road made ground is shown. Reference 2 records the superficial deposits to be between 20 and 25m thick.

No coal seams are shown outcropping close to the site, although several faults trending north to south are shown in the vicinity of the site.

A review of the BGS online portal "GeoIndex", records one borehole drilled immediately north of the site in 1968. It encountered 1m of made ground overlying glacial till with thin layers of silt and sand proved to a depth of 5.80m. No groundwater was encountered.

It also recorded a shaft section to the west of the site, which confirmed the depth to the Main seam of 110m. Reference 1 records this shaft to be within a fault belt.

The underlying superficial deposits are classified as a Secondary aquifer undifferentiated, but of high vulnerability, with the bedrock classified as a secondary aquifer A. Both aquifers were classified as productive.

Groundwater would be anticipated to be at depth, although a perched water table on top of the low permeability glacial till may be present.

2.3 Abandoned Mining

A Coal Authority (CON29) report has been obtained for the site. The findings of which are summarised below, with the full report presented in Appendix B.

- There are no probable unrecorded shallow workings beneath the site,
- There are no spine roadways recorded at shallow depth,
- No nearby coal outcrops shown,
- No mine entrances are recorded on site, or within 20m, with two shafts recorded to the west of the site.

2.4 History

The history of the site has been studied on old Ordnance Survey (OS) plans dating from 1874, at a scale of 1:2,500 unless stated otherwise, and aerial photographs dating from 2001.

The 1874 OS plan confirms that the Moreton Inn had already been constructed, with a road immediately west of the Inn, and the Inn gardens appearing to be an orchard. The adjacent road is on embankment on its western side leading down to a shaft some 50m away called Moreton Pit. Open fields lie to the north, east and south of the site, see Figure 3a.

There is a railway station and a railway line immediately north west/west of the shaft, which runs from northwest to south. To the northwest the railway line leads to Brandie Pits, with mounds of spoil and coke ovens associated with the colliery. There is a spot height on the road outside the Inn, which records an elevation of 403ft AOD. There is also what appears to be a small pond to the south east of the Inn.

The 1900 OS plan shows no change to the site itself, although an access track had been constructed along the southern site boundary leading to the rear of the Inn. To the west the Moreton Pit had now become disused, as had Brandie Pit, with the shafts labelled as old coal shafts. The railway line that runs north west to south is now labelled as the Ponkey Branch of the GWR, although the majority of railway lines had been removed, see Figure 3b.

No changes are shown on site on the 1912 OS plan, see 3c.

No changes were recorded on the 1938 and 1953 OS plans at a scale of 1:10,560, although by 1953 residential development was starting to be constructed to the north of the site.

The 1961 OS plan shows significant changes surrounding the site. To the north of the site there had been a major residential development creating a housing estate. Opposite the site to the west a Crane works had been constructed, with tanks recorded to the south of the Crane Works. It appears this side of the road may have been raised/filled, as the embankment is no longer shown. The road on the western site boundary is now called Ruabon Road, which appears to have been widened in the vicinity of the Inn. Moreton Farm had been constructed on the southern site boundary, see Figure 3d.

The 1974 OS plan shows no change to the north. From the east of the site to the south an industrial estate had been developed, with Plastic Products factories, Storage Radiator factory, Warehouse, engineering and paint works. To the west the Crane works and tanks had been demolished and replaced with engineering works, pallet factory and a sub-station. Immediately south of the site Moreton House had been constructed, with the pond south west of the site being backfilled, see Figure 3e.

No changes are shown on site on the 1989 OS plan, with the industrial estate now named Vauxhall Industrial Estate, see Figure 3f.

The 1992 OS plan shows no significant change, see Figure 3g.

The 2001 aerial photograph shows the engineering works and factory to the west had been demolished, and the land developed with residential buildings/properties.

3.0 ENVIRONMENTAL SEARCHES

An Envirocheck report has been obtained for the site, the relevant points are summarised below, with the report presented in full in Appendix C.

Agency & Hydrological

- The closest active discharge consent is 205m south of the site, for sewerage discharge from land/soakaway,
- Nearest surface water feature is 32m to the south,
- The closest pollution incident to controlled waters is 46m west of the site relating to crude sewerage, which was a Category 3 – Minor Incident,
- The closest water abstraction is from the Afon Goch, which is 770m south east, relating to a water supply,
- The BGS consider there to be a potential for groundwater flooding to occur at surface.

Waste

- The closest licensed waste management facility is 432m east of the site, run by Cory Environmental (Central) Ltd,
- The closest historic landfill site is 371m east at Bangor Road, Johnstown, with the license holder is Sita UK,
- Potentially infilled land (water) has been identified 35m south east of the site,
- Whilst potentially infilled land (non-water) was identified on site,
- The closest registered landfill is 638m north east of the site, and is authorised to hold bonded asbestos, commercial, household and industrial waste and inert waste and metal/scrap metal.

Geology

The BGS have provided the following estimated soil chemistry at the site:

- Arsenic <15 mg/kg,
- Cadmium <1.8 mg/kg,
- Chromium 60-90 mg/kg,
- Lead <100 mg/kg,
- Nickel 15-30 mg/kg.

In addition, the following comments were given for the site:

- All ground stability and dissolution stability hazards are either no hazard, or very low/low hazard,
- In an area which may be affected by Coal mining activity,

- The property is in an intermediate probability radon area (3 to 5% of homes are estimated to be at or above the action level).
- Basic radon protective measures are necessary in the construction of new dwellings or extensions.

Industrial Land Use

- The closest industrial land use was 46m to the north east and was Key Gas Wales Ltd, which is now inactive.

Sensitive Land Use

- Ancient and semi- natural woodland located 239m west of the site,
- Site of special interest and conservation located 73m south west of the site.

4.0 PROPOSED DEVELOPMENT

NL are proposing to develop a plot of land in Rhosllanerchrugog off Ruabon Road, which is currently occupied by the Moreton Inn. The current proposals are presented in Figure 4.

The development will comprise nine dwellings, three detached and the remainder being semi-detached, which will be constructed in traditional brick and block. An access road off Ruabon Road is proposed, along with an attenuation area for surface water along the southern site boundary, adjacent to Plots 6 and 7. The mature tree on the south boundary is to remain, whilst the other trees on site are to be removed.

Foundation loads are not known at this stage, however, based on experience, foundation loads will be around 50 to 75kN/m run, with floor slab loadings not exceeding 5kN/m^2.

The recommendations given in this report are based on these assumptions, therefore, they should be reviewed, and if necessary revised during the detailed design process.

5.0 SITE INVESTIGATION

5.1 Fieldwork

The investigation was undertaken on the 1st March 2021, and comprised:

- Four machine excavated trial pits to a maximum depth of 2.90m,
- Soakaway Testing in two of the trial pits,
- CBR Testing (by DCP – Dynamic Cone Penetrometer).

The trial pits were supervised and logged by an engineer from GSL in general accordance with BS 5930, Reference 3.

The soakaway testing was carried out by filling the trial pits quickly with a 2,000-gallon water bowser and monitoring the fall in water level in accordance with BRE Digest 365, Reference 4.

The location of the trial pits and CBR Test were determined by GSL, and their locations are presented in Figure 2.

The logs for the above work are presented in the following Appendices:

- Appendix D Trial Pit Logs,
- Appendix E Soakaway Tests,
- Appendix F CBR Tests.

5.2 Laboratory Testing

Physical Testing

Soil samples were recovered from the trial pits for physical testing, which comprised:

- pH and Sulphate,
- Atterberg limit,
- Moisture Content.

The testing was carried out in accordance with BS 1377, Reference 5. The results are discussed in Section 6.0, with the full results presented in full in Appendix G.

Chemical Testing

Samples of the made ground were placed in the appropriate containers and a cool box, and taken immediately to the laboratories of DETS in County Durham for the following chemical testing:

Metals & Non-metals - Arsenic (As), Boron (B), Cadmium (Cd), Chromium (hexavalent), Chromium (Trivalent), Copper (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Phenol, Selenium (Se), and Zinc (Zn).

Petroleum Hydrocarbons - Benzene, Toluene, Ethylbenzene, o-xylene, m-xylene, p-xylene, Aliphatics >C5 – C44, Aromatics >EC5 – EC44.

Polyaromatic Hydrocarbons (PAH) – Acenaphthene, Acenaphthylene, Anthracene, Benz (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (g, h, I) perylene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, h) anthracene, Fluorene, Fluoranthene, Indeno (1,2,3-cd) pyrene, Naphthalene, Phenanthrene, Pyrene.

Other Contaminants – Sulphide (easily liberated), Water soluble Sulphate (2:1 extract), Cyanide, pH, Soil Organic Matter (SOM), Asbestos screening.

The results are summarised in Section 7.0, with the results presented in full in Appendix H.

6.0 GROUND CONDITIONS

6.1 General Stratigraphy

The ground conditions encountered in the trial pits typically comprised topsoil/made ground overlying glacial deposits.

The general stratigraphy encountered in the trial pits is summarised in Table 6.1 below:

Table 6.1: General Stratigraphy

TP Ref	Stratigraphy			
	Topsoil (m)	Made Ground (m)	Glacial Deposits (m)	Glacial Till (m)
TP01	N/E	0.00 – 0.45	0.65 – 1.10	0.45 – 0.65 1.10 – 2.40
TP02	N/E	0.00 – 0.50	0.50 – 1.30	1.30 – 2.0
TP03	0.00 – 0.60	N/E	N/E	0.60 – 2.50
TP04	0.00 – 0.60	N/E	0.60 – 2.10 2.50 – 2.90	2.10 – 2.50

Note: N/E = Not Encountered

6.2 Topsoil

Topsoil was encountered in TP03 and TP04, in the southern section of the site, where it was generally described as grass over loose, black, slightly sandy, slightly gravelly silt, with rootlets, with the gravel being subangular to subrounded, fine to coarse. The topsoil in TP04 contained some brick and pottery.

pH values of 6.4 were recorded, with sulphate values when measured as 2:1 water extract between 12 and 24mg/l (0.012 to 0.024mg/l).

6.3 Made Ground

Made ground was encountered in TP01 and TP02, which was in the northern car parking area, and was described as loose, silty gravel, or clay, and a limestone sub-base, with the gravel being angular and subangular to subrounded fine to coarse.

A pH value of 8 was recorded, with a sulphate value when measured as 2:1 water extract of 16mg/l (0.016g/l).

6.4 Glacial Deposits

Glacial sand and gravel was recorded across three of the trial pits at various depths, which were generally described as loose to medium dense, brown, slightly gravelly, silty, clayey sand.

Particle size distribution testing of the glacial deposits recorded it to be well graded, with a silt/clay content of 21%.

pH values between 7.59 and 7.72 were recorded, with sulphate values, when measured as 2:1 water extract of between 0.005 and 0.009 g/l.

6.5 Glacial Till

Glacial till was recorded across all four of the trial pits, where it was generally described as soft to firm, becoming firm, brown, slightly sandy, slightly gravelly clay, with some cobble content, with the gravel being subangular to subrounded, fine to coarse.

Hand shear vane tests in the glacial till recorded shear strengths between 38 and 58kPa, average 50kPa, confirming a firm consistency.

Atterberg limit testing recorded liquid limits between 29 and 41%, plastic limits between 15 and 23%, with plasticity indices between 7 and 18%, indicating a clay of low, occasionally intermediate plasticity. Natural moisture contents were between 16.6 and 17%. However, it should be noted that only 21 to 31% of the sample passed the 425-micron sieve.

pH values of 7.69 were recorded, with sulphate values when measured as 2:1 water extract of between 0.010 and 0.012 g/l.

6.6 Groundwater

Ground water was only encountered in TP04, with a seepage at a depth of 2.40m, the groundwater table being encountered at a depth of 2.90m at the base of the trial pit.

6.7 Soakaway Testing

Soakaway testing was carried out in TP02 and TP03, in general accordance with BRE 365. Two cycles were carried out in TP02, whilst only a single cycle was carried out in TP03 due to time restraints. The results are summarised below in Table 6.2:

Table 6.2: Soakaway Test Results

Trial Pit No	Test No	Depth (m)	Time (mins)	Fall in water levels (m)	Permeability (m/s)
TP02	1	2.00	180	0.47	3.92×10^{-6}
TP02	2	2.00	220	0.57	5.86×10^{-6}
TP03	1	2.50	150	0.20	2.37×10^{-6}

6.8 CBR Testing

CBR testing was carried out at seven locations to a maximum depth of 0.95m, using the DCP (TRRL) method, see Figure 2. CBR values showed considerable variation across the site

ranging between 0 and 175%. They are discussed in detail in Section 9.5, with the full results presented in Appendix D.

7.0 RESULTS OF CHEMICAL TESTING

Soil samples were taken from the made ground and topsoil, with the sample depths presented in the table below.

TP No	Depth (m)	Strata
TP01	0.30	Made Ground
TP03	0.25	Topsoil
TP04	0.15	Topsoil

The results of the soil analyses are presented below, where they have been compared to suitable generic assessment criteria (GACs), in order to allow a generic quantitative risk assessment (GQRA) to be carried out for the site and the proposed development.

The Category 4 Screening Levels (C4SLs) published by DEFRA (2014) have been adopted in the first instance, which have been published for six substances to date. Where a C4SL is unavailable, the "Suitable 4 Use Levels" (S4ULs) published by LQM/CIEH (2015) have been adopted.

These criteria have been derived using the CLEA model for a range of standard end-use scenarios and a range of soil organic matter (SOM) contents. It should be noted that the C4SL values are derived on the basis of a "low level of toxicological concern", while the S4UL values are based on a "tolerable" or "minimal" level of risk. As such, the S4ULs describe a lower level of risk than the C4SLs, and are equivalent to the former Soil Guideline Values (SGVs, published by the Environment Agency) and the previous editions of the LQM/CIEH GAC values.

A "residential with gardens" end-use has been adopted for this analysis, based on the most-conservative SOM content of 1.0%.

Note: the S4UL values presented below are Copyright Land Quality Management Limited, reproduced with permission; Publication Number S4UL3668. All rights reserved.

	TP01	TP03	TP04			
Metals & Non-Metals	0.3	0.25	0.15	Adopted Guideline (mg/kg)	Source	Exceedances
Arsenic	8.2	13	8.9	37	C4SL	0
Boron	< 0.2	0.4	0.3	290	S4UL	0
Cadmium	0.9	2.2	0.5	22	C4SL	0
Chromium III	12	19	13	910	S4UL	0
Chromium, Hexavalent	< 1.0	< 1.0	< 1.0	21	C4SL	0
Copper	50	92	27	2400	S4UL	0
Lead	50	240	73	200	C4SL	1
Mercury	0.09	0.21	0.08	1.2	S4UL	0
Nickel	24	18	16	130	S4UL	0
Phenol	< 0.3	< 0.3	< 0.3	120	S4UL	0
Selenium	< 0.5	0.5	< 0.5	250	S4UL	0
Zinc	170	320	92	3700	S4UL	0

In TP03 the value for lead slightly exceeds the adopted SGV values for residential end use with gardens.

	TP01	TP03	TP04			
Petroleum Hydrocarbons	0.3	0.25	0.15	Adopted Guideline (mg/kg)	Source	Exceedances
Aliphatic C5-C6	< 0.01	< 0.01	< 0.01	42	S4UL	0
Aliphatic C6-C8	< 0.01	< 0.01	< 0.01	100	S4UL	0
Aliphatic C8-C10	< 0.01	< 0.01	< 0.01	27	S4UL	0
Aliphatic C10-C12	< 1.5	< 1.5	< 1.5	130	S4UL	0
Aliphatic C12-C16	< 1.2	< 1.2	< 1.2	1100	S4UL	0
Aliphatic C16-C35	< 1.5	< 1.5	< 1.5	65000	S4UL	0
Aliphatic C35-C40	< 3.4	< 3.4	< 3.4	65000	S4UL	0
Aromatic C5-C7	< 0.01	< 0.01	< 0.01	70	S4UL	0
Aromatic C7-C8	< 0.01	< 0.01	< 0.01	130	S4UL	0
Aromatic C8-C10	< 0.01	< 0.01	< 0.01	34	S4UL	0
Aromatic C10-C12	< 0.9	< 0.9	< 0.9	74	S4UL	0
Aromatic C12-C16	< 0.5	< 0.5	< 0.5	140	S4UL	0
Aromatic C16-C21	< 0.6	< 0.6	< 0.6	260	S4UL	0
Aromatic C21-C35	< 1.4	< 1.4	< 1.4	1100	S4UL	0
Aromatic C35-C40	< 1.4	< 1.4	< 1.4	1100	S4UL	0

None of the above exceed the SGV values for residential end use with gardens.

	TP01	TP03	TP04			
Polyaromatic Hydrocarbons (PAH)	0.3	0.25	0.15	Adopted Guideline (mg/kg)	Source	Exceedances
Acenaphthene	0.1	< 0.03	< 0.03	210	S4UL	0
Acenaphthylene	< 0.03	< 0.03	< 0.03	170	S4UL	0
Anthracene	0.22	< 0.03	< 0.03	2400	S4UL	0
Benz(a)anthracene	0.48	0.09	< 0.03	7.2	S4UL	0
Benzo(a)pyrene	1.1	0.09	< 0.03	5	C4SL	0
Benzo(b)fluoranthene	1.2	0.13	0.04	2.6	S4UL	0
Benzo(g,h,i)perylene	0.84	0.04	< 0.03	320	S4UL	0
Benzo(k)fluoranthene	0.45	0.05	< 0.03	77	S4UL	0
Chrysene	0.59	0.11	0.04	15	S4UL	0
Dibenzo(a,h)anthracene	0.14	< 0.03	< 0.03	0.24	S4UL	0
Fluoranthene	1.1	0.18	0.06	280	S4UL	0
Fluorene	0.07	< 0.03	< 0.03	170	S4UL	0
Indeno(1,2,3-cd)pyrene	0.65	0.04	< 0.03	27	S4UL	0
Naphthalene	< 0.03	< 0.03	< 0.03	2.3	S4UL	0
Phenanthrene	0.52	0.05	< 0.03	95	S4UL	0
Pyrene	1.1	0.18	0.05	620	S4UL	0

None of the above exceed the SGV values for residential end use with gardens.

	TP01	TP03	TP04			
Other Contaminants / Testing	0.3	0.25	0.15	Adopted Guideline (mg/kg)	Source	Exceedances
Soil Organic Matter (SOM)	0.6	4.9	2.7	-	-	-
pH	8	6.4	6.4	-	-	-
Sulphide	84	< 10	< 10	-	-	-
Cyanide, Total	< 0.1	0.5	0.3	-	-	-
Sulphur (free)	11	< 0.75	< 0.75	-	-	-
Water Soluble Sulphate as SO4 2:1 Extract	16	12	24	-	-	-

None of the above exceed the SGV values for residential end use with gardens.

In addition, no asbestos was found in any of the samples.

8.0 CONCEPTUAL MODEL AND RISK ASSESSMENT

8.1 General

According to the Contaminated Land Regulations, to determine whether there is a significant possibility of significant harm, the following should be considered:

"The nature and degree of harm, the susceptibility of the receptors and the timescale within which the harm might occur".

Current good practice therefore requires that the findings from the desk study or site investigation be evaluated for contamination on a site-specific basis using a risk-based approach. Risk assessment involves identification of the hazards and evaluation of the risks associated with these hazards. Risk assessment requires an evaluation of a conceptual "source – pathway – receptor" linkage model and can be qualitative or quantitative.

The basis of an environmental risk assessment involves identifying a 'source' of contamination, a 'pathway' along which the contamination may migrate and a 'receptor' at risk from the contamination.

Current legislation defines the various elements of the pollution linkage as:

- A contaminant 'source' is a substance, which is in, or under the ground, and which has the potential to cause harm or to cause pollution of controlled waters.
- A 'pathway' is one or more routes through which a receptor is being exposed to, or affected by, a contaminant, or could be so affected.
- A 'receptor' is either a living organism, an ecological system, a piece of land or property, or controlled water.

A pollutant linkage indicates that all three elements have been identified. The site can only be defined as 'Contaminated Land' if a pollutant linkage exists and the contamination meets the criteria above.

8.2 Hazard Identification

On Site

The desk study has confirmed that the Moreton Inn had been constructed by 1874, with no other land uses recorded.

The trial pits from this site investigation failed to reveal any visual or olfactory evidence of contamination below the topsoil or hardstanding, which was generally confirmed by the chemical testing, although one minor exceedance of lead was encountered in the topsoil on site.

Possible contaminants include hydrocarbon spills from the car park, although any spills are likely to be limited to existing drainage runs.

In addition, the existing, or any previous structures on site may contain asbestos. Therefore, an asbestos survey of the existing building should be undertaken, with any asbestos encountered removed by a suitably qualified specialist contractor.

Off Site

The desk study has revealed that there were various industrial uses close to the site, however, none of these are considered capable of producing contaminants that could migrate onto site.

The desk study identified made ground to the west of Ruabon Road, however, this will comprise inert colliery spoil associated with underground workings from Moreton Pit.

8.3 Pathways

In relation to any on site contamination reaching potential site users, the following pathways are generally considered for this type of development:

- Ingestion and skin contact with soils on site,
- Ingestion of home-grown vegetables,
- Inhalation of contaminated dust,
- Leaching of contaminated materials that may affect controlled waters,
- Direct contact with contaminated material during construction,
- Infiltration and accumulation of ground gas.

8.4 Receptors

The potential impact of a hazard must be assessed with regard to the following target groups:

- Future site users,
- Construction workers,
- Surface and groundwater, both on and off the site,
- Nearby vegetation,
- Building materials and buried services.

8.5 Summary of Conceptual Ground Model

The conceptual ground model is presented in Table 8.1.

Table 8.1: Source, Pathway, Receptor

Potential Contamination Sources	Potential Contaminants of Concern	Potential Pathways	Receptor Group
Localised made ground/demolition debris	Heavy metals Asbestos PAH	Inhalation/ingestion of contaminated dust Dermal contact	Construction workers Site end users
Possible hydrocarbon spills	Hydrocarbons	Ingestion of soil/home grown vegetables Leaching of contaminated materials Lateral migration and infiltration of gas/water	Surface and groundwater Building materials and buried services

8.6 Future Site Users Risk Assessment

The site is to be developed with nine residential plots, which is the most sensitive end use.

The desk study failed to reveal any past contaminated land uses on site, and no visual or olfactory evidence of contamination was encountered in any of the boreholes or trial pits.

However, one slightly elevated lead level was encountered in the topsoil. Therefore, it is recommended that further specific testing for lead is carried out in the vicinity of TP 03 to determine if the topsoil can be reused on site.

8.7 Controlled Waters Risk Assessment

When considering the risk to controlled waters, both surface waters and underlying aquifers have to be considered.

The lack of contamination on site and the fact that the underlying aquifer will already be contaminated with acidic mine waters, means that the risk to controlled waters is considered to be negligible. This risk will reduce further when the site is covered with buildings and hardstandings, with the drainage taken via attenuation to the existing drainage system.

8.8 Construction Workers

The risk to construction workers is considered to be very low; and can be catered for by appropriate PPE and washing facilities in accordance with current good practice.

However, in line with current good practice a watching brief should be kept on all excavations. Any contamination encountered should be excavated, stored safely on site, tested, and taken off site to a suitably licensed landfill facility.

8.9 Ground Gases

No nearby landfills have been identified that could be a source of landfill gas. Whilst made ground was recorded surrounding the site it is inert colliery spoil associated with mining operations.

The risk of mine gas can also be discounted due to the significant depth to any workings and the lack of any shafts on site.

However, the site is in an intermediate radon area, and as such basic radon protection measures will be required for the development.

8.10 Vegetation

The investigation has confirmed that there is no risk to vegetation on site.

9.0 GEOTECHNICAL RECOMMENDATIONS

9.1 Excavations and Site Preparation

To enable detailed recommendations to be given, the location of the Moreton Inn and its basement have been plotted onto Figure 5.

The basement was inspected during the site works and was proven to be "L" shaped. The entrance from the service hatch at the back of the Inn was 6m long and 1.40m wide, with the main section of the basement being 11.80m long and between 3.5 and 4.0m wide. It was estimated to be 2m high, giving a total volume of 100m³, see Figure 5.

Firstly, it will be necessary to demolish the existing Inn and associated structures on site. It will also be necessary to grub out the Inn foundations where they interfere with new structures. However, this is only likely to influence Plots 4 and 5, with the basement wall possibly affecting Plot 4. Where the basement walls underly the proposed access road the top of the walls should be broken out to at least 0.50m below final ground levels. It will also be necessary to puncture the basement floor to prevent water ponding in the basement.

The brick/block work and any concrete walls/ floor slabs could be crushed on site to form a suitable structural fill, such as 6F2, which can be used on site for capping/hardstandings, etc.

The basement will then need to be backfilled, where several options are available. It would be possible to backfill the basement using the crushed material, compacted in accordance with an approved earthworks specification, such as Reference 6.

Alternatively, the spoil arisings in the sand and gravel derived from foundations and drainage excavations could be compacted in the basement, and then capped with a suitable granular layer.

Finally, consideration could be given to using the basement as part of the drainage attenuation, with the basement volume (100m³) being used for storage. Possibly being used for the access road drainage.

The topsoil will then need to be stripped and subject to the further testing, and stockpiled on site for future re use.

It will also be necessary to fell several trees on site, with the roots grubbed out and backfilled with suitable well compacted granular material.

Several drainage runs were also observed on site, which will probably need to be grubbed out and treated as described above.

The tarmac will need to be stripped and taken off site to a suitably licensed landfill facility, or alternatively used as fill to backfill the basement.

Excavations will then be in glacial sand and gravel and glacial till, and will be possible using conventional earth moving equipment. However, excavations deeper than 1.20m should be shored or battered back for safety reasons.

Groundwater seepages are not anticipated, if encountered they should be slight and easily catered for by pumping from sumps cut within the excavation.

9.2 Foundations and Floor Slabs

The site investigation confirmed the ground conditions to vary across the site at typical foundation depth, between granular sand and gravel and cohesive glacial till.

However, conventional spread foundations are recommended for the development, either founded in the loose to medium dense sand and gravel, or the firm glacial till, where an allowable bearing pressure of 100kN/m² can be used in the design.

It is possible the foundations may span between the differing ground conditions; in which case it will be necessary to lightly reinforce the foundations. Foundation depths should vary, as a minimum between 0.75 for the sand and gravel and 0.90m for the glacial till below final external ground levels.

However, several of the plots have further considerations.

Plot 4 may encounter the edge of the basement, in which case, deeper foundations may be required with a stepping detail for the strip foundation. It is recommended that Plot 4 be set out and further trial pits excavated to examine the potential foundation construction details.

Plot 6 is in an area where it is intended to remove one of the mature trees. Therefore, the potential for ground heave needs to be considered on removal of the tree. TP 04 excavated nearby encountered interlayered sand and gravel, and glacial till.

The trial pit failed to reveal any evidence of desiccation in the pit and the Atterberg limit testing on the clay confirmed it to be of low plasticity.

It is therefore recommended that this plot be founded in the underlying sand and gravel at a depth of around 1.20m. Due to the potential for ground heave a suspended floor slab is recommended for this plot. It is also recommended that the foundation excavations for Plot 6 should be inspected by a suitably qualified person to check for signs of possible desiccation.

Floor slabs for the other plots could be ground bearing designed assuming a "Poor" formation as described in Reference 7.

9.3 Drainage

The soakaway testing has recorded permeabilities in the range of 2.37 to 5.86 x 10^{-6} m/sec. However, these are considered to be conservative, as the values were extrapolated, with likely

values of 1 x 10^{-7} m/sec considered more likely due to the high silt/clay content of the sand and gravel.

This is at the limit of the recommended values for soakaway drainage, therefore, the use of soakaways is unlikely to be suitable, although permeable paving may be an option in the near surface sand and gravel.

However, it is understood that agreement has already been reached with the Local Authority to attenuate the storm water and discharge it into the existing storm water network, with an attenuation area set aside on the southern site boundary, see Figure 4.

9.4 Reuse of Materials

As discussed above, additional testing of the topsoil is recommended before a decision can be made on its suitability to be included in the works.

However, the crushed building will be suitable for reuse as a capping or structural fill. In addition, the hardcore beneath the tarmac hardstanding may be suitable for re-use, certainly for backfilling the basement.

In addition, the sand and gravel derived from foundation and drainage excavations will be suitable for backfilling the basement.

9.5 Roads and Hard standings

The California Bearing Ratio (CBR) test results did not give a consistent range of values.

In the existing car parking areas in the northern section of the site, lower bound values in the glacial deposit were between 5 and 8%, which is consistent with the material description.

In the grassed areas CBR values below the topsoil were generally between 4 and 6%, although a value of 0% was recorded.

Therefore, based on the test results and a description of the materials a CBR value of 5% should be assumed in the design. Any formations in the glacial till with be subject to rapid deterioration on exposure to wet weather and trafficking, therefore, they should be left slightly high until construction is imminent.

Formations should be proof rolled, and any soft/loose area identified excavated locally to around 300mm depth and replaced with suitable well compacted granular material.

9.6 Protection of Buried Concrete

The chemical test results have confirmed that chemical attack of buried concrete is not an issue, and buried concrete can be designed as the following classes, in accordance with Reference 8.

- AC – 1,
- DS – 1.

9.7 Landfill and Radon Gas

No nearby landfills have been identified that could be a source of landfill gas. Whilst made ground was recorded surrounding the site it is inert colliery spoil associated with mining operations.

The risk of mine gas can also be discounted due to the significant depth to any workings and the lack of any shafts on site.

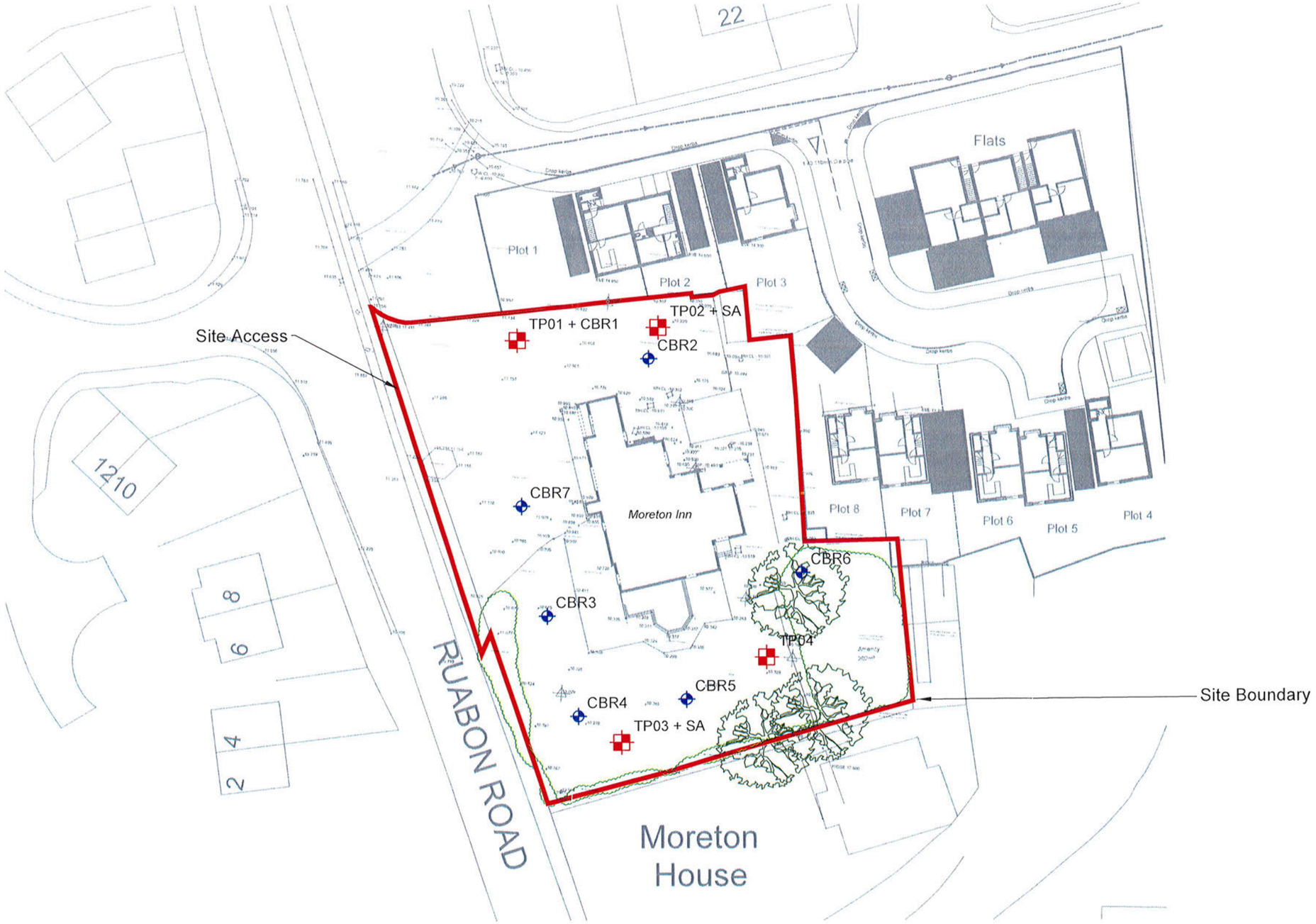
However, the site is in an intermediate radon area, and as such basic radon protection measures will be required for the development. These will need to be constructed in accordance with Reference 9.

REFERENCES

1. The Geology of the Country around Wrexham (Part II), British Geological Survey, 1928
2. Applied geological mapping in the Wrexham area: geology and land use planning, Technical Report WA/91/4, British Geological Survey, 1991.
3. BS 5930:2015, Code of Practice for Site Investigation.
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6. Manual of Contract Documents for Highway Works, Volume 1, Specification for Highway Works - Series 600, Department of Transport, 2016.
7. Cement & Concrete Association, Concrete Ground floors: their design, construction and finish, Deacon, R, Publication 48.034, 1986.
8. BRE Special Digest 1, 2005, Concrete in Aggressive Ground.
9. Radon: Guidance on protective measures for New Buildings, BRE 211, 2007.

FIGURES


Site Location
Rhosllanerchrugog
Johnstown
Ruabon / Rhiwabon
Penycae
Acrefair
Rhosymedre
Cefn mawr
Rhosymadoc
Sontley
Eyton
Park Eyton
Wynnstay Park
Trefechan
Stryt issa
Afon Eitha
Pen-y-bryn
Tyddyn-uchaf
Plas-uchaf
Wynn Hall
Garden Hall
Moreton Below
Pentre clawdd
Llwyn Howell
Old Crymbles
Cae-gwyrdd
Plas Goulbourn
Kennels
Crab Mill
Bryn Pen-y-lan
Pen-y-lan
Wynnstay Hall
Belan Placed
Pen-y-lion
Cefn bychan
Pont Cysyllte
Trevor
Garth Trevor
Nant Uchaf
Plas yn Wern
Plas Madoc
Home Fm
James Fm
Columbine
Cinders
Lower Park Eyton
Manor Sm
Old Hall
Rosehill
Erbistock Hall
Top Fm
Crabtree Green
Crymbal Fm
Gyfelia
Cock Bank
Pentre Mailyn
Old Sontley
Middle Sontley
Sontley Lodge Fm
Old Hall Fm
Bentley's
Eyton Grange
Eyton Bank
Moreton Fm
Quarry
Brick Wks
Haton Ho
Haton Hall
Afon-Eitha
Garden Lodge
Wynn Dell
Sunny Bank
Nant Uchaf Fm
Tref-y-nant
Cemy Chemical Wks
Cemetery
Cemetery
Cemetery



SCALE 1:500 @ A3

Legend

(SA) Soakaway Test

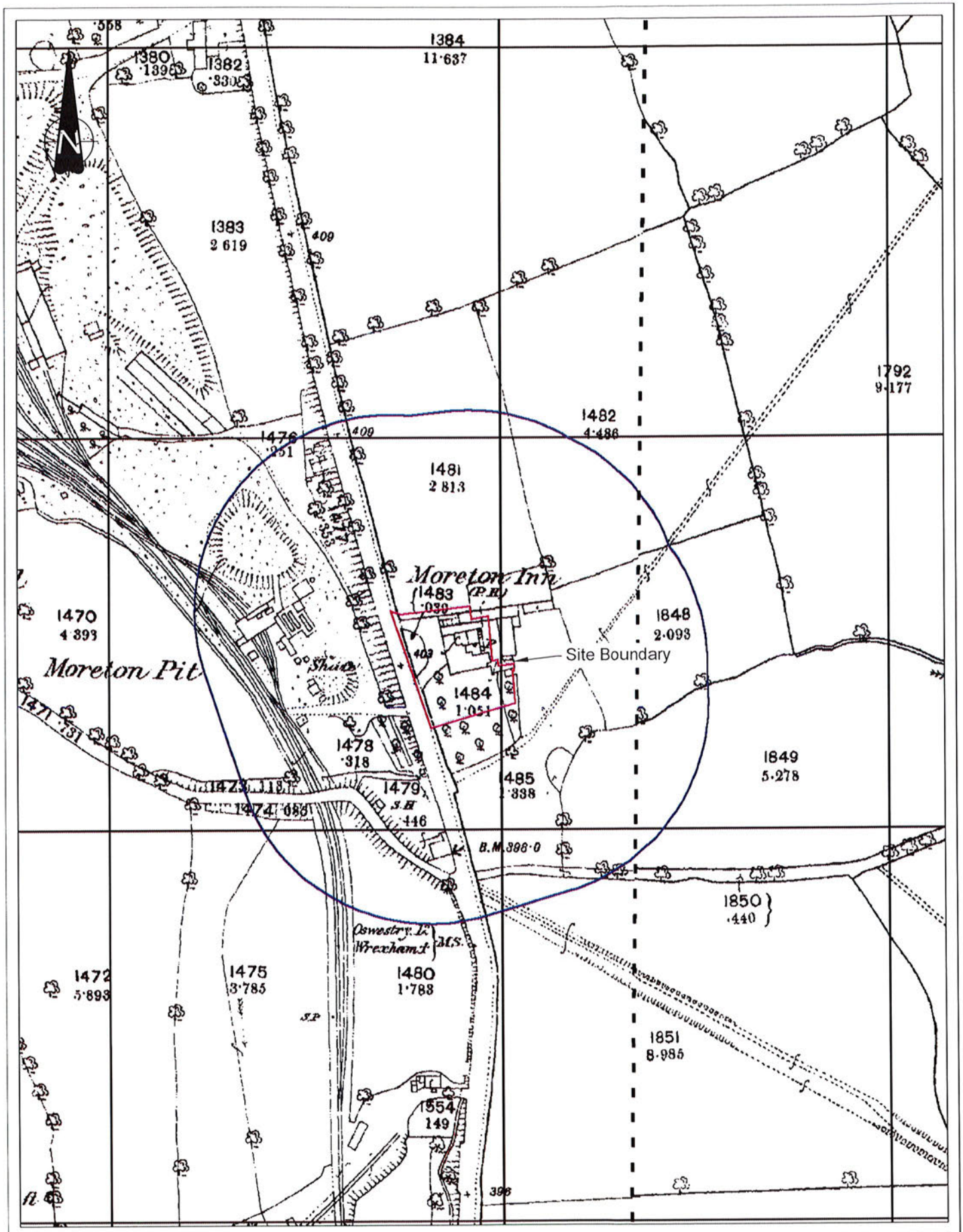
Trial Pit Location

CBR Test Location

Figure Title

Existing Site Layout & Locations of Exploratory Holes

FIGURE 2

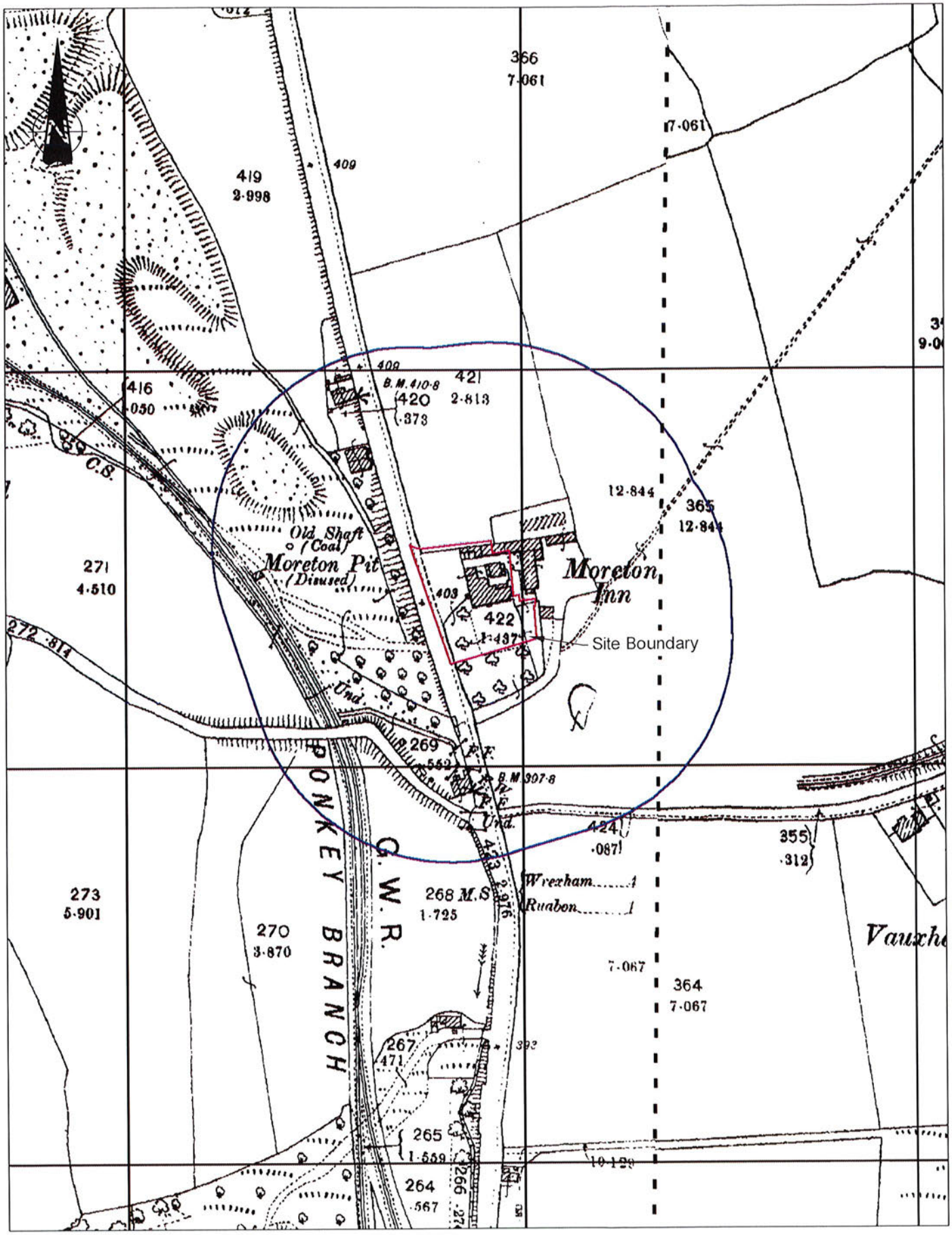


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Figure Title

History
1874 OS Plan

FIGURE 3a

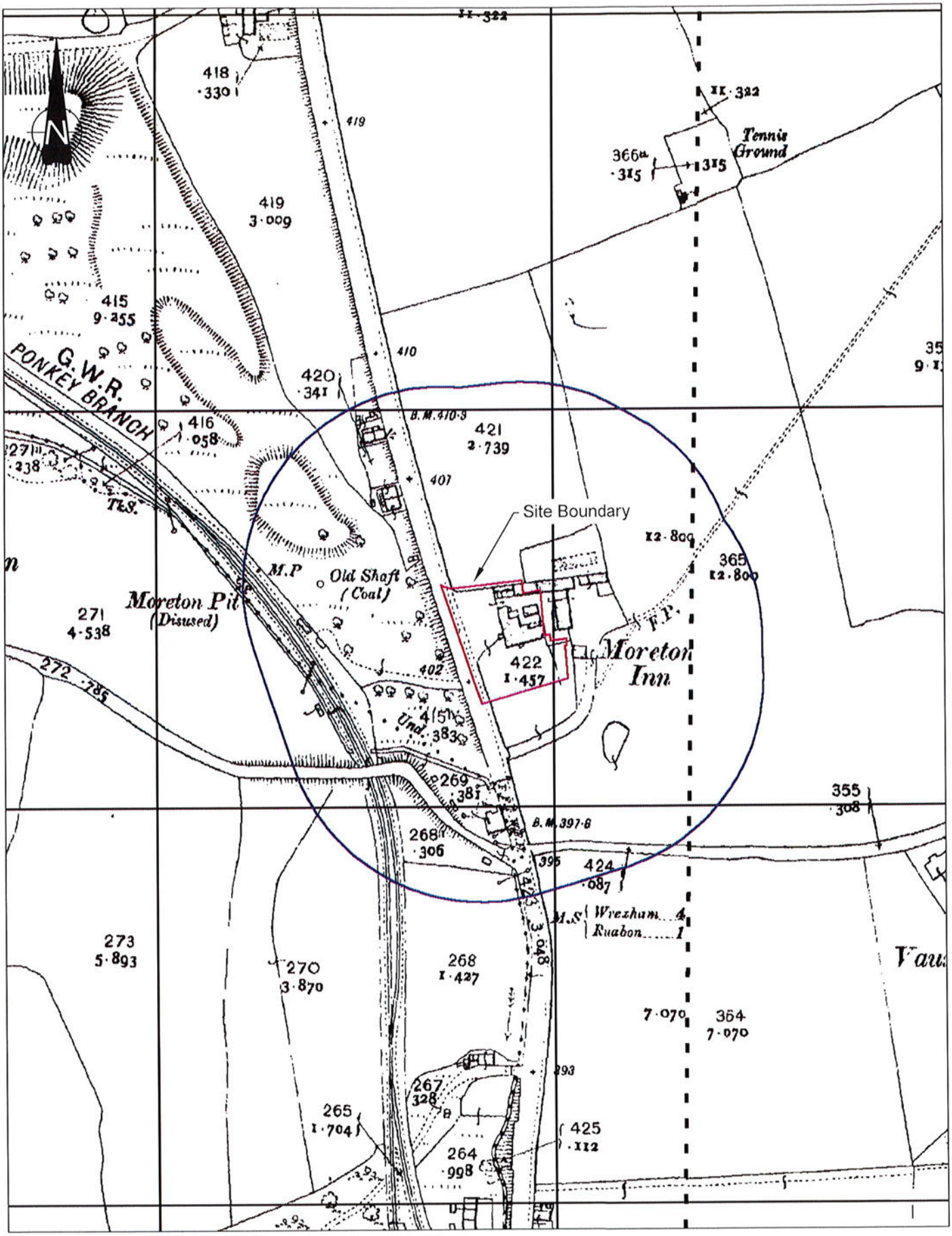


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Figure Title

History
1900 OS Plan

FIGURE 3b

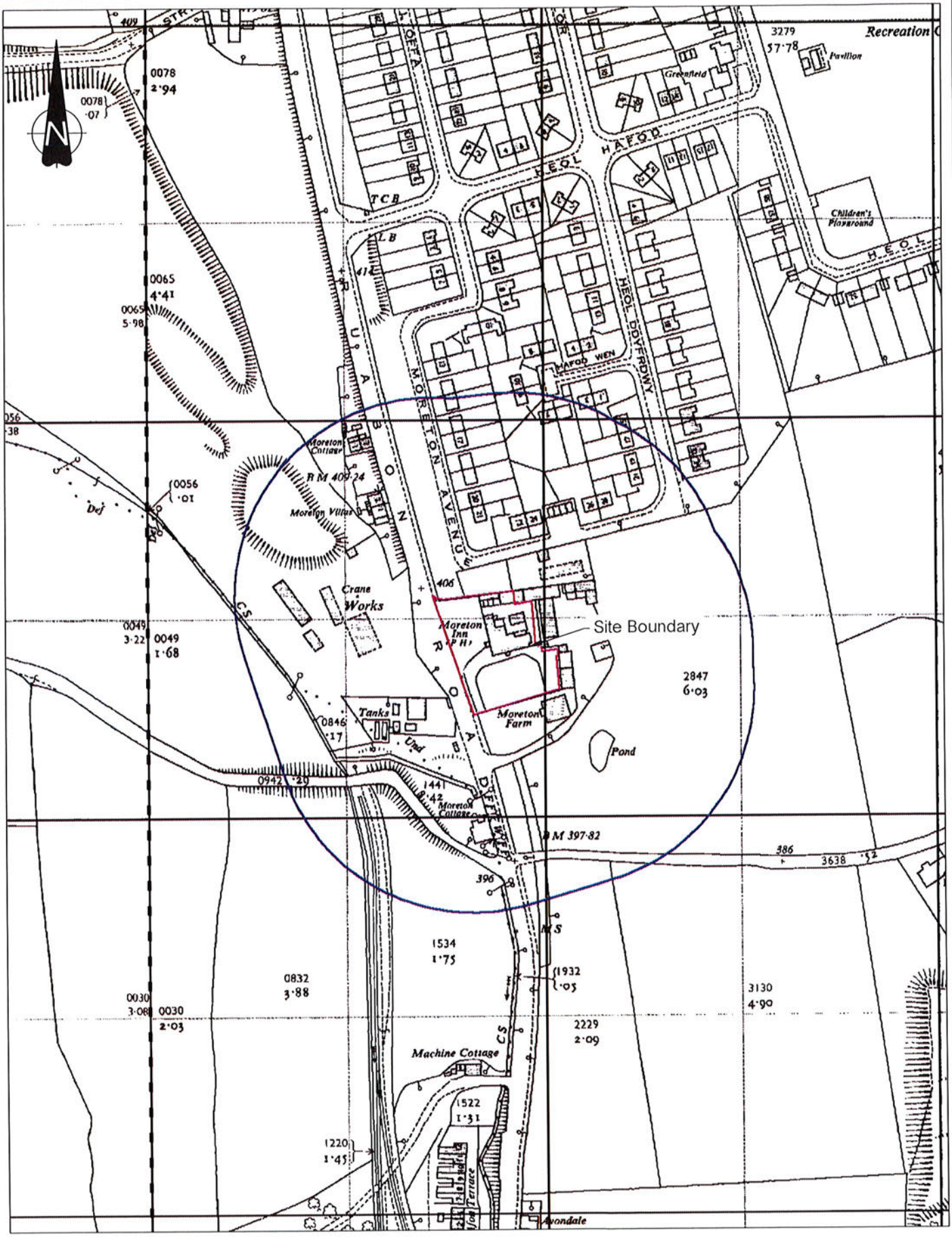


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Figure Title

History
1912 OS Plan

FIGURE 3c

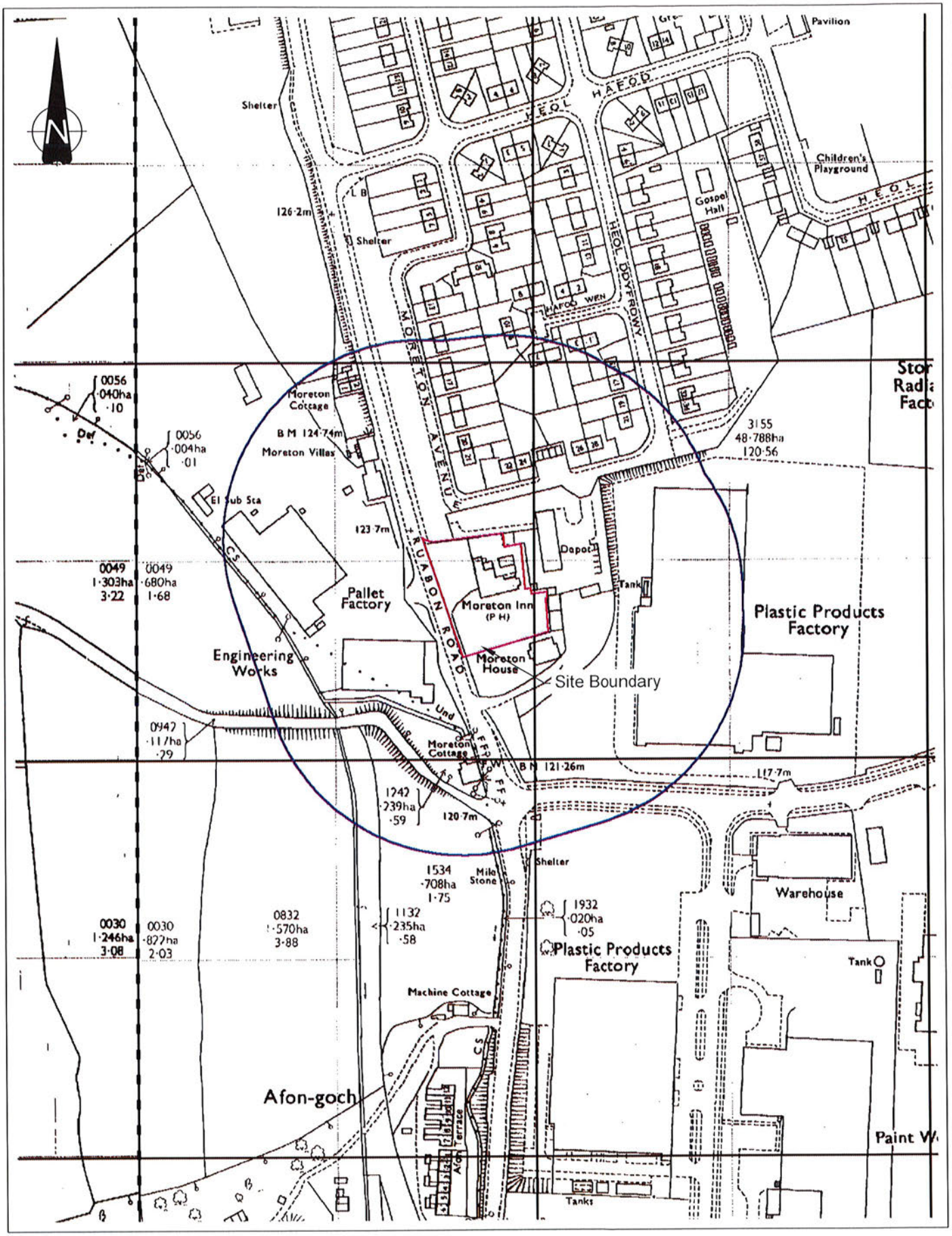


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Figure Title

History
1961 OS Plan

FIGURE 3d

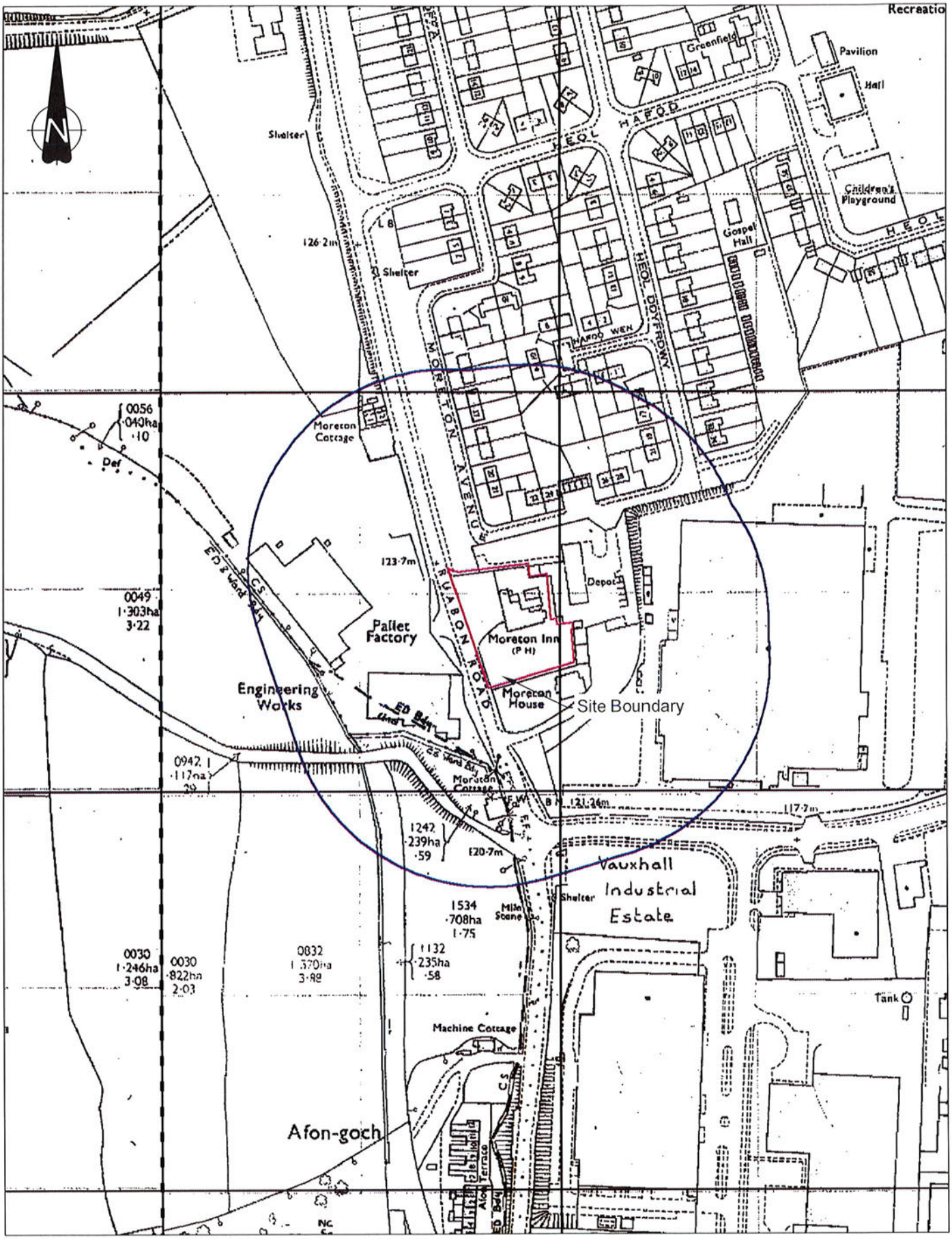


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Figure Title

History
1974 OS Plan

FIGURE 3e

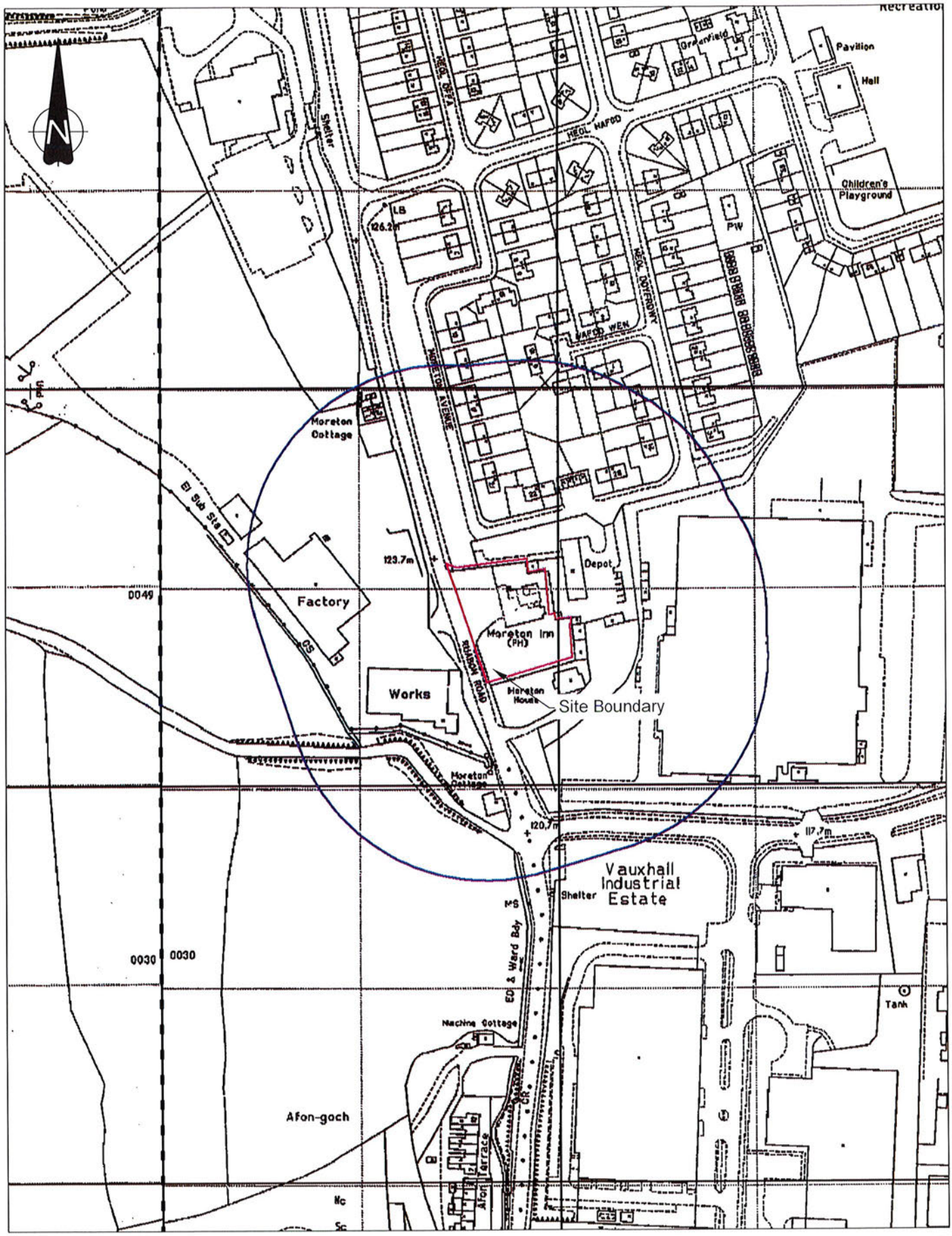


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Figure Title

History
1989 OS Plan

FIGURE 3f



SCALE 1:2,500 @ A4

Figure Title

History
1992 OS Plan

FIGURE 3g



SCALE 1:2,500 @ A4

Figure Title

Aerial
2001 Photograph

FIGURE 3h

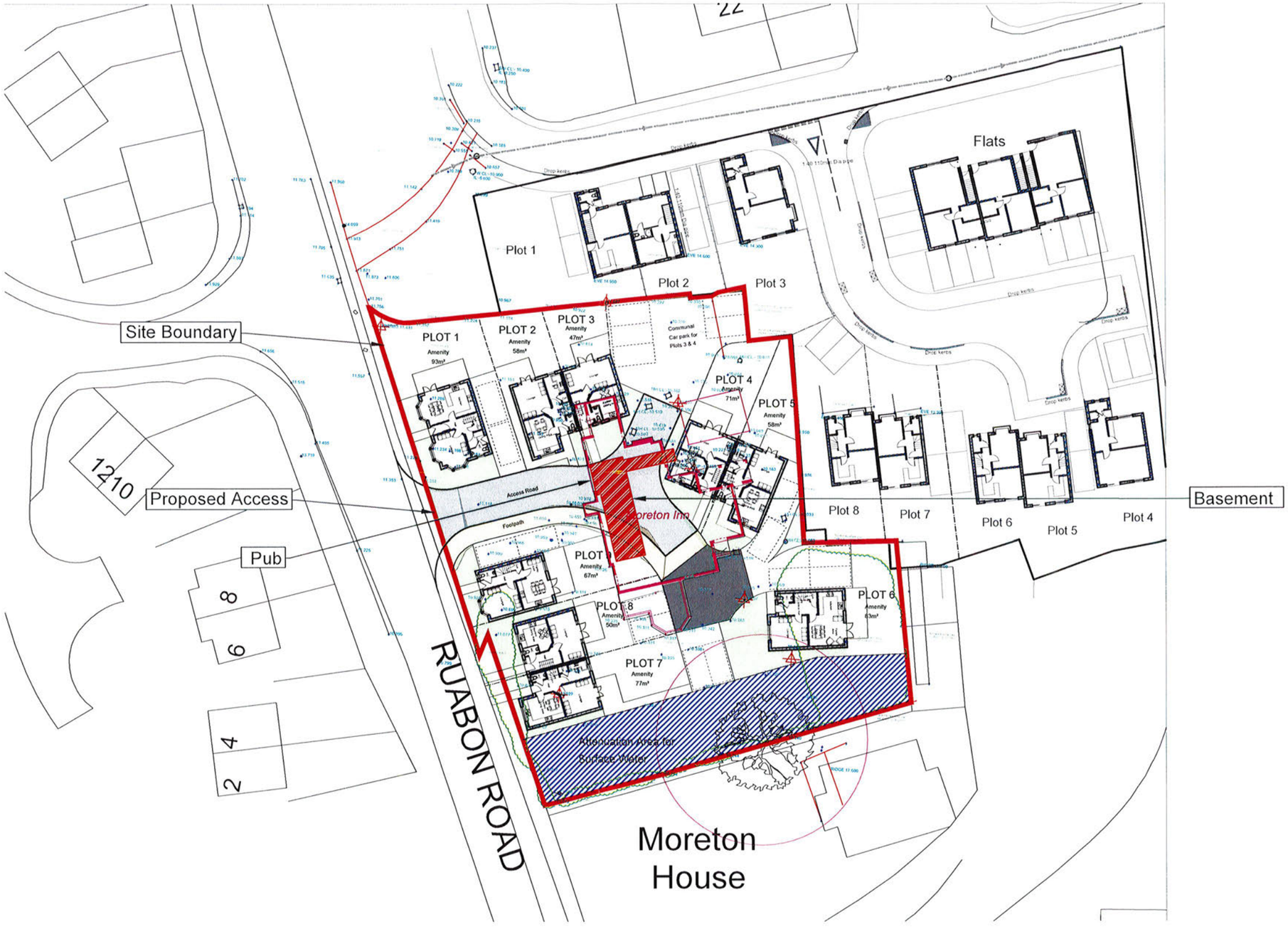


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Figure Title

PROPOSED DEVELOPMENT

FIGURE 4



SCALE 1:500 @ A3

Figure Title

Constraints Drawing

FIGURE 5

APPENDIX A

SITE PHOTOGRAPHS



Photograph 1 Looking east at the existing building on the site



Photograph 2 – In the car park near the entrance looking east towards the rear of the site



Photograph 3 – In the north east corner of the site looking east at access gates to the rear



Photograph 4 – In north east corner of the site looking west to Ruabon Road and the site entrance



Photograph 5 – In the car park adjacent to the building entrance looking south to the grassed area and TP03



Photograph 6 - At the TP03 location looking north towards TP01



Photograph 7 – At the TP03 location looking east towards TP04



Photograph 8 – Adjacent to TP04 looking north down the rear of the building and east elevation

APPENDIX B

COAL AUTHORITY REPORT

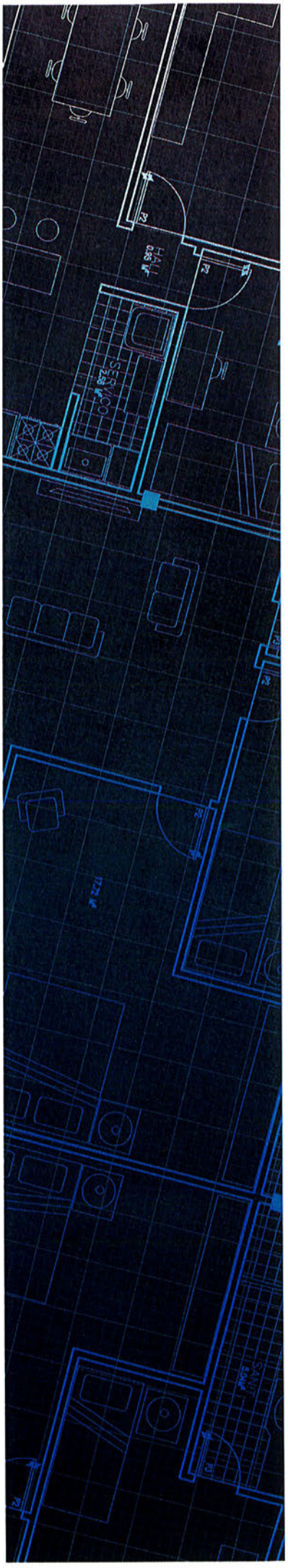
The Coal Authority

Consultants

Coal Mining Report

Moreton Inn
Moreton Inn
Ruabon Rd, Rhosllanerchrugog
Rhosllanerchrugog
Wrexham
LL14 6PU

Date of enquiry:	16 February 2021
Date enquiry received:	16 February 2021
Issue date:	16 February 2021
Our reference:	51002393079001
Your reference:	2478AB



Consultants
Coal Mining Report

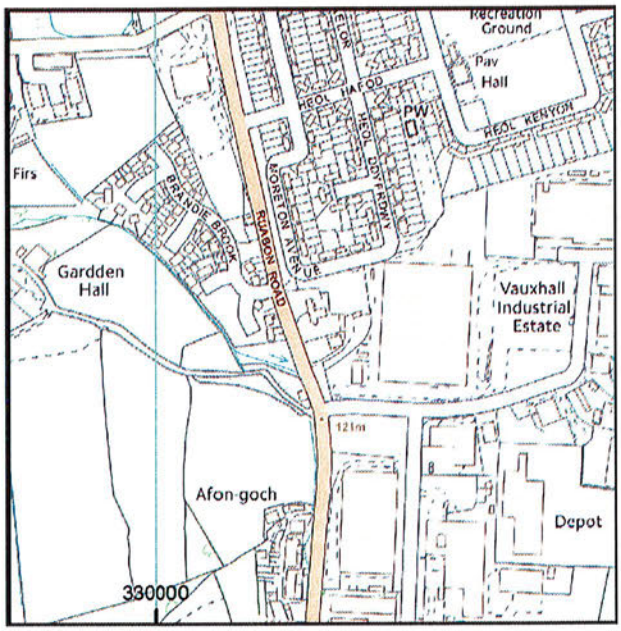
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GROUNDSOLVE LTD

Enquiry address

Moreton Inn
Moreton Inn
Ruabon Rd, Rhosllanerchrugog
Rhosllanerchrugog
Wrexham
LL14 6PU



Approximate position of property

Map data

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NG18 4RG

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/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
MORETON	STONE	Coal	7BNZ	155	South-West	6.0	East	100	1870
MORETON	STONE	Coal	7BNY	156	West	6.0	East	100	1871
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	38WX	170	West	6.0	East	100	1872
unnamed	QUAKER	Coal	38UC	376	South	7.0	East	130	1890
unnamed	QUAKER	Coal	3ACD	377	South-East	8.0	East	130	1890
unnamed	MAIN	Coal	38RZ	406	South-East	7.0	East	195	1890
unnamed	MAIN	Coal	38S1	410	North-East	7.0	East	195	1890
unnamed	HALF YARD / QUEEN	Coal	383P	476	South-East	1.7	West	110	1931

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	330345-010	330080 345514	This entry has been filled and reinforced concrete capped to an unknown specification by the site owners in 1969.	Coal	Tilgate Pallets Ltd 04/11/1969
Shaft	330345-011	330092 345490	This entry has been filled and reinforced concrete capped to an unknown specification by the site owners in 1969.	Coal	Tilgate Pallets Ltd 04/11/1969

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Abandoned mine plan catalogue numbers

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

NW1506	NW1504	NW1508
NW1498	NW1500	NW1501
0	NW1499	NW1507

Our records show we have more plans than those shown above which could affect the enquiry boundary.

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

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

Please refer to the "Summary of findings" map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

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

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

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

Court orders
None recorded.

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

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

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

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

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Section 4 – Further information

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

Development advice

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

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

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Section 5 – Data definitions

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

Past underground coal mining

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

Probable unrecorded shallow workings

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

Spine roadways at shallow depth

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

Mine entries

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

Abandoned mine plan catalogue numbers

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

Outcrops

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

Geological faults, fissures and breaklines

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

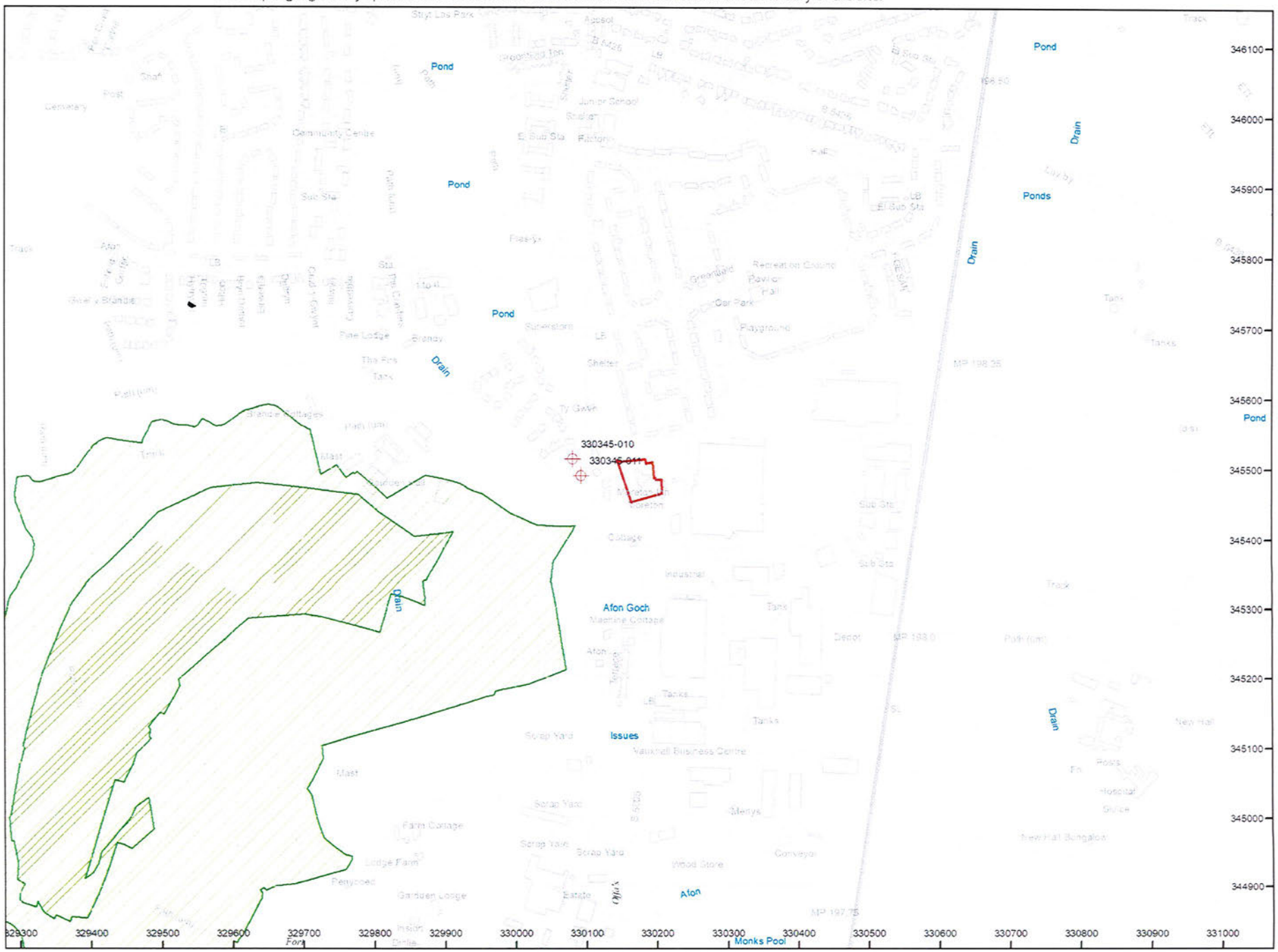
The Coal Authority

Summary of findings

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

Key

- Approximate position of the enquiry boundary shown
- Disused mine shaft
- Unlicensed opencast site



How to contact us

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+44 (0)1623 637 000 (International)
www.groundstability.com

APPENDIX C

ENVIROCHECK REPORT

Envirocheck®
LANDMARK INFORMATION GROUP

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
273467105_1_1

Customer Reference:
2478AB

National Grid Reference:
330170, 345490

Slice:
A

Site Area (Ha):
0.26

Search Buffer (m):
1000

Site Details:

Moreton Inn, Ruabon Road
Ruabon
WREXHAM
LL14 6PU

Client Details:

Mr M Scott
GroundSolve Ltd
Unit 1
Well House Barns
Chester Road
Bretton
Flintshire
CH4 0DH

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Introduction

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

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3		3	1	26
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 10			2	
Integrated Pollution Prevention And Control	pg 10			7	7
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 14			5	2
Local Authority Pollution Prevention and Control Enforcements	pg 15			3	
Nearest Surface Water Feature	pg 15		Yes		
Pollution Incidents to Controlled Waters	pg 15		2	3	8
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 17				3
Water Abstractions	pg 18				1
Water Industry Act Referrals	pg 18			1	1
Groundwater Vulnerability Map	pg 18	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 18	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 18	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 18		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 19		6	14	37

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 26			1	2
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 26			3	3
Licensed Waste Management Facilities (Locations)	pg 27		2	4	12
Local Authority Landfill Coverage	pg 31	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 31	1	1	3	8
Potentially Infilled Land (Water)	pg 32		1	3	5
Registered Landfill Sites	pg 33				4
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 35			1	1
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 36	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 36	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 37			3	28
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 43	Yes	n/a	n/a	n/a
Mining Instability	pg 43	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 43	Yes	Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 43	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 43		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 43	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 44	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 44	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 44	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 44	Yes	n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 45		9	25	35
Fuel Station Entries					
Points of Interest - Commercial Services	pg 50		3	5	15
Points of Interest - Education and Health	pg 52				1
Points of Interest - Manufacturing and Production	pg 52		2	26	8
Points of Interest - Public Infrastructure	pg 55		4	3	9
Points of Interest - Recreational and Environmental	pg 57		1	1	6
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 58		1	3	3
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 58		1		
Special Areas of Conservation	pg 58		1		
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (E)	0	1	330175 345485
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	137	1	330175 345650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (W)	144	1	330000 345485
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	156	1	330000 345450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	172	1	330000 345400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	193	1	330000 345350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	194	1	329950 345500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	194	1	329950 345485
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	204	1	329950 345450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	211	1	330050 345700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	220	1	329950 345400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	244	1	329900 345485
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	247	1	329900 345550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	252	1	329900 345450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	294	1	329950 345250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	297	1	329850 345550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	323	1	330000 345800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	337	1	330175 345850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	346	1	329800 345550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	349	1	329850 345300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	353	1	330450 345750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	370	1	329950 345150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	371	1	329800 345650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (SW)	389	1	330000 345100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	394	1	329750 345500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	396	1	329750 345550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	404	1	330300 345900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	427	1	330600 345300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	446	1	329700 345550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	449	1	329800 345800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	449	1	329850 345850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (S)	452	1	330175 345000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	462	1	330000 345950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (S)	481	1	330000 345000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	482	1	329700 345700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (NW)	487	1	329850 345900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	494	1	330700 345450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	498	1	330700 345550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	498	1	330700 345400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	500	1	329950 345000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Kwik Save Group Ltd. Property Type: Undefined Or Other Location: Kwik Save Foodstore Ruabon Road Joh, Ruabon Road Johnstown Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0177401 Permit Version: 1 Effective Date: 8th December 1988 Issued Date: 8th December 1988 Revocation Date: 22nd December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Un-Named Stream **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A13NW (W)	114	2	330030 345520
2	**Discharge Consents** Operator: Mr Carl Scourfield Property Type: Domestic Property (Single) Location: Land To Rear Of Machine Cottage, Ruabon Road, Wrexham, Clwyd, LI14 6ra Authority: Natural Resources Wales Catchment Area: River Dee Reference: Npswqd003654 Permit Version: 1 Effective Date: 5th August 2008 Issued Date: 5th August 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Ground Waters Via A Soakaway **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (S)	205	2	330123 345251
2	**Discharge Consents** Operator: Mr Carl Scourfield Property Type: Domestic Property (Single) Location: Land To Rear Of Machine Cottage, Ruabon, Wrexham, Clwyd, LI14 6ra Authority: Environment Agency, Midlands Region Catchment Area: Perry Catchment Reference: Npswqd003654 Permit Version: 1 Effective Date: 5th August 2008 Issued Date: 5th August 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Groundwaters Via Soakaway **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (S)	205	3	330123 345251
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Industrial Parks & Estates Location: Johnstown Vauxhall Industrial Estat, Vauxhall Industrial Estate, Ruabon, Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0047101 Permit Version: 1 Effective Date: 17th January 1968 Issued Date: 17th January 1968 Revocation Date: 6th March 2007 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Un-Named Trib.Of Black Brook **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A14SW (E)	320	2	330520 345400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: Trevalyn Estates Ltd Property Type: Industrial Parks & Estates Location: Gardden Ind Estate Tatham Road Rua, Tatham Road, Ruabon, Wrexham Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: CM0090001 Permit Version: 1 Effective Date: 19th November 1980 Issued Date: 19th November 1980 Revocation Date: Not Supplied Discharge Type: Sewage And Trade Combined - Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Goch **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A8NE (S)	553	2	330200 344900
5	**Discharge Consents** Operator: Clwyd Compounders Limited Property Type: Other Rubber Manufacture Location: Septic Tank Serving Unit 1, Gardden, Unit 1, Gardden Industrial Estate, Ruabon, Wrexham, LI14 6rg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Eprrb3097tc Permit Version: 1 Effective Date: 7th January 2014 Issued Date: 7th January 2014 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Groundwater **Status: New issued under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	555	2	330083 344903
5	**Discharge Consents** Operator: Clwyd Compounders Limited Property Type: Not Supplied Location: Septic Tank Serving Unit 1, Gardden, Unit 1, Gardden Industrial Estate, Ruabon, Wrexham, LI14 6rg Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Rb3097tc Permit Version: 1 Effective Date: 7th January 2014 Issued Date: 7th January 2014 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Into Land Receiving Water: Groundwater Via Infiltration System **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	555	2	330083 344903
6	**Discharge Consents** Operator: Wrg Property Type: Not Supplied Location: Gardden Lodge Landfill Site Ruabon, Tatham Road, Ruabon Wrexham Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0180301 Permit Version: 3 Effective Date: 20th May 2000 Issued Date: 4th May 1993 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Afon Goch **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	622	2	330150 344830

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: Shanks Waste Services Ltd Property Type: Unspecified Tip Location: Gardden Lodge Landfill Site Ruabon, Tatham Road, Ruabon Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0180301 Permit Version: 2 Effective Date: 4th May 1993 Issued Date: 4th May 1993 Revocation Date: 19th May 2000 Discharge Type: Waste Site - Unspecified Discharge Environment: Not Supplied Receiving Water: Afon Goch **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A8NW (S)	622	2	330150 344830
6	**Discharge Consents** Operator: Shanks & Mcewan (Northern) Ltd Property Type: Unspecified Tip Location: Gardden Lodge Landfill Site Ruabon, Tatham Road, Ruabon Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0180301 Permit Version: 1 Effective Date: 21st March 1989 Issued Date: 21st March 1989 Revocation Date: 3rd May 1993 Discharge Type: Waste Site - Unspecified Discharge Environment: Not Supplied Receiving Water: Afon Goch **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A8NW (S)	622	2	330150 344830
7	**Discharge Consents** Operator: Trevalyn Estates Ltd Property Type: Industrial Parks & Estates Location: Gardden Ind Estate Tatham Road Rua, Tatham Road, Ruabon, Wrexham Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: CM0090101 Permit Version: 1 Effective Date: 19th November 1980 Issued Date: 19th November 1980 Revocation Date: Not Supplied Discharge Type: Sewage And Trade Combined - Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Goch **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A8SE (S)	653	2	330200 344800
8	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Fford Offa Cso, Ne 43 Ffordd Offa, Rhosllanerchrugog, Wrexham, Ll14 2ey Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cg0359501 Permit Version: 2 Effective Date: 29th August 2019 Issued Date: 29th August 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Watercourse **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	691	2	329808 346115

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Ffordd Offa Rhoslanerchrugog Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: CG0359501 Permit Version: 1 Effective Date: 21st July 1994 Issued Date: 21st July 1994 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Watercourse **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	723	2	329770 346130
8	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Ffordd Offa Rhoslanerchrugog Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cg0359501 Permit Version: 1 Effective Date: 21st July 1994 Issued Date: 21st July 1994 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Watercourse **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	723	2	329770 346130
9	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Johnstown Bangor Road - Sso Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0197501 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 4th March 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Aberderfyn **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	722	2	330800 345900
9	**Discharge Consents** Operator: Director And General Manager Property Type: Extraction Of Stone, Gravel Etc. Location: Hafod Quarry Bangor Road, Ruabon, Wrexham, LI14 6et Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0397901 Permit Version: 1 Effective Date: 25th March 2002 Issued Date: 25th March 2002 Revocation Date: 1st November 2004 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: Aberderfyn Brook **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	731	2	330790 345930

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Johnstown Combined Sewerage System Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0050101 Permit Version: 3 Effective Date: 31st March 2007 Issued Date: 31st March 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Black Brook **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	808	2	330900 345900
10	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Johnstown Combined Sewerage System Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0050101 Permit Version: 3 Effective Date: 31st March 2007 Issued Date: 31st March 2007 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Black Brook **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	808	2	330900 345900
10	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Johnstown Combined Sewerage System Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0050101 Permit Version: 2 Effective Date: 31st March 2009 Issued Date: 8th March 2005 Revocation Date: 30th March 2007 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Black Brook **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	808	2	330900 345900
10	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Johnstown Combined Sewerage System Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0050101 Permit Version: 1 Effective Date: 20th May 1968 Issued Date: 20th May 1968 Revocation Date: 30th March 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Black Brook **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	808	2	330900 345900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Johnstown Combined Sewerage System Cso, Nr 106 Bangor Rd, Ruabon, Wrexham, LI14 6et Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0050101 Permit Version: 4 Effective Date: 21st October 2019 Issued Date: 21st October 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Black Spool **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	815	2	330850 345991
12	**Discharge Consents** Operator: Clwyd County Council Property Type: Domestic Property (Single) Location: Ruabon New Hall Old Peoples' Home Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0054401 Permit Version: 1 Effective Date: 14th February 1969 Issued Date: 14th February 1969 Revocation Date: 5th April 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Pond Overflow Into Goch **Status:** **Consent expired** Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	834	2	330870 344960
13	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso At Ruabon Combined Sewerage System, New Hall Road, Ruabon, Wrexham, LI15 6au Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0050201 Permit Version: 4 Effective Date: 21st October 2019 Issued Date: 21st October 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Afon Goch **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	887	2	330817 344821
13	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Ruabon Combined Sewerage System, New Hall Road, Ruabon Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0050201 Permit Version: 3 Effective Date: 31st March 2009 Issued Date: 31st March 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Goch **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	887	2	330817 344821

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Ruabon Combined Sewerage System, New Hall Road, Ruabon Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0050201 Permit Version: 3 Effective Date: 31st March 2009 Issued Date: 31st March 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Goch **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	887	2	330817 344821
14	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Ruabon New Hall Road - Sso Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0199401 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 4th March 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Black Brook **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	910	2	330700 344700
15	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Ruabon Combined Sewerage System, New Hall Road, Ruabon Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0050201 Permit Version: 2 Effective Date: 30th March 2009 Issued Date: 21st January 2005 Revocation Date: 30th March 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Goch **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	974	2	331000 344900
15	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Ruabon Combined Sewerage System, New Hall Road, Ruabon Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0050201 Permit Version: 1 Effective Date: 20th May 1968 Issued Date: 20th May 1968 Revocation Date: 30th March 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Goch **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	974	2	331000 344900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Discharge Consents** Operator: Hafod Quarries Ltd Property Type: Extraction Of Stone, Gravel Etc. Location: Hafod Clay Pit Ruabon Wrexham, Ruabon Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cg0323101 Permit Version: 2 Effective Date: 14th June 2000 Issued Date: 27th July 1992 Revocation Date: 1st November 2004 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Not Supplied Receiving Water: Aberderfyn Brook **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A14NE (E)	978	2	331170 345650
16	**Discharge Consents** Operator: Hafod Quarries Ltd Property Type: Extraction Of Other Minerals Location: Haford Clay Pit Ruabon Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: CG0323101 Permit Version: 1 Effective Date: 27th July 1992 Issued Date: 27th July 1992 Revocation Date: 13th June 2000 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Aberderfyn Brook **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	980	2	331172 345648
17	**Integrated Pollution Controls** Name: Morgan Advanced Ceramics Ltd Location: Vauxhall Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6HY Authority: Environment Agency, Welsh Region Permit Reference: BC9305 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.5 A (F) Inorganic Chemical processes within the Chemical Industry **Status: Revoked - Now IPPC** Positional Accuracy: Manually positioned to the address or location	A13NE (E)	303	3	330487 345597
17	**Integrated Pollution Controls** Name: Morgan Advanced Ceramics Ltd Location: Vauxhall Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6HY Authority: Environment Agency, Welsh Region Permit Reference: AO0164 Dated: 28th November 1994 Process Type: IPC application for process that was regulated by HMIP for air releases under previous legislation Description: 4.5 A (F) Inorganic Chemical processes within the Chemical Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A13NE (E)	303	3	330487 345597
18	**Integrated Pollution Prevention And Control** Name: Ruabon Electro Ceramics Location: Ruabon Electro Ceramics, Vauxhall Industrial Estate, Ruabon,, WREXHAM, Clwyd, LL14 6HY Authority: Natural Resources Wales Permit Reference: PP3834CB Original Permit Ref: Zp3831cu Effective Date: 13th April 2018 **Status: Effective** Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 PART A (1) D) Activity Description: Not Supplied Primary Activity: Y Activity Code: 5.3 A(1) a) (ii) Activity Description: Not Supplied Primary Activity: N	A13NE (E)	286	2	330470 345594

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	**Integrated Pollution Prevention And Control** Name: Morgan Technical Ceramics Limited Location: Ruabon Electro Ceramics, Vauxhall Industrial Estate, Ruabon,, WREXHAM, Clwyd, LL14 6HY Authority: Natural Resources Wales Permit Reference: ZP3831CU Original Permit Ref: Pp3834cb Effective Date: 26th September 2012 **Status: Effective** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 A(1) (D) Activity Description: Inorganic Chemicals; Using Etc Of Antimony Etc (Unless Otherrwise Prescrined) (Unless Glazing Etc) Primary Activity: Y	A13NE (E)	286	2	330470 345594
18	**Integrated Pollution Prevention And Control** Name: Morgan Electro Ceramics Ltd Location: Ruabon Electro Ceramics, Vauxhall Industrial Estate, Ruabon,, WREXHAM, Clwyd, LL14 6HY Authority: Natural Resources Wales Permit Reference: UP3938HY Original Permit Ref: By0364ib Effective Date: 25th January 2011 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Simple Standard Variation Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 A(1) (D) Activity Description: Inorganic Chemicals; Using Etc Of Antimony Etc (Unless Otherrwise Prescrined) (Unless Glazing Etc) Primary Activity: Y	A13NE (E)	286	2	330470 345594
18	**Integrated Pollution Prevention And Control** Name: Morgan Electro Ceramics Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HY Authority: Natural Resources Wales Permit Reference: QP3232UM Original Permit Ref: By0364ib Effective Date: 23rd August 2007 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 A(1) (D) Activity Description: Inorganic Chemicals; Using Etc Of Antimony Etc (Unless Otherrwise Prescrined) (Unless Glazing Etc) Primary Activity: Y	A13NE (E)	286	2	330470 345594
18	**Integrated Pollution Prevention And Control** Name: Morgan Electro Ceramics Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HY Authority: Natural Resources Wales Permit Reference: FP3838MT Original Permit Ref: By0364ib Effective Date: 26th February 2007 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 A(1) (D) Activity Description: Inorganic Chemicals; Using Etc Of Antimony Etc (Unless Otherrwise Prescrined) (Unless Glazing Etc) Primary Activity: Y	A13NE (E)	286	2	330470 345594
18	**Integrated Pollution Prevention And Control** Name: Morgan Electro Ceramics Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HY Authority: Natural Resources Wales Permit Reference: NP3338LX Original Permit Ref: By0364ib Effective Date: 18th July 2006 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 A(1) (D) Activity Description: Inorganic Chemicals; Using Etc Of Antimony Etc (Unless Otherrwise Prescrined) (Unless Glazing Etc) Primary Activity: Y	A13NE (E)	286	2	330470 345594

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	**Integrated Pollution Prevention And Control** Name: Morgan Electro Ceramics Ltd Location: Ruabon Electro Ceramics, Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HY Authority: Natural Resources Wales Permit Reference: By0364ib Original Permit Ref: By0364ib Effective Date: 31st August 2005 **Status: Superseded By Variation** Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 A(1) (D) Activity Description: Inorganic Chemicals; Using Etc Of Antimony Etc (Unless Otherrwise Prescrined) (Unless Glazing Etc) Primary Activity: Y	A13NE (E)	286	2	330470 345594
19	**Integrated Pollution Prevention And Control** Name: Hafod Quarry Landfill Site Location: Hafod Landfill Ea/Epr/Pp3139gb/T001, Hafod Quarry And Landfill Site, Bangor Road,,, Johnstown, Wrexham Borough Council, LL14 6ET Authority: Natural Resources Wales Permit Reference: PP3139GB Original Permit Ref: Dp3636zc Effective Date: 6th March 2020 **Status: Effective** Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Located by supplier to within 10m Activity Code: 5.2 A(1) (A) Activity Description: Not Supplied Primary Activity: Y	A14NE (E)	656	2	330860 345540
19	**Integrated Pollution Prevention And Control** Name: Cory Environmental (Central) Ltd Location: Hafod Landfill - Ea/Epr/Pp3139gb/V005, Hafod Quarry And Landfill Site, Bangor Road,,, Johnstown, Wrexham Borough Council, LL14 6ET Authority: Natural Resources Wales Permit Reference: DP3839FS Original Permit Ref: Pp3139gb Effective Date: 7th February 2012 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Standard Positional Accuracy: Located by supplier to within 10m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y Activity Code: 1.1 A(1) (B) (III) Activity Description: Combustion; Waste Derived Fuel Greater Or Equal To 3Mw But Less Than 50Mw Primary Activity: N	A14NE (E)	656	2	330860 345540
19	**Integrated Pollution Prevention And Control** Name: Cory Environmental (Central) Ltd Location: Hafod Landfill - Ea/Epr/Pp3139gb/V005, Hafod Quarry And Landfill Site, Bangor Road,,, Johnstown, Wrexham Borough Council, LL14 6ET Authority: Natural Resources Wales Permit Reference: PP3934TD Original Permit Ref: Pp3139gb Effective Date: 8th June 2010 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Minor Positional Accuracy: Located by supplier to within 10m Activity Code: 1.1 A(1) (B) (III) Activity Description: Combustion; Waste Derived Fuel Greater Or Equal To 3Mw But Less Than 50Mw Primary Activity: N Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A14NE (E)	656	2	330860 345540

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Integrated Pollution Prevention And Control** Name: Cory Environmental (Central) Ltd Location: Hafod Landfill Ea/Epr/Pp3139gb/V004, Hafod Quarry And Landfill Site, Bangor Road,,, Johnstown, Wrexham Borough Council, LL14 6ET Authority: Natural Resources Wales Permit Reference: KP3933KM Original Permit Ref: Pp3139gb Effective Date: 25th September 2009 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Substantial Positional Accuracy: Located by supplier to within 10m Activity Code: 1.1 A(1) (B) (III) Activity Description: Combustion; Waste Derived Fuel Greater Or Equal To 3Mw But Less Than 50Mw Primary Activity: N Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A14NE (E)	656	2	330860 345540
19	**Integrated Pollution Prevention And Control** Name: Cory Environmental Ltd Location: Hafod Landfill Ea/Epr/Pp3139gb/V003, Hafod Quarry And Landfill Site, Bangor Road,,, Johnstown, Wrexham Borough Council, LL14 6ET Authority: Natural Resources Wales Permit Reference: GP3034GM Original Permit Ref: Pp3139gb Effective Date: 27th March 2009 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Simple Standard Variation Positional Accuracy: Located by supplier to within 10m Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A14NE (E)	656	2	330860 345540
19	**Integrated Pollution Prevention And Control** Name: Mersey Waste Holdings Associate Ltd Location: Hafod Landfill Ea/Epr/Bs8621iw/T003, Hafod Quarry And Landfill Site, Bangor Road,,, Johnstown, Wrexham Borough Council, LL14 6ET Authority: Natural Resources Wales Permit Reference: Bs8621iw Original Permit Ref: Bs8621iw Effective Date: 8th October 2004 **Status: Superseded By Variation** Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 10m Activity Code: 5.3 A(1) (C) (I) Activity Description: Other Waste Disposal; Non-Hazardous Waste >50T/D By Biological Treatment Primary Activity: N Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A14NE (E)	656	2	330860 345540
20	**Integrated Pollution Prevention And Control** Name: Mersey Waste Holdings Associate Ltd Location: Hafod Landfill, Hafod Quarry And Landfill Site, Bangor Road,,, Johnstown, Wrexham Borough Council, LL14 6ET Authority: Natural Resources Wales Permit Reference: TP3032LA Original Permit Ref: Bs8621iw Effective Date: 28th February 2007 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Minor Positional Accuracy: Manually positioned to the road within the address or location Activity Code: 5.2 A(1) (A) Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste Primary Activity: Y	A14NE (E)	872	2	331014 345813

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**Local Authority Pollution Prevention and Controls** Name: G H A Coaches Location: Unit 11 Vauxhall Industrial Estate, Ruabon, Wrexham, LI14 6ha Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC-PG1-1-1-GHA Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	279	4	330419 345284
22	**Local Authority Pollution Prevention and Controls** Name: Morgan Electro Ceramics Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, LI14 6ha Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: 41 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/45 Surface cleaning **Status: Authorisation certificate surrendered by operator** Positional Accuracy: Located by supplier to within 10m	A13NE (E)	280	4	330474 345564
23	**Local Authority Pollution Prevention and Controls** Name: Flint Ink (Uk) Ltd Location: Vauxhall Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6HU Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG6/44/FI Dated: 9th February 1994 Process Type: Local Authority Air Pollution Control Description: PG6/44 Manufacture of coating materials **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	281	4	330344 345220
24	**Local Authority Pollution Prevention and Controls** Name: Steni Uk Ltd Location: Units 1-4 Vauxhall Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6HA Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG4/2/SF/V1 Dated: 26th September 2001 Process Type: Local Authority Air Pollution Control Description: PG4/2 Processes for the manufacture of fibre reinforced plastics **Status: Site Closed** Positional Accuracy: Manually positioned to the address or location	A8NE (S)	332	4	330284 345142
24	**Local Authority Pollution Prevention and Controls** Name: Rockrite Ltd Location: Vauxhall Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6HA Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: Wcbc/Pg3/1(5)V1 Dated: 14th July 2002 Process Type: Local Authority Air Pollution Control Description: Part B - General Mineral Process (No Specific Reference) **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A8NE (S)	336	4	330261 345131
25	**Local Authority Pollution Prevention and Controls** Name: Bryn Melyn Ltd Location: Unit Ga 05 Gardden Industrial Estate, Ruabon, Wrexham, LI14 6rg Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC-PG1-1-1-BM Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A8SW (S)	659	4	330034 344806
26	**Local Authority Pollution Prevention and Controls** Name: Clwyd Compounders Ltd Location: Gardden Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6RG Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: Wcbc/Pg6/28/Ccv2 Dated: 18th June 1993 Process Type: Local Authority Air Pollution Control Description: PG6/28 Rubber processes **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A8SW (S)	660	4	330090 344797

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	**Local Authority Pollution Prevention and Control Enforcements** Location: Unit 11 Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Type: Air Pollution Control Enforcement Notice Reference: WCBC-PG1-1-1-GHA Date Issued: Not Supplied Enforcement Date: 1st March 2011 Details: Not Supplied Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	279	4	330419 345284
28	**Local Authority Pollution Prevention and Control Enforcements** Location: Units 1-4 Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LI14 6ha Type: Air Pollution Control Enforcement Notice Reference: NOT GIVEN Date Issued: 1st February 2002 Enforcement Date: Not Supplied Details: Section 13 Notice Served Positional Accuracy: Manually positioned to the address or location	A8NE (S)	332	4	330284 345142
28	**Local Authority Pollution Prevention and Control Enforcements** Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LI14 6ha Type: Air Pollution Control Enforcement Notice Reference: NOT GIVEN Date Issued: 1st April 2002 Enforcement Date: Not Supplied Details: Section 80 Notice Served Positional Accuracy: Manually positioned to the address or location	A8NE (S)	336	4	330261 345131
	Nearest Surface Water Feature	A13SW (S)	32	-	330151 345422
29	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Next To, 39 Brandy Lane Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Afon Goch; Overflow Incident Date: 12th January 1998 Incident Reference: 34925 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Weather Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NW (W)	46	3	330100 345500
30	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Surface Water Outfall Location: Aberderfyn Authority: Environment Agency, Welsh Region Pollutant: Mining Water Note: Vandalism Incident Date: 13th May 1995 Incident Reference: 23992 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	189	3	330300 345300
31	**Pollution Incidents to Controlled Waters** Property Type: Road (Lost Load) Location: Factory, Vauxhall Industrial Estate Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Accidental Spillage/Leakage Incident Date: 2nd September 1995 Incident Reference: 25598 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	322	3	330390 345200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	**Pollution Incidents to Controlled Waters** Property Type: Road (Lost Load) Location: Offa Street Authority: Environment Agency, Welsh Region Pollutant: Natural Foam Note: Accidental Spillage/Leakage Incident Date: 23rd April 1995 Incident Reference: 23923 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SE (N)	387	3	330200 345900
33	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Deliberate Act Incident Date: 25th October 1996 Incident Reference: 30285 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	420	3	330350 345070
34	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: High Street, JOHNSTOWN Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Fire water / Foam Note: River Dee Incident Date: 7th September 1997 Incident Reference: 33513 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	506	3	330001 345996
34	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Surface Runoff Location: Ashtons Furnace Bank, WREXHAM Authority: Environment Agency, Welsh Region Pollutant: Cement/Mortar Note: Vandalism Incident Date: 13th October 1994 Incident Reference: 21391 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	510	3	330001 346001
35	**Pollution Incidents to Controlled Waters** Property Type: Waste Handling Facilities Location: Garrden Industrial Estate Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Poor Operational Practise Incident Date: 8th April 1992 Incident Reference: 4175 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8NW (S)	556	3	330100 344900
36	**Pollution Incidents to Controlled Waters** Property Type: Warehouses Location: Petrol Station, JOHNSTOWN Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Accidental Spillage/Leakage Incident Date: 21st October 1995 Incident Reference: 26445 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (N)	591	3	330100 346100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Denis Clay Tip, RUABON Authority: Environment Agency, Welsh Region Pollutant: Farm Land Run-Off Note: Not Supplied Incident Date: 25th January 1992 Incident Reference: 3276 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	658	3	330200 344795
37	**Pollution Incidents to Controlled Waters** Property Type: Domestic/Residential Location: RUABON Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Weather Incident Date: 31st July 1991 Incident Reference: 3002 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	659	3	330205 344795
38	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: The Firs, Brundy Road, JOHNSTOWN Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Fire water / Foam Note: Mechanical/Electrical Failure Incident Date: 1st May 1997 Incident Reference: 32133 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Natural Causes Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	945	3	331000 346000
39	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Snack 24 Garage, Johnstow N, WREXHAM Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Accident Incident Date: 20th February 1997 Incident Reference: 31356 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A23SW (N)	990	3	330100 346500
40	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 12th June 2020 Incident Reference: 2004148 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Inert Materials And Wastes: Soils And Clay	A19SE (NE)	832	2	330966 345823
41	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 12th June 2020 Incident Reference: 2004144 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Inert Materials And Wastes: Soils And Clay	A14NE (E)	884	2	331027 345813

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 25th April 2003 Incident Reference: 153893 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Contaminated Water: Other Contaminated Water	A14NE (E)	989	2	331181 345652
43	**Water Abstractions** Operator: Wrexham County Borough Licence Number: 24/67/7/0181 Permit Version: 100 Location: Afon Goch Authority: Environment Agency, Welsh Region Abstraction: Water Supply Related: Effluent/Slurry Dilution Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Gwenfro Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th February 1974 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	770	3	330760 344930
44	**Water Industry Act Referrals** Name: Morgan Advanced Ceramics Ltd Location: VAUXHALL INDUSTRIAL ESTATE, RUABON, WREXHAM, CLWYD, LL14 6HY Authority: Natural Resources Wales Permit Reference: AU5971 Dated: 18th January 1996 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Application received by the EA but is not yet authorised** Positional Accuracy: Automatically positioned to the address	A13NE (E)	284	2	330470 345589
45	**Water Industry Act Referrals** Name: Robinson Bros (Environmental) Ltd Location: GARDDEN LODGE LANDFILL SITE, RUABON, WREXHAM, CLWYD, LL14 6RD Authority: Natural Resources Wales Permit Reference: AX5099 Dated: 4th October 1996 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations **Status: Application received by the EA but is not yet authorised** Positional Accuracy: Manually positioned to the address or location	A8SW (S)	767	2	330106 344687
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: Medium	A13NW (E)	0	2	330175 345485
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (E)	0	2	330175 345485
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (E)	0	2	330175 345485
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A13SW (W)	1	2	330154 345478

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A13SW (S)	32	5	330151 345422
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A13SW (S)	35	5	330164 345417
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (SW)	71	5	330088 345445
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 323.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A13SW (SW)	75	5	330088 345445
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 201.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A13SE (S)	86	5	330176 345368
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (NW)	245	5	329919 345609
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 56.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A13SW (S)	283	5	330168 345169
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 94.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A12NE (W)	323	5	329830 345588

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 100.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	330	5	329820 345451
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 144.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A8NW (S)	337	5	330162 345115
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	347	5	329832 345352
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	348	5	329833 345347
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SW (E)	370	5	330565 345373
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 842.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SW (E)	372	5	330578 345433
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (SW)	374	5	329841 345264
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 117.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A13SW (SW)	374	5	329841 345264
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A12NE (W)	415	5	329737 345593

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 907.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A12NE (W)	430	5	329726 345610
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.5 Watercourse Level: Underground Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A8NW (S)	479	5	330152 344974
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 142.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A8NW (S)	484	5	330142 344969
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 305.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	503	5	330530 345079
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 164.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A8NE (S)	547	5	330332 344931
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 164.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A8NE (S)	548	5	330340 344933
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.9 Watercourse Level: Underground Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A8NE (S)	583	5	330195 344870
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A8NE (SE)	594	5	330503 344950
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 145.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SW (SE)	606	5	330747 345190

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A9NW (SE)	610	5	330521 344943
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 228.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A9NW (SE)	625	5	330572 344957
74	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 45.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	690	5	330785 345088
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	695	5	330761 345046
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	698	5	330762 345042
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	701	5	330762 345037
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	703	5	330773 345049
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	706	5	330774 345045
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	712	5	330777 345039

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 9.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	730	5	330802 345043
82	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 55.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	731	5	330809 345050
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	774	5	330823 344996
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: Underground Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A9NW (SE)	787	5	330793 344941
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A9NW (SE)	794	5	330797 344934
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SW (NE)	826	5	330824 346040
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 351.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aberderfyn Catchment Name: Dee Primacy: 1	A19SW (NE)	830	5	330844 346024
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 263.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aberderfyn Catchment Name: Dee Primacy: 1	A19SW (NE)	831	5	330829 346042
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 140.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Goch Catchment Name: Dee Primacy: 1	A9NE (SE)	837	5	330868 344953

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 254.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Black Brook Catchment Name: Dee Primacy: 1	A9SW (SE)	875	5	330782 344806
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Black Brook Catchment Name: Dee Primacy: 1	A9SW (SE)	887	5	330763 344774
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9SW (SE)	887	5	330763 344774
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 396.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Black Brook Catchment Name: Dee Primacy: 1	A9SW (SE)	898	5	330740 344743
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9SW (SE)	898	5	330740 344743
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 452.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NW (N)	909	5	329902 346387
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.8 Watercourse Level: Underground Permanent: True Watercourse Name: Aberderfyn Catchment Name: Dee Primacy: 1	A19SE (E)	962	5	331101 345835
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Black Brook Catchment Name: Dee Primacy: 1	A9NE (SE)	974	5	330982 344875
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 106.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aberderfyn Catchment Name: Dee Primacy: 1	A19SE (E)	977	5	331119 345830

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 247.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aberderfyn Catchment Name: Dee Primacy: 1	A14NE (E)	982	5	331174 345652
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 103.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aberderfyn Catchment Name: Dee Primacy: 1	A14NE (E)	982	5	331174 345652
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19NW (NE)	990	5	330788 346300
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 168.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Aberderfyn Catchment Name: Dee Primacy: 1	A19NW (NE)	990	5	330788 346300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	**Historical Landfill Sites** Licence Holder: Sita Uk Location: Bangor Road, Johnstown, Wrexham Name: Hafod Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD34211 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 37201 Regis Ref: WW1/L/SWM001 WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A14SW (E)	371	2	330575 345419
104	**Historical Landfill Sites** Licence Holder: Watkin Jones and Son Limited Location: Stryd Las, Johnstown, Wrexham Name: Stryt Las Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14774 First Input Date: 31st December 1993 Last Input Date: 31st December 1995 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 37077 Regis Ref: WW1/L/WAT001 WRC Ref: 6955/0052 BGS Ref: Not Supplied Other Ref: NOW-513-L, WMBC L75	A18SW (N)	564	2	329967 346047
105	**Historical Landfill Sites** Licence Holder: Shanks and McEwan Northern Limited Location: Gardden Lodge, Tatham Road, Ruabon, Wrexham, Clywd Name: Gardden Clay Pit Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14778 First Input Date: 31st December 1977 Last Input Date: 31st August 1984 Specified Waste Type: Deposited Waste included Industrial, Commercial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0028 BGS Ref: Not Supplied Other Ref: WMBC L/23, WMBC L82	A8NE (S)	635	2	330181 344817
106	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Hafod Quarry Licence Number: 37201 Location: Bangor Road, Johnstown, Wrexham, LL14 6ET Licence Holder: Sita Uk Authority: Natural Resources Wales Site Category: Co-disposal Landfill Sites Max Input Rate: Large (Equal to or greater than 75,000 tonnes per year) **Licence Status:** **Inactive** Issued: 30th April 1999 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A14SW (E)	371	2	330575 345419
107	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Not Supplied Licence Number: 37201 Location: Not Supplied Licence Holder: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Max Input Rate: Not Supplied **Licence Status:** **Inactive** Issued: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A14SW (E)	371	2	330575 345419

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Hafod Quarry Landfill Licence Number: 37286 Location: Bangor Road, Johnstown, Wrexham, Clwyd, LL14 6ET Licence Holder: Cory Environmental (Central) Ltd Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills Max Input Rate: Not Supplied **Licence Status:** **PPC** Issued: 8th March 2005 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A14NW (E)	432	2	330630 345563
109	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Stryt Las Licence Number: 37077 Location: Stryd Las, Johnstown, Wrexham, LL14 2AN Licence Holder: Watkin Jones & Sons Authority: Natural Resources Wales Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) Max Input Rate: Large (Equal to or greater than 75,000 tonnes per year) **Licence Status:** **Inactive** Issued: 22nd July 1993 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A18SW (NW)	592	2	329870 346037
110	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Gardden Claypit 2 Northern Licence Number: 37109 Location: Tatham Road, Ruabon, Wrexham, Clwyd, LL14 6RF Licence Holder: Shanks Northern Ltd Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills Max Input Rate: Not Supplied **Licence Status:** **Closure** Issued: 6th July 1994 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A8NE (S)	638	2	330188 344815
111	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Gardden Claypit 1 Midlands Licence Number: 37014 Location: Gardden, Tatham Road, Ruabon, Wrexham, Clwyd, LL14 6RF Licence Holder: Shanks Midlands Ltd Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills Max Input Rate: Not Supplied **Licence Status:** **Closure** Issued: 2nd May 1989 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A8NE (S)	638	2	330183 344815
112	**Licensed Waste Management Facilities (Locations)** Licence Number: 103896 Location: Brother Industries (U K) Ltd, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Operator Name: Brother Industries (U K) Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Material Recycling Treatment Facilities **Licence Status:** **Issued** Issued: 6th August 2012 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	83	2	330100 345400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
113	**Licensed Waste Management Facilities (Locations)** Licence Number: FB3234AY Location: Brother Industries (U.K.) Ltd., Brother Industries (U.K.) Ltd., Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, Wrexham, LL14 6HA Operator Name: Brother Industries (U.K.) Ltd. Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Material Recycling Treatment Facilities **Licence Status: Effective** Issued: 10th September 2018 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13NE (E)	127	2	330333 345490
114	**Licensed Waste Management Facilities (Locations)** Licence Number: AP3194FU Location: H K Motors, Ruabon, Ruabon, Wrexham, Clwyd, Wrexham, LL14 6RG Operator Name: Williams H K; K; D H; A K; C A; I J And N G Williams Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status: Effective** Issued: 28th March 2003 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	389	2	330096 345069
114	**Licensed Waste Management Facilities (Locations)** Licence Number: 37231 Location: H K Motors, Gardden Industrial Estate, Ruabon, Wrexham, LL14 6RG Operator Name: Williams H K; K; D H; A K; C A; I J And N G Williams Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Vehicle Dismantlers) **Licence Status: Modified** Issued: 28th March 2003 Last Modified: 10th December 2003 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	389	2	330096 345069
115	**Licensed Waste Management Facilities (Locations)** Licence Number: EP3794FY Location: I Hayward Ltd, I Hayward Ltd, Gardden Ind Est, Ruabon, Wrexham, Clwyd, Wrexham, LL14 6RG Operator Name: I Hayward Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Mixed) **Licence Status: Effective** Issued: 30th April 1999 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	469	2	330082 344990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	**Licensed Waste Management Facilities (Locations)** Licence Number: 37162 Location: I Hayward Ltd, Gardden Ind Est, Ruabon, Wrexham, LL14 6RG Operator Name: I Hayward Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Mixed) **Licence Status: Modified** Issued: 31st March 1999 Last Modified: 31st January 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	469	2	330082 344990
115	**Licensed Waste Management Facilities (Locations)** Licence Number: NP3290VM Location: Clwyd Breakers Ltd, Ruabon, Wrexham, Clwyd, Wrexham, LL14 6RG Operator Name: Clwyd Breakers Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Vehicle depollution facility **Licence Status: Revoked** Issued: 7th October 2010 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: 2nd January 2019 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	508	2	330053 344957
115	**Licensed Waste Management Facilities (Locations)** Licence Number: 102006 Location: Gardden Industrial Estate, Ruabon, Wrexham, LL14 6RG Operator Name: Clwyd Breakers Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Vehicle depollution facility **Licence Status: Modified** Issued: 7th October 2010 Last Modified: 17th May 2015 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	508	2	330053 344957
115	**Licensed Waste Management Facilities (Locations)** Licence Number: VP3394FX Location: Clwyd Car Breakers, Ruabon, Wrexham, Clwyd, Wrexham, LL14 6RG Operator Name: D Bennett Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Mixed) **Licence Status: Expired** Issued: 31st March 1999 Last Modified: Not Supplied Expires: 25th July 2010 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	517	2	330083 344942
115	**Licensed Waste Management Facilities (Locations)** Licence Number: 37163 Location: Land / Premises At, Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Operator Name: Bennett D Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Mixed) **Licence Status: Expired** Issued: 31st March 1999 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (S)	517	2	330083 344942

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
116	**Licensed Waste Management Facilities (Locations)** Licence Number: HP3694FJ Location: Gardden Claypit 2 Northern, Wrexham, Clwyd, Wrexham, LL14 6RF Operator Name: Shanks Northern Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills **Licence Status: Effective** Issued: 6th July 1994 Last Modified: Not Supplied Expires: 25th January 2002 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SW (S)	735	2	330077 344722
116	**Licensed Waste Management Facilities (Locations)** Licence Number: 37109 Location: Tatham Road, Ruabon, Wrexham, LL14 6RF Operator Name: Shanks Northern Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills **Licence Status: Closed** Issued: 6th July 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SW (S)	735	2	330077 344722
116	**Licensed Waste Management Facilities (Locations)** Licence Number: BP3494FC Location: Gardden Claypit 1 Midlands, Gardden, Ruabon, Wrexham, Clwyd, Wrexham, LL14 6RF Operator Name: Shanks Midlands Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills **Licence Status: Effective** Issued: 2nd May 1989 Last Modified: Not Supplied Expires: 25th January 2002 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SW (S)	740	2	330087 344716
116	**Licensed Waste Management Facilities (Locations)** Licence Number: 37014 Location: Gardden, Tatham Road, Ruabon, Wrexham, LL14 6RF Operator Name: Shanks Midlands Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills **Licence Status: Closed** Issued: 2nd May 1989 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SW (S)	740	2	330087 344716

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
117	**Licensed Waste Management Facilities (Locations)** Licence Number: 37077 Location: Stryd Las, Johnstown, Wrexham, Clwyd, LL14 2AN Operator Name: Watkin Jones & Son Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Landfills Taking Non-biodegradeable Wastes (Not Construction) **Licence Status: Surrendered** Issued: 22nd July 1993 Last Modified: 31st March 2003 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 17th August 2005 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A18NW (N)	856	2	329878 346325
118	**Licensed Waste Management Facilities (Locations)** Licence Number: 37201 Location: Bangor Road, Johnstown, Wrexham, Clwyd, LL14 6ET Operator Name: Sita U K Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Co-disposal Landfill Sites **Licence Status: Surrendered** Issued: 30th April 1999 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 23rd May 2005 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14NE (E)	942	2	331110 345749
118	**Licensed Waste Management Facilities (Locations)** Licence Number: JP3294FV Location: Hafod Quarry Landfill, Wrexham, Clwyd, Wrexham, LL14 6ET Operator Name: Cory Environmental (Central) Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills **Licence Status: Expired** Issued: 8th March 2005 Last Modified: Not Supplied Expires: 8th October 2004 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14NE (E)	947	2	331114 345752
118	**Licensed Waste Management Facilities (Locations)** Licence Number: 37286 Location: Bangor Road, Johnstown, Wrexham, Clwyd, LL14 6ET Operator Name: Cory Environmental (Central) Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Waste Landfills **Licence Status: To PPC** Issued: 8th March 2005 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: BS8621IW Positional Accuracy: Located by supplier to within 10m	A14NE (E)	947	2	331114 345752
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	6	330175 345485
119	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1976	A13NW (W)	0	-	330164 345487
120	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13SE (SE)	166	-	330349 345379

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
121	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1976	A13SW (S)	257	-	330105 345202
122	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8NE (SE)	384	-	330365 345115
123	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A18SE (NE)	489	-	330423 345940
124	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1995	A8NW (S)	532	-	329975 344955
125	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1976	A7NE (SW)	557	-	329837 345001
126	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1976	A12NE (NW)	616	-	329573 345742
127	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1976	A12SE (SW)	672	-	329561 345155
128	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1976	A12NW (W)	771	-	329413 345759
129	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (S)	782	-	330083 344675
130	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1976	A17NE (N)	888	-	329827 346341
131	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A19NW (NE)	948	-	330712 346301
132	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A13SE (SE)	35	-	330227 345436
133	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1963	A13NW (NW)	331	-	329974 345795
134	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1963	A12NE (NW)	428	-	329751 345681
135	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1963	A12SE (W)	482	-	329673 345409
136	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1900	A8NW (SW)	547	-	329851 345004
137	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A18SW (N)	548	-	330089 346056
138	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14NW (NE)	593	-	330743 345735

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A12SW (W)	760	-	329447 345200
140	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A18NE (N)	844	-	330279 346352
141	**Registered Landfill Sites** Licence Holder: Shropshire Waste Management Ltd Licence Reference: EAWML37201 Site Location: Hafod Quarry, Ruabon, WREXHAM, Clwyd, LL14 6ET Licence Easting: 330760 Licence Northing: 345800 Operator Location: 107 Longden Road, SHREWSBURY, Shropshire, SY3 9DS Authority: Environment Agency Wales, North Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Site not yet started Dated: 30th April 1999 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Bonded Asbestos Degradable/Non-Degradable Commercial Waste Degradable/Non-Degradable Household Waste Degradable/Non-Degradable Industrial Waste Inert Waste Metal Waste/Scrap Metal (Only As Small Admixtures With Permitted Wastes)) Prohibited Waste: Liquid Wastes Material With Haz.Code H 1 - Explosive Material With Haz.Code H 2 - Oxidising Material With Haz.Code H 3a - Highly Flammable Material With Haz.Code H 3b - Flammable Material With Haz.Code H 9 - Infectious Material With Haz.Code H10 - Teratogenic Material With Haz.Code H11 - Mutagenic Material With Haz.Code H12 - Can Release Toxic Gases Material With Haz.Code H13 - May Yield Leachates With Haz.Code Properties Material With Haz.Code H14 - Ecotoxic Other Waste/Waste Not Otherwise Specified Packaged Waste (Mixed/Unmixed) Or Bulk Loose Container Waste Special Waste (As In Epa 1990:S62 Of 1996 Regs) Other Than	A14NW (NE)	638	3	330760 345800
142	**Registered Landfill Sites** Licence Holder: Watkin Jones & Son Ltd Licence Reference: NOW-513-L (L75) Site Location: Stryd Las Landfill, Between Stryd Las & Gutter Hill, Johnstown, Wrexham, Clwyd Licence Easting: 329900 Licence Northing: 346150 Operator Location: Foundry Building, Johnstown, WREXHAM, Clwyd, LL57 4YH Authority: Environment Agency Wales, North Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Status: Site Closed Dated: 22nd July 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Gravels, Shales, Clays Hardcore And Rubble Max.Waste Permitted By Licence Top/Subsoil, Sand/Sandstone Uncontam.Bricks, Stone, Set Concrete Prohibited Waste: Biodegradable/Putrescible Waste Radioactive Wastes Waste In Drums	A18SW (N)	684	3	329900 346150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
143	**Registered Landfill Sites** Licence Holder: Shanks & Mc Ewan (Midlands) Ltd Licence Reference: NOW-509-L (L50) Site Location: Gardden Clay Pit, Tatham Road, Ruabon, WREXHAM, Clwyd, LL14 6RF Licence Easting: 330200 Licence Northing: 344500 Operator Location: Weldon Road, CORBY, Northamptonshire, NN18 8AP Authority: Environment Agency Wales, North Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Operational as far as is knownOperational Dated: 1st June 1997 Preceded By Licence: NOW-509-L (L50) Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Construction And Demolition Wastes; Excavation Waste; House, Com + Ind.Waste; Max.Waste For Licences L50 + L82; Shredded Tyres Prohibited Waste: Clinical Wastes; Drummed Waste; Liable To Cause Environmental Hazards; Special Wastes (As In '96 Regs); Water Soluble Ind. Waste	A8SE (S)	953	3	330200 344500
143	**Registered Landfill Sites** Licence Holder: Shanks & Mc Ewan (Midlands) Ltd Licence Reference: NOW-509-L (L50) Site Location: Gardden Clay Pit, Tatham Road, Ruabon, WREXHAM, Clwyd, LL14 6RF Licence Easting: 330200 Licence Northing: 344500 Operator Location: Weldon Road, CORBY, Northamptonshire, NN18 8AP Authority: Environment Agency Wales, North Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Record supersededSuperseded Dated: 1st May 1989 Preceded By Licence: Not Given Superseded By Licence: NOW-509-L (L50) Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Bonded Asbestos Products; Construction And Demolition Wastes; Excavation Waste; House, Com + Ind.Waste; Max.Waste For Licences L50 + L82; Shredded Tyres Prohibited Waste: Clinical Wastes; Drummed Waste; Liable To Cause Environmental Hazards; Special Wastes N.O.S.; Water Soluble Ind. Waste	A8SE (S)	953	3	330200 344500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
144	**Registered Waste Treatment or Disposal Sites** Licence Holder: I Haywards Ltd Licence Reference: NOW-529-L Site Location: Gardden Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6RG Operator Location: Gardden Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6RG Authority: Environment Agency Wales, North Area Site Category: Scrapyard - with Transfer Station Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 31st March 1999 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Batteries, Electrical Cable, Electrical Equipment, Engines, Ferrous Metals, Ferrous Swarf, Machinery, Max.Storage In Licence, Max.Waste Permitted By Licence, Non-Ferrous Metals, Non-Ferrous Swarf, Scrap Vehicles, Structural Timber/Telegraph Poles/Railway Sleepers Prohibited Waste: Liquid Waste N.O.S., Spec.Waste (Epa'90:S62/1996 Regs)N.O.S, Waste N.O.S.	A13SW (S)	309	3	330100 345150
145	**Registered Waste Treatment or Disposal Sites** Licence Holder: D Bennett - Clwyd Breakers Licence Reference: NOW-531-L Site Location: Gardden Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6RG Operator Location: Gardden Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6RG Authority: Environment Agency Wales, North Area Site Category: Scrapyard - with Transfer Station Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 31st March 1999 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Batteries, Engines, Ferrous Metals, Max.Waste Permitted By Licence, Non-Ferrous Metals, Scrap Vehicles, Structural Timber/Telegraph Poles/Railway Sleepers, Transmission Units Prohibited Waste: Liquid Waste N.O.S., Spec.Waste (Epa'90:S62/1996 Regs)N.O.S, Waste N.O.S.	A8NW (S)	505	3	330050 344960

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Warwickshire Group	A13NW (E)	0	1	330175 345485
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (E)	0	1	330175 345485
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A13NW (W)	5	1	330134 345497
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NE (W)	443	1	329714 345616
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	462	1	330256 345000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	618	1	330323 344855
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A12SE (W)	681	1	329524 345219

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SE (S)	720	1	330181 344733
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SW)	738	1	329610 344964
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A7NW (SW)	878	1	329429 344971
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A3NW (S)	999	1	330078 344457
146	**BGS Recorded Mineral Sites** Site Name: Brandie Pits Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172101 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NE (W)	351	1	329814 345631
147	**BGS Recorded Mineral Sites** Site Name: Brandie Pits, Engine Pit Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172102 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NE (W)	398	1	329762 345622

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
148	**BGS Recorded Mineral Sites** Site Name: Wharf Cottage Sand Pit Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185619 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	490	1	330430 345937
149	**BGS Recorded Mineral Sites** Site Name: Ruabon Brick & Terra Cotta Works' Location: Ruabon, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185809 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8NW (S)	532	1	329962 344960
150	**BGS Recorded Mineral Sites** Site Name: Vauxhall Colliery Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185620 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Etruria Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SW (E)	534	1	330728 345349
151	**BGS Recorded Mineral Sites** Site Name: Ruabon Brick & Terra Cotta Works' Location: Ruabon, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185654 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	555	1	329833 345007
152	**BGS Recorded Mineral Sites** Site Name: Brandie Pits, No. 6 Pit Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172105 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NE (NW)	624	1	329565 345744

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	**BGS Recorded Mineral Sites** Site Name: Terra-Cotta Brick & Tile Works Location: Ruabon, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185623 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Etruria Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A8NE (S)	653	1	330345 344825
154	**BGS Recorded Mineral Sites** Site Name: Gardden Hall Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185660 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	676	1	329468 345501
155	**BGS Recorded Mineral Sites** Site Name: Hafod Location: Ruabon, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 4744 Type: Opencast **Status: Dormant** Operator: Cory Environmental Ltd. Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A14NE (E)	676	1	330880 345530
155	**BGS Recorded Mineral Sites** Site Name: Hafod Location: Ruabon, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 4744 Type: Opencast **Status: Dormant** Operator: Cory Environmental Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Etruria Formation (Ruabon Marl Formation) Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14NE (E)	676	1	330880 345530
156	**BGS Recorded Mineral Sites** Site Name: Tatham Brick & Terra Cotta Works Location: Ruabon, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185655 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Etruria Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A8SW (S)	705	1	330164 344747
157	**BGS Recorded Mineral Sites** Site Name: Brandie Pits, Park No. 1 Pit Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172103 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 100m	A12NW (W)	749	1	329400 345600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
158	**BGS Recorded Mineral Sites** Site Name: Gardden Lodge Colliery Location: Penycae, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185653 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	774	1	329465 345119
159	**BGS Recorded Mineral Sites** Site Name: Hafod Red Brick Works Clay Pits Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185621 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Etruria Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14NE (E)	804	1	330983 345690
160	**BGS Recorded Mineral Sites** Site Name: Brandie Pits Shaft Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172108 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	807	1	329390 345800
160	**BGS Recorded Mineral Sites** Site Name: Brandie Pits Shaft Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172106 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	853	1	329346 345813
160	**BGS Recorded Mineral Sites** Site Name: Brandie Pits Shaft Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172112 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	869	1	329341 345843
161	**BGS Recorded Mineral Sites** Site Name: Brandie Pits, No. 2 Pit Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172104 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	839	1	329308 345576

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
162	**BGS Recorded Mineral Sites** Site Name: Gardden Lodge Colliery Location: Penycae, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185652 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NW (SW)	841	1	329389 345127
163	**BGS Recorded Mineral Sites** Site Name: Pant Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185635 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	850	1	329483 346045
164	**BGS Recorded Mineral Sites** Site Name: Hafod Red Brick Works Clay Pits Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185622 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Etruria Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14NE (E)	853	1	331058 345510
165	**BGS Recorded Mineral Sites** Site Name: Wheelwright'S Arms Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185638 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12SW (W)	895	1	329254 345421
166	**BGS Recorded Mineral Sites** Site Name: Brandie Pits Shaft Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172107 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	899	1	329290 345792

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
167	**BGS Recorded Mineral Sites** Site Name: Pant Location: Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 185636 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	904	1	329349 345942
168	**BGS Recorded Mineral Sites** Site Name: Brandie Pits Shaft Location: Stryt Las, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172111 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SW (W)	919	1	329287 345843
169	**BGS Recorded Mineral Sites** Site Name: Brandie Pits Shaft Location: Pant, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172114 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	936	1	329228 345705
170	**BGS Recorded Mineral Sites** Site Name: Gardden Location: Ruabon, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 4743 Type: Opencast **Status: Ceased** Operator: Shanks And Mcewan (Midlands) Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Etruria Formation (Ruabon Marl Formation) Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 100m	A8SE (S)	953	1	330200 344500
171	**BGS Recorded Mineral Sites** Site Name: Pant Colliery Pit Location: Pant, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172110 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	957	1	329236 345813
172	**BGS Recorded Mineral Sites** Site Name: Brandie Pits Shaft Location: Pant, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172115 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	964	1	329212 345759

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
172	**BGS Recorded Mineral Sites** Site Name: Pant Colliery Pit Location: Pant, Rhosllanerchrugog, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 172109 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NW (W)	1000	1	329185 345794
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NW (E)	0	7	330175 345485
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (E)	0	-	330175 345485
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	5	1	330134 345497
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	144	1	330000 345485
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	144	1	330000 345485
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	15	1	330139 345475
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	144	1	330000 345485
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	146	1	330000 345536
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	160	1	330320 345352
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	144	1	330000 345485
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	144	1	330000 345485
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	151	1	330003 345458
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	152	1	330000 345465
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	144	1	330000 345485
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	139	1	330103 345327
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	144	1	330000 345485
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	241	1	330241 345748
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	250	1	330452 345531
	Radon Potential - Radon Affected Areas Affected Area: The property is an Intermediate probability radon area (3 to 5% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	330200 345485
	Radon Potential - Radon Protection Measures Protection Measure: Basic radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (E)	0	1	330175 345485
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	0	1	330200 345485

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
173	**Contemporary Trade Directory Entries** Name: Key Gas Wales Ltd Location: Hafod Road,Hafod Ind Est, Johnstown, Wrexham, Clwyd, LL14 2AT Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13NE (NE)	46	-	330226 345540
174	**Contemporary Trade Directory Entries** Name: Brother Industries Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Plastics - Injection Moulding **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	100	-	330306 345473
174	**Contemporary Trade Directory Entries** Name: Sci-Mart Location: Unit 1, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Scientific Apparatus & Instruments - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	100	-	330306 345478
174	**Contemporary Trade Directory Entries** Name: Celantic North Wales Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Marine Equipment & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	100	-	330306 345478
175	**Contemporary Trade Directory Entries** Name: Clwyd Spares & Repairs Ltd Location: Unit 13, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Car Breakers & Dismantlers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	176	-	330337 345347
175	**Contemporary Trade Directory Entries** Name: Enviroclear Site Services Ltd Location: Unit 12, Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	201	-	330376 345356
175	**Contemporary Trade Directory Entries** Name: Danisco Pack Langfern Location: Unit 13 Vauxhall Indust Est, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Boxes & Cartons **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	201	-	330376 345356
175	**Contemporary Trade Directory Entries** Name: Environclear Site Services Ltd Location: Unit 12, Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	201	-	330376 345356
176	**Contemporary Trade Directory Entries** Name: Lafarge Aggregates Location: Vauxhall Ind Est, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13SE (SE)	209	-	330327 345294
177	**Contemporary Trade Directory Entries** Name: Portec Rail Products Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6UY Classification: Materials Handling Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	251	-	330442 345376
178	**Contemporary Trade Directory Entries** Name: G H A Coaches Location: Unit 11, Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	279	-	330419 345284
178	**Contemporary Trade Directory Entries** Name: G H A Coaches Ltd Location: Unit 11, Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	279	-	330419 345284

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
178	**Contemporary Trade Directory Entries** Name: Vale Of Llangollen Travel Ltd Location: Unit 11, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	284	-	330414 345270
178	**Contemporary Trade Directory Entries** Name: Thompson Coating Solutions Ltd Location: Unit 2 Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Coating Specialists **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A13SE (SE)	285	-	330414 345270
179	**Contemporary Trade Directory Entries** Name: Ceramtec Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HY Classification: Ceramic Manufacturers, Supplies & Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (E)	286	-	330470 345594
180	**Contemporary Trade Directory Entries** Name: Steni Uk Ltd Location: Unit 1-4, Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Cladding Suppliers & Installers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	304	-	330509 345483
180	**Contemporary Trade Directory Entries** Name: Fry Fresh Edible Oils Ltd Location: Wrexham, LL14 6HA Classification: Distribution Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	328	-	330531 345523
181	**Contemporary Trade Directory Entries** Name: Link Powder Coating & Metal Finishing Ltd Location: Unit 8a, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Powder Coatings **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	334	-	330538 345425
181	**Contemporary Trade Directory Entries** Name: A W Services Northwest Ltd Location: Unit 8a, Vauxhall Industrial Estate, Ruabon, WREXHAM, Clwyd, LL14 6HA Classification: Powder Coatings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	339	-	330544 345429
182	**Contemporary Trade Directory Entries** Name: Wrexham Sharpening Services Location: Plas yn Clawdd, Stryt Las, Johnstown, Wrexham, LL14 2AN Classification: Tool Sharpening, Repairing & Servicing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	335	-	330030 345826
183	**Contemporary Trade Directory Entries** Name: Manutech (Europe) Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Electronic Component Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	337	-	330227 345121
183	**Contemporary Trade Directory Entries** Name: Clwyd Screen Prints Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Screen Process Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	337	-	330227 345121
183	**Contemporary Trade Directory Entries** Name: Sci Mart Location: Unit 2, Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Scientific Apparatus & Instruments - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	337	-	330227 345121
184	**Contemporary Trade Directory Entries** Name: Flinting Ink Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HU Classification: Printing Equipment Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	342	-	330409 345189

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
185	**Contemporary Trade Directory Entries** Name: Williams Location: Unit 9, Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	350	-	330527 345323
186	**Contemporary Trade Directory Entries** Name: Elite Graphics Uk Ltd Location: Unit 18, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	408	-	330271 345059
187	**Contemporary Trade Directory Entries** Name: Sutures Ltd Location: Unit 19, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Medical Equipment Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	449	-	330357 345042
187	**Contemporary Trade Directory Entries** Name: A E Sewing Machines Location: Unit 20a, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Sewing Machines - Industrial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	453	-	330395 345053
187	**Contemporary Trade Directory Entries** Name: A E Sewing Machines Location: Unit 1, Vauxhall Court, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Sewing Machines - Industrial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	453	-	330395 345053
187	**Contemporary Trade Directory Entries** Name: Advance Enterprises Location: Unit 2, Vauxhall Court, Vauxhall Industrial Estate, Wrexham, LL14 6HA Classification: Sewing Machines - Industrial **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	469	-	330395 345035
188	**Contemporary Trade Directory Entries** Name: Advance Spares Location: Unit 21, Vauxhall Industrial Estate, Wrexham, LL14 6HA Classification: Nuts, Bolts & Fixings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	452	-	330440 345078
188	**Contemporary Trade Directory Entries** Name: Advance Spares Location: Unit 21, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Classification: Nuts, Bolts & Fixings **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	452	-	330440 345078
189	**Contemporary Trade Directory Entries** Name: I Hayward Ltd Location: Scrap Metal Depot, Gardden Industrial Estate, Tatham Road, Wrexham, LL14 6RG Classification: Scrap Metal Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	468	-	330039 345001
190	**Contemporary Trade Directory Entries** Name: Travis Perkins Plc Location: RUABON ROAD, RUABON, WREXHAM, LL14 6RA Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NE (S)	481	-	330213 344974
191	**Contemporary Trade Directory Entries** Name: C J C Motor Services Location: Unit 2,Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RE Classification: Car Engine Tuning & Diagnostic Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (S)	510	-	330074 344950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
191	**Contemporary Trade Directory Entries** Name: Clwyd Breakers Ltd Location: Gardden Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (S)	518	-	330100 344939
191	**Contemporary Trade Directory Entries** Name: C S Paint & Body Repairs Location: Unit 2,Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (S)	523	-	330058 344940
192	**Contemporary Trade Directory Entries** Name: Rockrite Ltd Location: Vauxhall Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6HA Classification: Mortar Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	534	-	330419 344974
193	**Contemporary Trade Directory Entries** Name: Belle Blinds & Curtains Location: 36, Bangor Road, Johnstown, Wrexham, Clwyd, LL14 2SP Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (N)	536	-	330311 346034
194	**Contemporary Trade Directory Entries** Name: Bridge Street Location: Brandie View, Stryt Las, Rhosllanerchrugog, Wrexham, Clwyd, LL14 2HD Classification: Washing Machines - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	565	-	329640 345765
195	**Contemporary Trade Directory Entries** Name: Paul Bell Location: Park St, Johnstown, Wrexham, Clwyd, LL14 2AB Classification: Lawnmowers & Garden Machinery - Sales & Service **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	585	-	330046 346088
196	**Contemporary Trade Directory Entries** Name: Wrexham Motor Co Location: Gardden Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	591	-	330099 344865
196	**Contemporary Trade Directory Entries** Name: Ainscough Group Ltd Location: Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (S)	595	-	330074 344864
196	**Contemporary Trade Directory Entries** Name: Bodyworx Location: Unit 2 Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (S)	618	-	330064 344842
196	**Contemporary Trade Directory Entries** Name: Wrexham Electrical Repairs Ltd Location: Gardden Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Electric Motor Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	627	-	330091 344830
196	**Contemporary Trade Directory Entries** Name: Johnstown & Ruabon Location: Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (S)	627	-	330091 344830
197	**Contemporary Trade Directory Entries** Name: Tartan Domestics Location: High Street, Johnstown, Wrexham, Clwyd, LL14 2SH Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	606	-	330108 346116

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
198	**Contemporary Trade Directory Entries** Name: Cassini Blinds Wrexham Chester & Northwich Location: 3, Park Mews, Park Street, Johnstown, Wrexham, Clwyd, LL14 2AF Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	624	-	329968 346110
198	**Contemporary Trade Directory Entries** Name: Bellini Blinds Wrexham Location: 3, Park Mews, Park Street, Johnstown, Wrexham, LL14 2AF Classification: Blinds, Awnings & Canopies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	624	-	329967 346109
199	**Contemporary Trade Directory Entries** Name: Bryn Melyn Ltd Location: Gardden Industrial Estate, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	660	-	330034 344806
200	**Contemporary Trade Directory Entries** Name: Pareck Ltd Location: High St, Ruabon, Wrexham, Clwyd, LL14 6BL Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	670	-	330098 346180
201	**Contemporary Trade Directory Entries** Name: Bromfield Garage Location: Moreton Street, Johnstown, Wrexham, LL14 2AA Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	690	-	329958 346176
201	**Contemporary Trade Directory Entries** Name: Bromfield Garage Location: Moreton Street, Johnstown, Wrexham, LL14 2AA Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	690	-	329958 346176
201	**Contemporary Trade Directory Entries** Name: Bromfield Garage Location: Moreton Street, Johnstown, Wrexham, Clwyd, LL14 2AA Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	691	-	329958 346177
202	**Contemporary Trade Directory Entries** Name: New Dubs Location: Gardden Ind Est, Ruabon, Wrexham, Clwyd, LL14 6RG Classification: Classic Car Specialists **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8SW (S)	703	-	330054 344758
202	**Contemporary Trade Directory Entries** Name: Johnstown & Ruabon Tyres Location: Wrexham, LL14 6RG Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SW (S)	725	-	330044 344737
203	**Contemporary Trade Directory Entries** Name: New Hall Independant Hospital Location: New Hall, New Hall Road, Ruabon, Wrexham, Clwyd, LL14 6HB Classification: Hospitals **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	781	-	330873 345058
203	**Contemporary Trade Directory Entries** Name: New Hall Independent Hospital Location: New Hall,New Hall Road, Ruabon, Wrexham, Clwyd, LL14 6HB Classification: Hospitals **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	796	-	330884 345047
204	**Contemporary Trade Directory Entries** Name: Pro Control Location: 22, Gardden Road, Rhosllanerchrugog, Wrexham, Clwyd, LL14 2EW Classification: Pest & Vermin Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	808	-	329654 346154

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
204	**Contemporary Trade Directory Entries** Name: Pro Control Pest Services Location: 20, Gardden Road, Rhosllanerchrugog, WREXHAM, Clwyd, LL14 2EN Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	849	-	329636 346192
205	**Contemporary Trade Directory Entries** Name: Ronor Launderette Location: Maelor Road, Johnstown, Wrexham, Clwyd, LL14 1NB Classification: Dry Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	846	-	329953 346335
205	**Contemporary Trade Directory Entries** Name: N S Cleaning Services Ltd Location: 19 Maelor Rd, Johnstown, Wrexham, Clwyd, LL14 1NB Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	870	-	329909 346349
206	**Contemporary Trade Directory Entries** Name: Eco Operative Location: Maes Isaf, Johnstown, Wrexham, LL14 1UU Classification: Heating Equipment - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	862	-	330427 346340
207	**Contemporary Trade Directory Entries** Name: S T Jones Ltd Location: Gutter Hill, Johnstown, Wrexham, Clwyd, LL14 1LT Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18NW (N)	871	-	329894 346346
208	**Contemporary Trade Directory Entries** Name: Ainscough Group Ltd Location: Gardden View, Ruabon, Wrexham, Clwyd, LL14 6PS Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8SE (S)	887	-	330344 344584
209	**Contemporary Trade Directory Entries** Name: Wright'S Location: Gutter Hill, Johnstown, Wrexham, Clwyd, LL14 1LT Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A17NE (N)	942	-	329823 346397
209	**Contemporary Trade Directory Entries** Name: Wrights Garage Location: Gutter Hill, Johnstown, Wrexham, LL14 1LT Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	962	-	329848 346427
209	**Contemporary Trade Directory Entries** Name: T Evans Location: Gutter Hill, Johnstown, Wrexham, Clwyd, LL14 1LT Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	962	-	329848 346426
209	**Contemporary Trade Directory Entries** Name: S C Jones Ltd Location: Gutter Hill, Johnstown, Wrexham, LL14 1LT Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	963	-	329848 346427
210	**Points of Interest - Commercial Services** Name: Fry Fresh Edible Oils Ltd Location: Unit 1, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13SE (E)	99	8	330305 345477
211	**Points of Interest - Commercial Services** Name: Clwyd Spares & Repairs Ltd Location: Unit 13, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A13SE (SE)	176	8	330337 345346

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
211	**Points of Interest - Commercial Services** Name: Enviroclear Services Ltd Location: Unit 12, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13SE (SE)	201	8	330376 345356
212	**Points of Interest - Commercial Services** Name: Scrap Yard Location: LL14 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	363	8	330045 345109
212	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A8NW (SW)	414	8	329987 345078
213	**Points of Interest - Commercial Services** Name: Scrap Yard Location: LL14 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	429	8	330042 345041
213	**Points of Interest - Commercial Services** Name: I Hayward Ltd Location: Scrap Metal Depot Gardden Industrial Estate, Tatham Road, Wrexham, LL14 6RG Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	468	8	330039 345001
213	**Points of Interest - Commercial Services** Name: I Hayward Ltd Location: Gardden Industrial Estate, Ruabon, Wrexham, LL14 6RG Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	478	8	330063 344986
213	**Points of Interest - Commercial Services** Name: Scrap Yard Location: LL14 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	509	8	330112 344946
213	**Points of Interest - Commercial Services** Name: Scrap Yard Location: LL14 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	509	8	330037 344959
213	**Points of Interest - Commercial Services** Name: Clwyd Breakers Ltd Location: Gardden Industrial Estate, Ruabon, Wrexham, LL14 6RG Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	518	8	330099 344938
214	**Points of Interest - Commercial Services** Name: H K Motors Location: 1 Gardden Industrial Estate, Ruabon, Wrexham, LL14 6RG Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	588	8	330083 344870
214	**Points of Interest - Commercial Services** Name: Scrap Yard Location: LL14 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (S)	638	8	330118 344816
215	**Points of Interest - Commercial Services** Name: Bromfield Garage Location: Moreton Street, Johnstown, Wrexham, LL14 2AA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	691	8	329958 346177

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
215	**Points of Interest - Commercial Services** Name: Bromfield Garage Location: Moreton Street, Johnstown, Wrexham, LL14 2AA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	691	8	329958 346177
216	**Points of Interest - Commercial Services** Name: Pro Control Pest Services Location: 20 Gardden Road, Rhosllanerchrugog, Wrexham, LL14 2EN Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A17NE (NW)	849	8	329635 346191
217	**Points of Interest - Commercial Services** Name: C J C Motor Services Location: Pen Y Gardden, Ruabon, Wrexham, Clwyd, LL14 6RE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (SW)	878	8	329742 344682
218	**Points of Interest - Commercial Services** Name: Tudor Evans Location: Gutter Hill, Johnstown, Wrexham, LL14 1LT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	962	8	329848 346426
218	**Points of Interest - Commercial Services** Name: Evans Location: Gutter Hill, Johnstown, Wrexham, LL14 1LT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	962	8	329848 346426
218	**Points of Interest - Commercial Services** Name: Wrights Garage Location: Gutter Hill, Johnstown, Wrexham, LL14 1LT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	962	8	329848 346426
218	**Points of Interest - Commercial Services** Name: Wrights Garage Location: Gutter Hill, Johnstown, Wrexham, LL14 1LT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	962	8	329848 346426
218	**Points of Interest - Commercial Services** Name: Wrights Garage Location: Gutter Hill, Johnstown, Wrexham, LL14 1LT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	963	8	329847 346427
218	**Points of Interest - Commercial Services** Name: S C Jones Ltd Location: Gutter Hill, Johnstown, Wrexham, LL14 1LT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	963	8	329847 346427
219	**Points of Interest - Education and Health** Name: New Hall Independent Hospital Location: New Hall, New Hall Road, Ruabon, Wrexham, LL14 6HB Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A9NE (SE)	780	8	330872 345057
220	**Points of Interest - Manufacturing and Production** Name: Vauxhall Industrial Estate Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	117	8	330241 345353
221	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	239	8	330371 345291

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
222	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	276	8	330222 345183
222	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (S)	278	8	330232 345183
222	**Points of Interest - Manufacturing and Production** Name: Tanks Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (S)	282	8	330226 345177
222	**Points of Interest - Manufacturing and Production** Name: Vauxhall Business Centre Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	363	8	330212 345093
223	**Points of Interest - Manufacturing and Production** Name: K H Thompson Location: Brandy, Ruabon, Wrexham, LL14 6RB Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A13NW (W)	302	8	329842 345515
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	325	8	330328 345163
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	328	8	330328 345160
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	331	8	330327 345157
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	333	8	330327 345154
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (SE)	340	8	330329 345148
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	344	8	330324 345141
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	346	8	330327 345141

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	348	8	330324 345137
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	349	8	330327 345137
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	350	8	330333 345138
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	351	8	330338 345139
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	357	8	330324 345128
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	358	8	330328 345128
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	359	8	330337 345130
224	**Points of Interest - Manufacturing and Production** Name: Tanks Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	362	8	330354 345134
224	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NE (SE)	364	8	330337 345125
225	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	460	8	330112 345970
225	**Points of Interest - Manufacturing and Production** Name: Factory Location: LL14 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	461	8	330101 345970
225	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	495	8	330125 346006

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
225	**Points of Interest - Manufacturing and Production** Name: Factory Location: LL14 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	499	8	330124 346010
226	**Points of Interest - Manufacturing and Production** Name: Ruabon - Landfill Gas (DECC) Location: Gardden Lodge Landfill Site, Tatham Road, Ruabon, Wrexham, LL14 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	481	8	330000 345000
227	**Points of Interest - Manufacturing and Production** Name: Gardden Industrial Estate Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	571	8	330080 344887
227	**Points of Interest - Manufacturing and Production** Name: Gardden Industrial Estate Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	578	8	330087 344879
228	**Points of Interest - Manufacturing and Production** Name: Clay Pit Location: LL14 Category: Extractive Industries Class Code: Sand, Gravel and Clay Extraction and Merchants Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	737	8	330943 345456
229	**Points of Interest - Manufacturing and Production** Name: Hafod Quarry (Dis) Location: LL14 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	738	8	330939 345568
230	**Points of Interest - Manufacturing and Production** Name: Shaft (Disused) Location: LL14 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	769	8	329475 345111
231	**Points of Interest - Manufacturing and Production** Name: Clay Pit Location: LL14 Category: Extractive Industries Class Code: Sand, Gravel and Clay Extraction and Merchants Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	839	8	331042 345550
232	**Points of Interest - Manufacturing and Production** Name: Shaft Location: LL14 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A17SW (NW)	850	8	329487 346050
232	**Points of Interest - Manufacturing and Production** Name: Shaft Location: LL14 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	853	8	329486 346054
233	**Points of Interest - Public Infrastructure** Name: Environclear Site Services Ltd Location: Unit 12, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A13SE (SE)	201	8	330376 345356
233	**Points of Interest - Public Infrastructure** Name: Enviroclear Site Services Ltd Location: Unit 12, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A13SE (SE)	201	8	330376 345356

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
233	**Points of Interest - Public Infrastructure** Name: Evironclear Site Services Location: Unit 12, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A13SE (SE)	201	8	330376 345356
233	**Points of Interest - Public Infrastructure** Name: Bryn Melyn Ltd Location: Unit 10, Vauxhall Industrial Estate, Wrexham, LL14 6HA Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A13SE (SE)	249	8	330439 345375
233	**Points of Interest - Public Infrastructure** Name: G H A Coaches Location: Unit 11, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A13SE (SE)	279	8	330419 345284
233	**Points of Interest - Public Infrastructure** Name: G H A Coaches Location: Unit 11, Vauxhall Industrial Estate, Ruabon, Wrexham, LL14 6HA Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A13SE (SE)	279	8	330419 345284
234	**Points of Interest - Public Infrastructure** Name: Slurry Lagoon Location: LL14 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A12NE (W)	377	8	329768 345538
235	**Points of Interest - Public Infrastructure** Name: Bryn Melyn Ltd Location: Gardden Industrial Estate, Ruabon, Wrexham, LL14 6RG Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A8SW (S)	660	8	330034 344806
236	**Points of Interest - Public Infrastructure** Name: Sluice Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	771	8	330837 345021
236	**Points of Interest - Public Infrastructure** Name: Sluice Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	785	8	330849 345014
237	**Points of Interest - Public Infrastructure** Name: Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	909	8	329355 345962
237	**Points of Interest - Public Infrastructure** Name: Cemetery Location: LL14 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	909	8	329355 345962
237	**Points of Interest - Public Infrastructure** Name: Cemetery Location: LL14 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SW (NW)	936	8	329354 346014
238	**Points of Interest - Public Infrastructure** Name: Johnstown Fire Station Location: Fire Station, Gutter Hill, Johnstown, Wrexham, LL14 1LT Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A17NE (N)	941	8	329823 346396

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
239	**Points of Interest - Public Infrastructure** Name: Spoil Heap Location: LL14 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	982	8	331060 345969
240	**Points of Interest - Public Infrastructure** Name: Refuse Tip Location: LL14 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A3NW (S)	989	8	330155 344463
241	**Points of Interest - Recreational and Environmental** Name: Childrens Playground Location: (Heol Kenyon), LL14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13NE (NE)	250	8	330356 345698
241	**Points of Interest - Recreational and Environmental** Name: Childrens Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	252	8	330357 345700
242	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	562	8	329796 345952
243	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18NW (NW)	723	8	329851 346172
244	**Points of Interest - Recreational and Environmental** Name: Play Area Location: LL14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	832	8	330618 344742
245	**Points of Interest - Recreational and Environmental** Name: Play Area Location: LL14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	845	8	330593 346253
245	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	848	8	330594 346255
246	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	851	8	330483 344660

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
247	**Ancient Woodland** Name: Not Supplied Reference: 31876 Area(m²): 5182.72 Type: Ancient and Semi-Natural Woodland	A13NW (W)	239	2	329915 345580
248	**Ancient Woodland** Name: Not Supplied Reference: 31872 Area(m²): 14323.18 Type: Ancient and Semi-Natural Woodland	A13SW (SW)	296	2	330029 345189
249	**Ancient Woodland** Name: Not Supplied Reference: 36790 Area(m²): 3231.92 Type: Restored Ancient Woodland Site	A8NW (S)	307	2	330168 345145
250	**Ancient Woodland** Name: Not Supplied Reference: 31877 Area(m²): 11727 Type: Ancient and Semi-Natural Woodland	A12NE (W)	454	2	329708 345638
251	**Ancient Woodland** Name: Not Supplied Reference: 31871 Area(m²): 30451.88 Type: Ancient and Semi-Natural Woodland	A8NW (SW)	583	2	329881 344943
252	**Ancient Woodland** Name: Not Supplied Reference: 36791 Area(m²): 4223.3 Type: Restored Ancient Woodland Site	A14SW (SE)	632	2	330754 345150
253	**Ancient Woodland** Name: Not Supplied Reference: 31870 Area(m²): 45784.57 Type: Ancient and Semi-Natural Woodland	A7NW (SW)	988	2	329392 344835
254	**Sites of Special Scientific Interest** Name: Stryt Las Ar Hafod Multiple Areas: Y Total Area (m2): 697177.17 Source: Natural Resources Wales Reference: 137631wsp Designation Details: Biological Designation Date: 27th November 1997 Date Type: Notified	A13SW (SW)	73	2	330089 345438
255	**Special Areas of Conservation** Name: Johnstown Newt Sites Multiple Areas: Y Total Area (m2): 697177.17 Source: Natural Resources Wales Reference: Uk0030173 **Status: Designated**	A13SW (SW)	73	2	330089 345438

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Wrexham County Borough Council - Public Protection Department	April 2016	Annually
Oswestry Borough Council (now part of Shropshire Council) - Environmental Health Department	December 2008	Not Applicable
Denbighshire County Council - Public Protection Department	January 2015	Annual Rolling Update
Natural Resources Wales	June 2020	Annually
Shropshire Council - Environmental Health Department	March 2015	Annually
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Environment Agency - Midlands Region	January 2021	Quarterly
Natural Resources Wales	November 2020	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Midlands Region	March 2013	Annual Rolling Update
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - Midlands Region	October 2008	Variable
Environment Agency - Welsh Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Natural Resources Wales	December 2020	Quarterly
Environment Agency - Midlands Region	January 2021	Quarterly
Environment Agency - Welsh Region	January 2021	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Denbighshire County Council - Environmental Health Department	March 2013	Variable
Shropshire Council - Environmental Health Department	October 2014	Variable
Oswestry Borough Council (now part of Shropshire Council) - Environmental Health Department	September 2008	Not Applicable
Local Authority Pollution Prevention and Controls		
Wrexham County Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Denbighshire County Council - Environmental Health Department	December 2014	Annual Rolling Update
Shropshire Council - Environmental Health Department	October 2014	Annually
Oswestry Borough Council (now part of Shropshire Council) - Environmental Health Department	September 2008	Not Applicable
Local Authority Pollution Prevention and Control Enforcements		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Denbighshire County Council - Environmental Health Department	December 2014	Variable
Shropshire Council - Environmental Health Department	October 2014	Variable
Oswestry Borough Council (now part of Shropshire Council) - Environmental Health Department	September 2008	Not Applicable
Nearest Surface Water Feature		
Ordnance Survey	October 2020	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Midlands Region	July 2015	Annual Rolling Update
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Natural Resources Wales	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - Midlands Region	March 2013	Annual Rolling Update
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Natural Resources Wales	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Natural Resources Wales	January 2015	Annually
Environment Agency - Midlands Region	June 2016	
Environment Agency - Welsh Region	June 2016	

Data Currency

Agency & Hydrological	Version	Update Cycle
Substantiated Pollution Incident Register		
Environment Agency - Midlands Region - Upper Severn Area	January 2021	Quarterly
Environment Agency - Midlands Region - West Area	January 2021	Quarterly
Environment Agency Wales - North Area	January 2021	Quarterly
Natural Resources Wales	November 2020	Quarterly
Water Abstractions		
Environment Agency - Welsh Region	January 2021	Quarterly
Natural Resources Wales	November 2020	Quarterly
Water Industry Act Referrals		
Natural Resources Wales	November 2020	Quarterly
Environment Agency - Midlands Region	October 2017	Quarterly
Environment Agency - Welsh Region	October 2017	Quarterly
Groundwater Vulnerability Map		
Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Source Protection Zones		
Natural Resources Wales	November 2016	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences		
Natural Resources Wales	August 2018	Quarterly
Flooding from Rivers or Sea without Defences		
Natural Resources Wales	September 2020	Quarterly
Areas Benefiting from Flood Defences		
Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas		
Natural Resources Wales	August 2019	Quarterly
Flood Defences		
Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines		
Ordnance Survey	September 2020	Quarterly
Surface Water 1 in 30 year Flood Extent		
Natural Resources Wales	October 2013	Annually
Surface Water 1 in 100 year Flood Extent		
Natural Resources Wales	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent		
Natural Resources Wales	October 2013	Annually
Surface Water Suitability		
Natural Resources Wales	October 2013	Annually
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	Annually

Data Currency

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Natural Resources Wales	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Midlands Region	October 2008	Not Applicable
Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Midlands Region - Upper Severn Area	January 2021	Quarterly
Environment Agency - Midlands Region - West Area	January 2021	Quarterly
Environment Agency Wales - North Area	January 2021	Quarterly
Natural Resources Wales	January 2021	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Midlands Region - Upper Severn Area	January 2021	Quarterly
Environment Agency - Midlands Region - West Area	January 2021	Quarterly
Environment Agency Wales - North Area	January 2021	Quarterly
Natural Resources Wales	November 2020	Quarterly
Local Authority Landfill Coverage		
Denbighshire County Council - Environmental Health Department	May 2000	Not Applicable
Oswestry Borough Council (now part of Shropshire Council) - Environmental Health Department	May 2000	Not Applicable
Shropshire County Council (now part of Shropshire Council) - Shropshire Records And Research Centre	May 2000	Not Applicable
Wrexham County Borough Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Wrexham County Borough Council	June 2003	Not Applicable
Denbighshire County Council - Environmental Health Department	May 2000	Not Applicable
Oswestry Borough Council (now part of Shropshire Council) - Environmental Health Department	May 2000	Not Applicable
Shropshire County Council (now part of Shropshire Council) - Shropshire Records And Research Centre	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - Midlands Region - Upper Severn Area	March 2003	Not Applicable
Environment Agency - Midlands Region - West Area	March 2003	Not Applicable
Environment Agency Wales - North Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Midlands Region - Upper Severn Area	March 2003	Not Applicable
Environment Agency - Midlands Region - West Area	March 2003	Not Applicable
Environment Agency Wales - North Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Midlands Region - Upper Severn Area	March 2003	Not Applicable
Environment Agency - Midlands Region - West Area	March 2003	Not Applicable
Environment Agency Wales - North Area	March 2003	Not Applicable

Data Currency

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Denbighshire County Council - Planning Department	February 2016	Variable
Shropshire Council - Planning Department	February 2016	Variable
Wrexham County Borough Council - Planning Department	February 2016	Variable
Shropshire County Council (now part of Shropshire Council)	March 2009	Annual Rolling Update
Oswestry Borough Council (now part of Shropshire Council)	October 2008	Not Applicable
Planning Hazardous Substance Consents		
Denbighshire County Council - Planning Department	February 2016	Variable
Shropshire Council - Planning Department	February 2016	Variable
Wrexham County Borough Council - Planning Department	February 2016	Variable
Shropshire County Council (now part of Shropshire Council)	March 2009	Annual Rolling Update
Oswestry Borough Council (now part of Shropshire Council)	October 2008	Not Applicable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry		
British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	November 2020	Bi-Annually
CBSCB Compensation District		
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability		
Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain		
British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	Annually

Data Currency

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	January 2021	Quarterly
Fuel Station Entries Catalist Ltd - Experian	September 2020	Quarterly
Gas Pipelines National Grid	January 2021	
Points of Interest - Commercial Services PointX	December 2020	Quarterly
Points of Interest - Education and Health PointX	December 2020	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2020	Quarterly
Points of Interest - Public Infrastructure PointX	December 2020	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2020	Quarterly
Underground Electrical Cables National Grid	December 2020	

Data Currency

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural Resources Wales	August 2018	Bi-Annually
Areas of Adopted Green Belt		
Denbighshire County Council	June 2020	As notified
Oswestry Borough Council (now part of Shropshire Council)	June 2020	As notified
Shropshire Council - Planning Department	June 2020	As notified
Wrexham County Borough Council	June 2020	As notified
Areas of Unadopted Green Belt		
Denbighshire County Council	June 2020	As notified
Oswestry Borough Council (now part of Shropshire Council)	June 2020	As notified
Shropshire Council - Planning Department	June 2020	As notified
Wrexham County Borough Council	June 2020	As notified
Areas of Outstanding Natural Beauty		
Natural England	January 2021	Bi-Annually
Natural Resources Wales	June 2019	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Denbighshire County Council	August 2018	Bi-Annually
Wrexham County Borough Council	August 2018	Bi-Annually
Natural England	February 2021	Bi-Annually
Marine Nature Reserves		
Natural Resources Wales	August 2018	Bi-Annually
National Nature Reserves		
Natural Resources Wales	June 2019	Bi-Annually
National Parks		
Natural England	April 2017	Bi-Annually
Natural Resources Wales	August 2018	Annually
Nitrate Vulnerable Zones		
Natural Resources Wales	July 2019	Bi-Annually
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	October 2005	
Ramsar Sites		
Natural Resources Wales	July 2019	Bi-Annually
Sites of Special Scientific Interest		
Natural Resources Wales	March 2020	Bi-Annually
Special Areas of Conservation		
Natural Resources Wales	August 2020	Bi-Annually
Special Protection Areas		
Natural Resources Wales	August 2018	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPA Scottish Environment Protection Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	CEH Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturiol Cymru Natural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Stantec UK Ltd	Stantec

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	**Wrexham County Borough Council - Environmental Health Department** Crown Buildings, P O Box 1297, Wrexham, Clwyd, LL13 8ZE	Telephone: 01978 297038 Fax: 01978 292502 Website: www.wrexham.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Wrexham County Borough Council** Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
7	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
8	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	GFSDD	Glaciofluvial Sheet Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	RTDU	River Terrace Deposits (Undifferentiated)	Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	HA	Halesowen Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	SAL	Salop Formation	Mudstone, Sandstone and Conglomerate	Not Supplied - Westphalian
	CF	Cefn Rock	Sandstone	Not Supplied - Westphalian
	PLMC	Pennine Lower Coal Measures Formation and Pennine Middle Coal Measures Formation (Undifferentiated)	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	PLMC	Pennine Lower Coal Measures Formation and Pennine Middle Coal Measures Formation (Undifferentiated)	Sandstone	Not Supplied - Westphalian
	ETM	Etruria Formation	Mudstone	Not Supplied - Westphalian
		Faults		
		Rock Segments		

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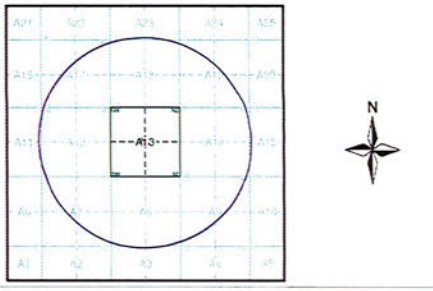
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	121
Map Name:	Wrexham
Map Date:	1993
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A



Order Details:

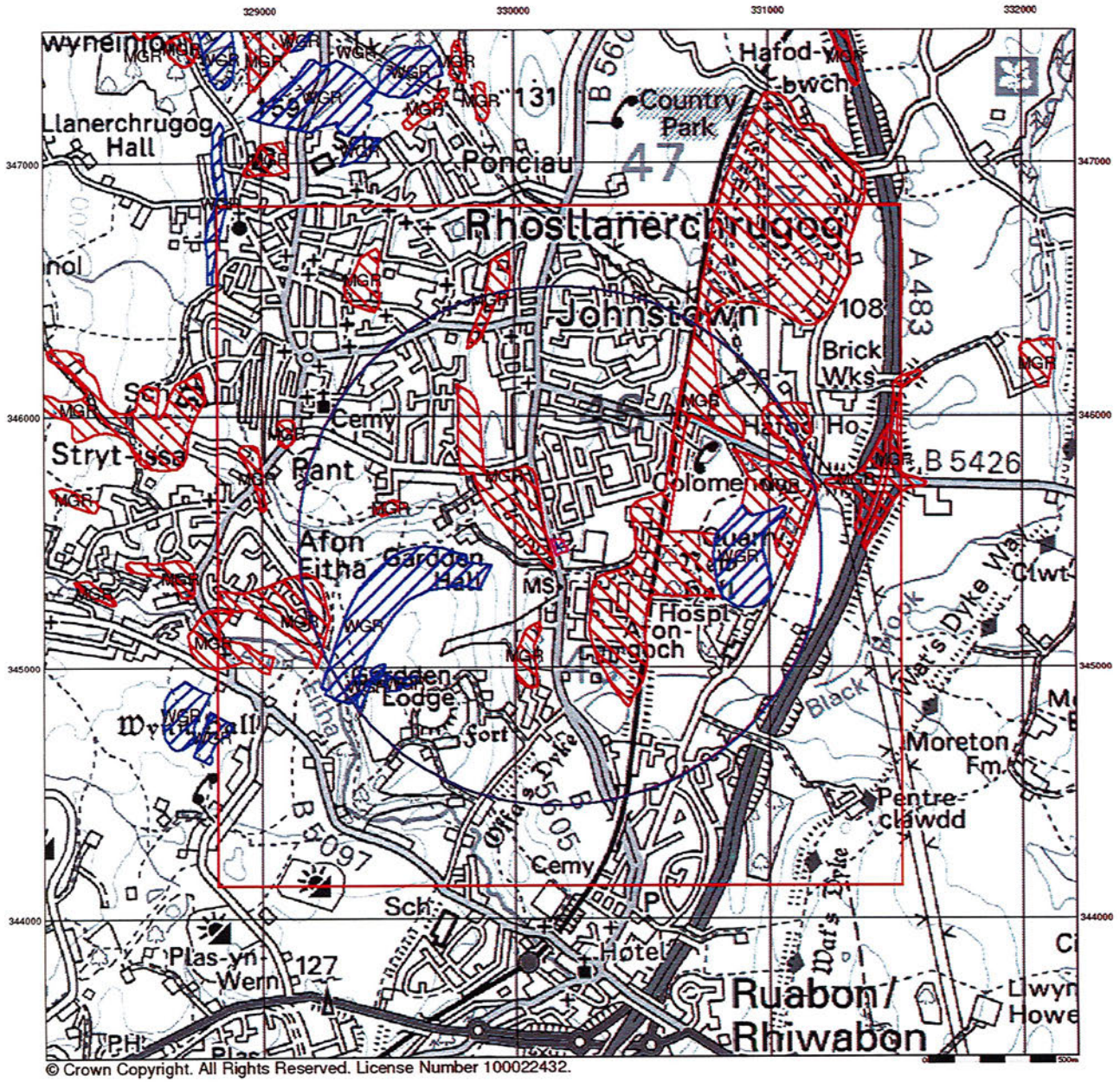
Order Number:	273467105_1_1
Customer Reference:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details:

Moreton Inn, Ruabon Road, Ruabon, WREXHAM, LL14 6PU

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Artificial Ground and Landslip

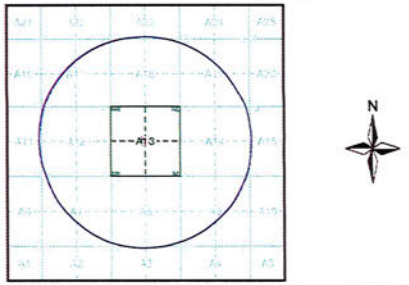
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



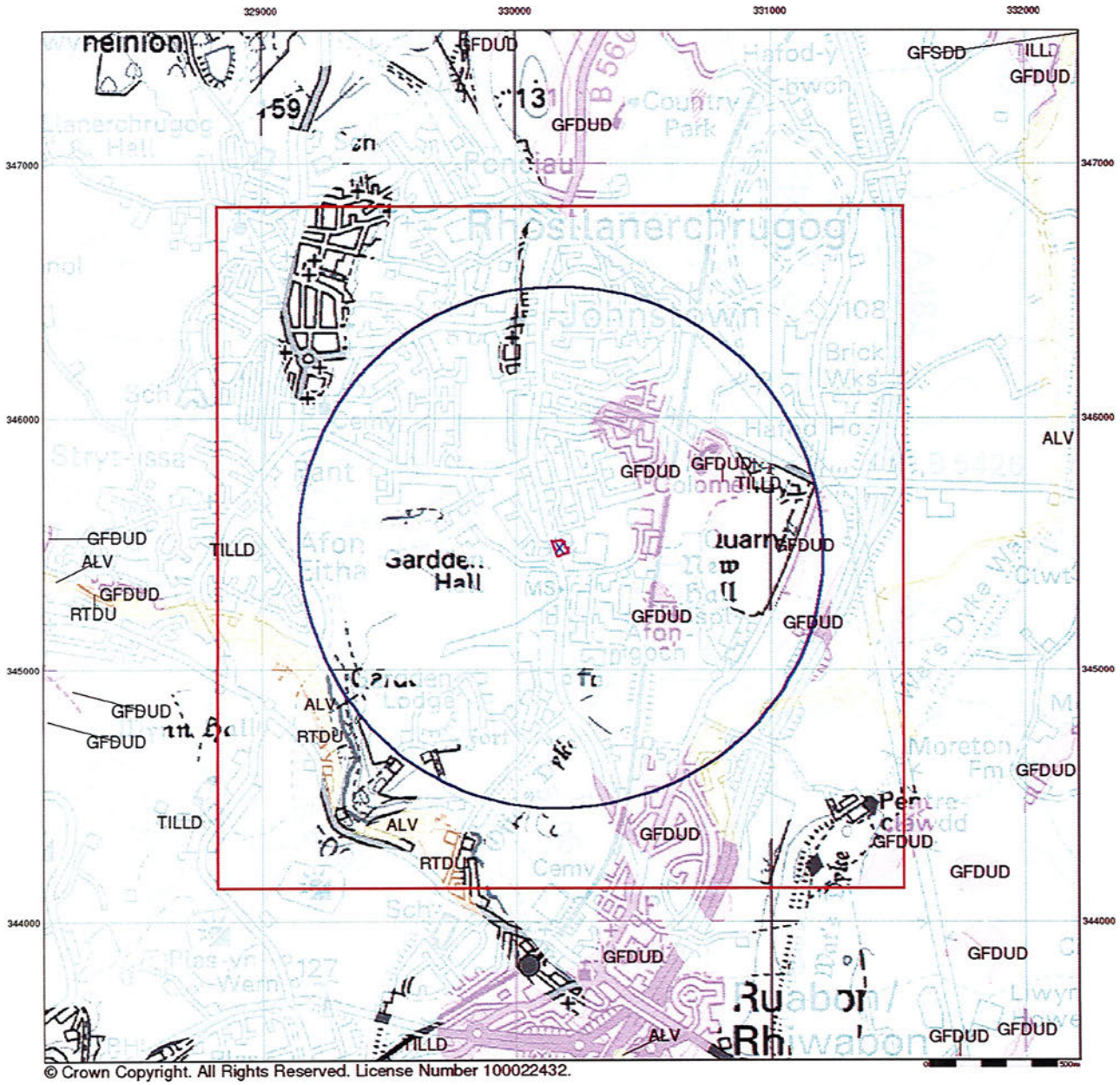
Order Details:

Order Number:	273467105_1_1
Customer Reference:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details:

Moreton Inn, Ruabon Road, Ruabon, WREXHAM, LL14 6PU

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Web: www.envirocheck.co.uk



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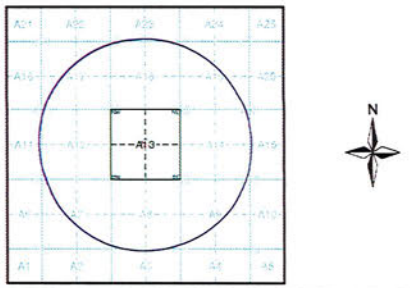
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



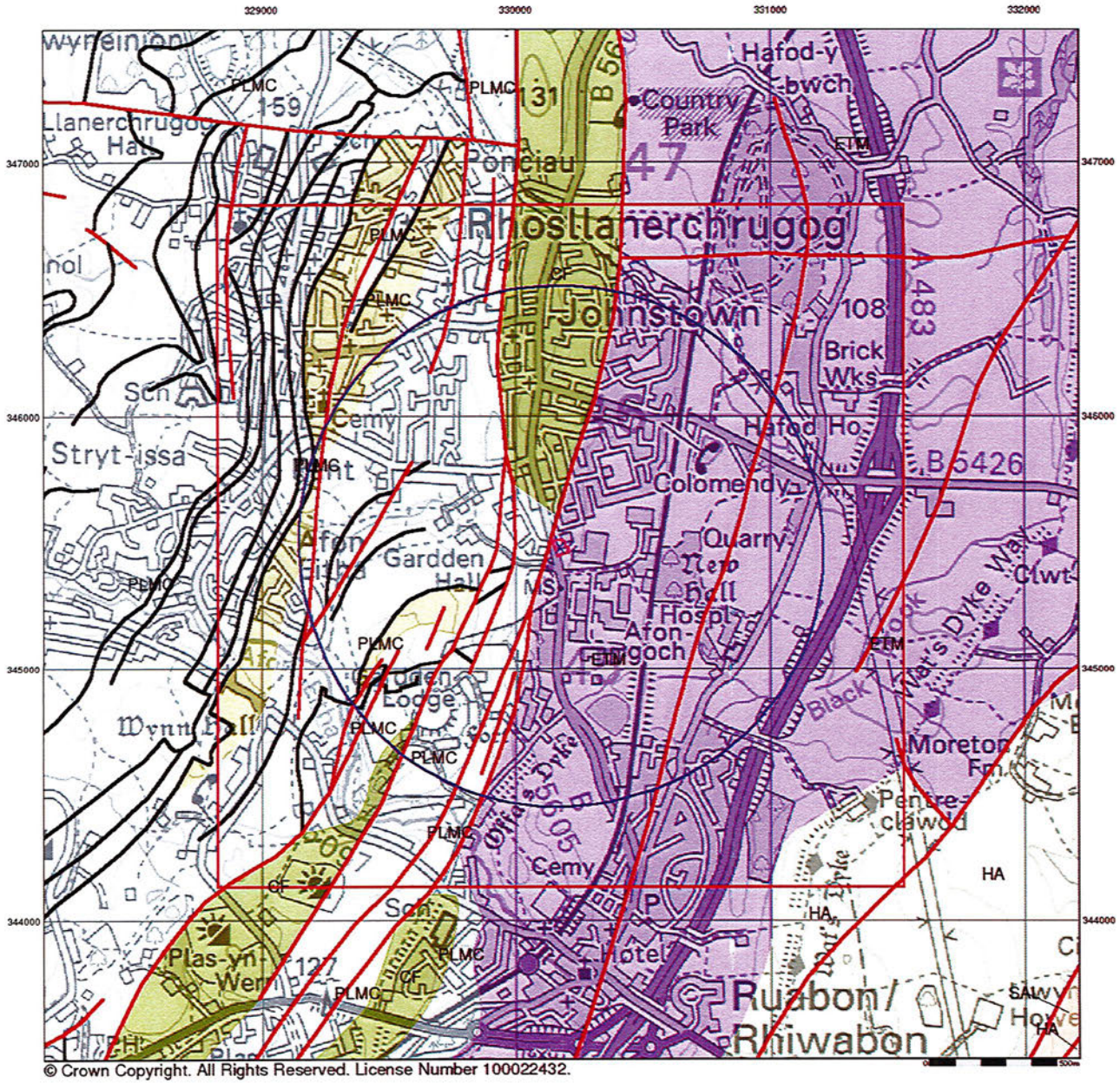
Order Details:

Order Number:	273467105_1_1
Customer Reference:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details:

Moreton Inn, Ruabon Road, Ruabon, WREXHAM, LL14 6PU

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Bedrock and Faults

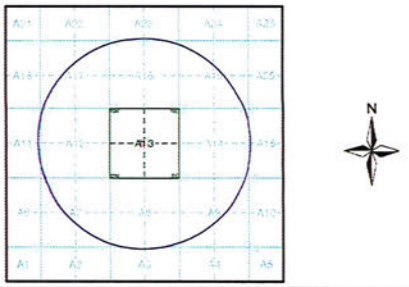
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



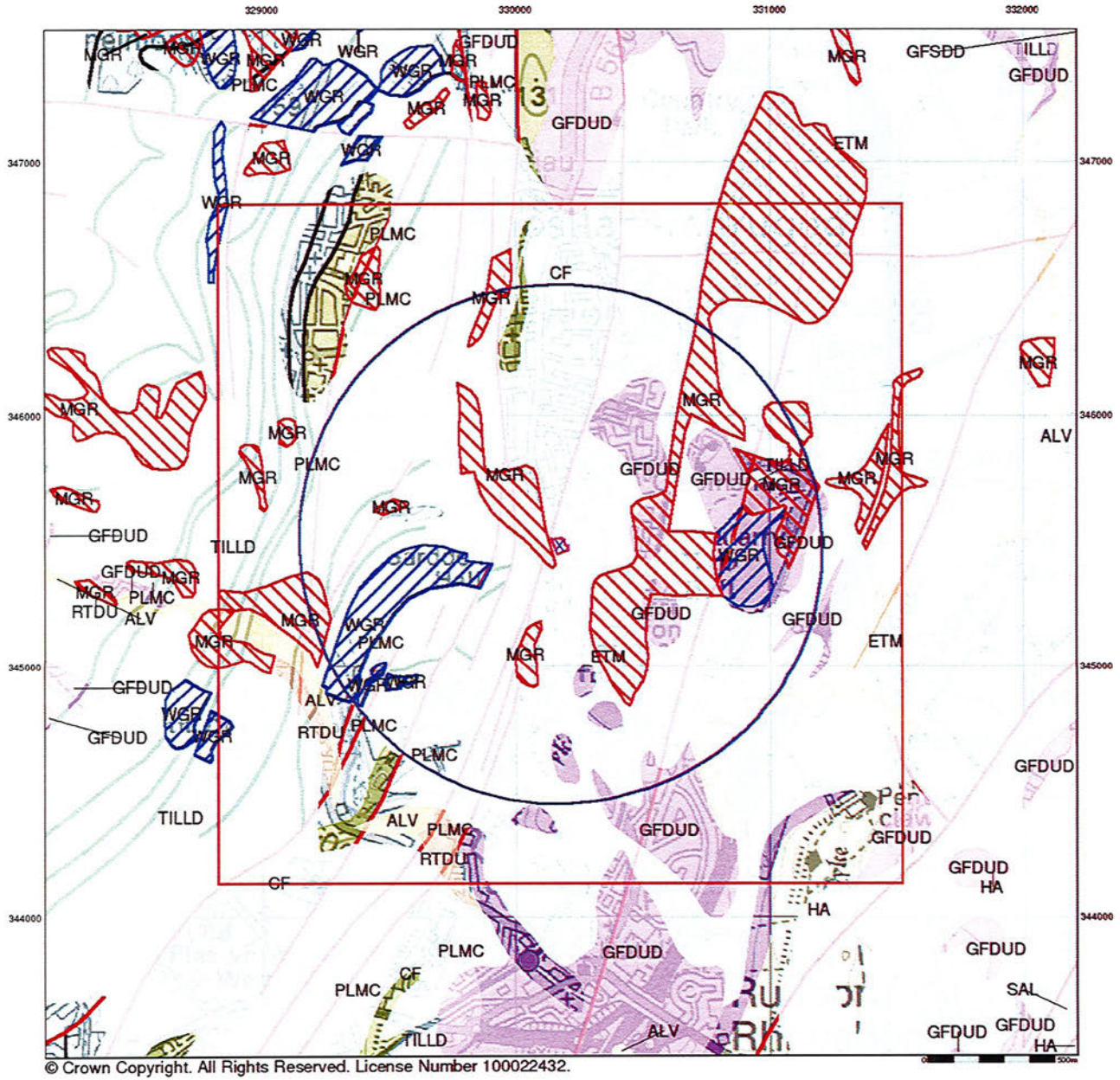
Order Details:

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Customer Reference:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

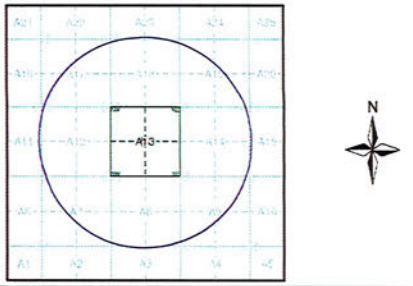
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A

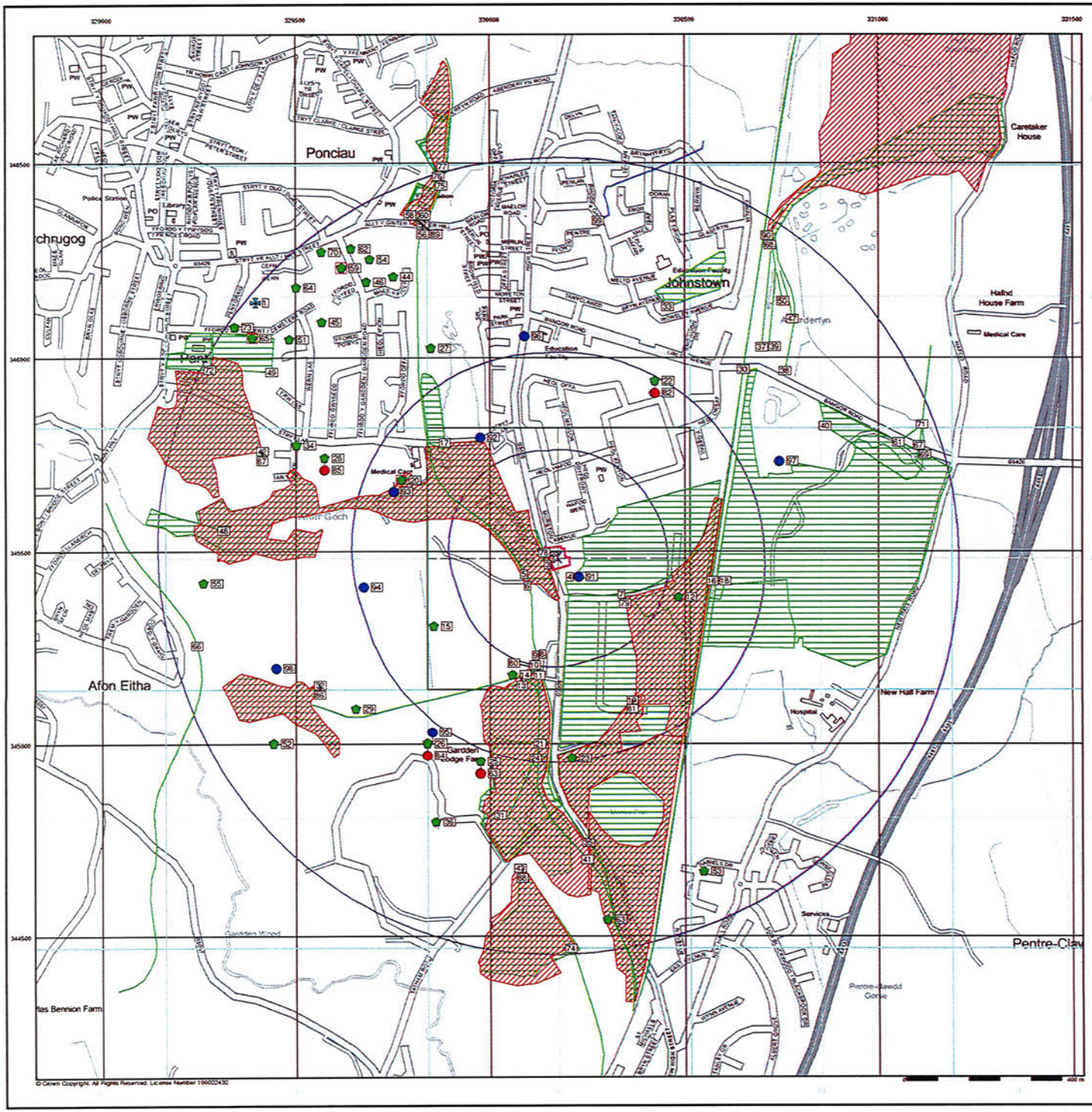


Order Details:

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Customer Reference:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
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General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

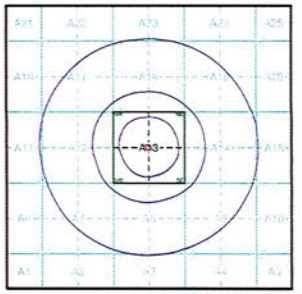
Historical Building Plans

Area Cleared due to Enemy Action

Historical Land Use

- Former Marsh
- Historical Flood Liability
- Historical Flood Liability (Location)
- Potentially Contaminative Industrial Use (Past Land Use)
- Potentially Contaminative Industrial Use (Past Land Use) (Linear)
- Potentially Contaminative Industrial Use (Past Land Use) (Location)
- Potentially Infilled Land (Non-Water)
- Potentially Infilled Land (Non-Water) (Linear)
- Potentially Infilled Land (Non-Water) (Location)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water) (Linear)
- Potentially Infilled Land (Water) (Location)

Historical Data Report - Slice Map A



Order Details

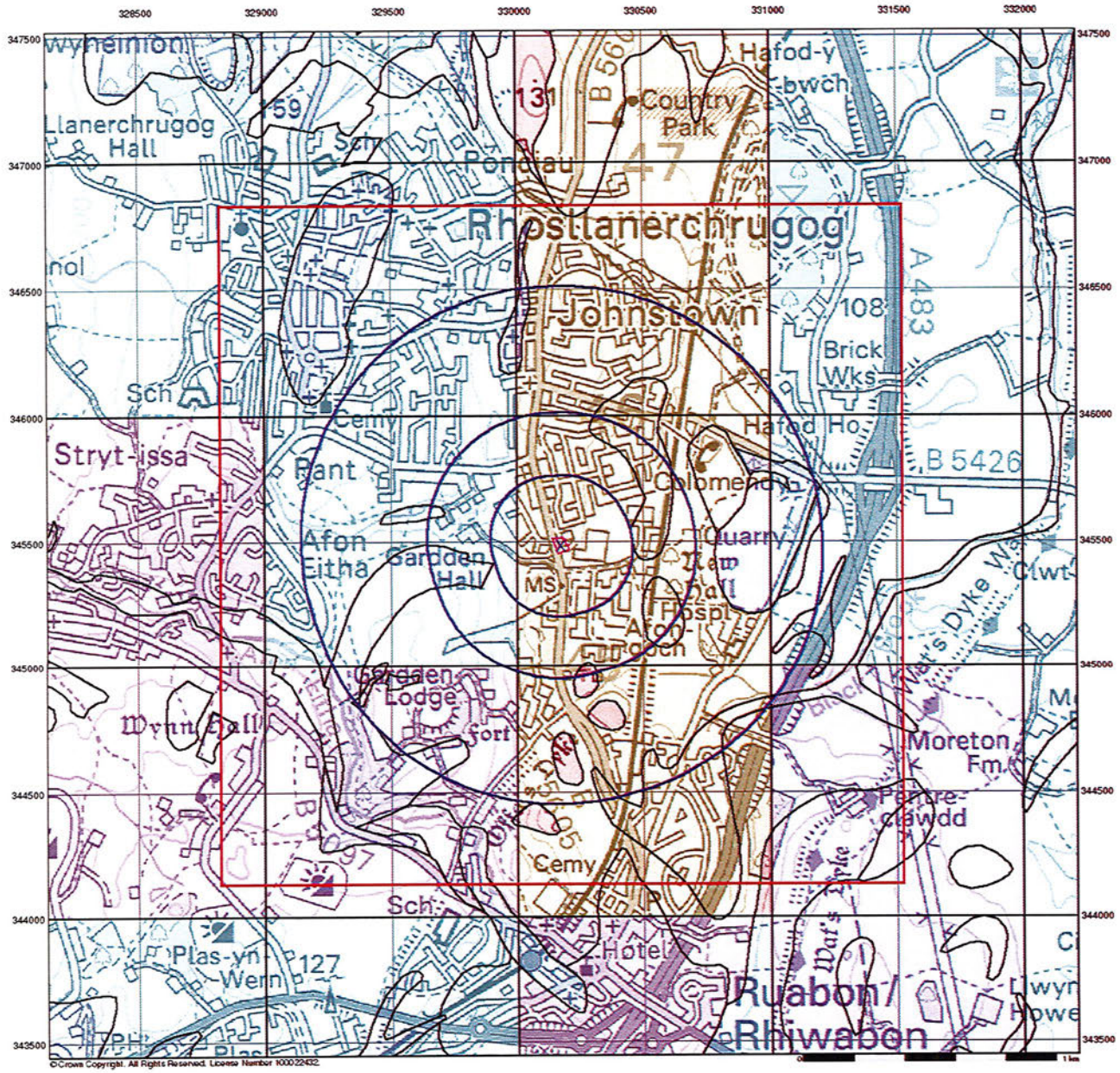
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Customer Ref:	2478AB
National Grid Reference:	330170, 345490
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Site Area (Ha):	0.26
Search Buffer (m):	1000

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Groundwater Vulnerability

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

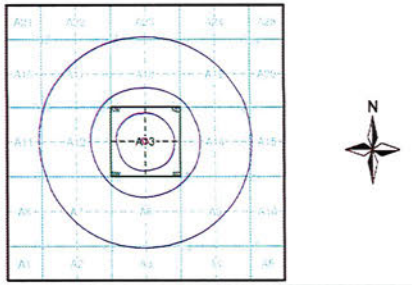
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



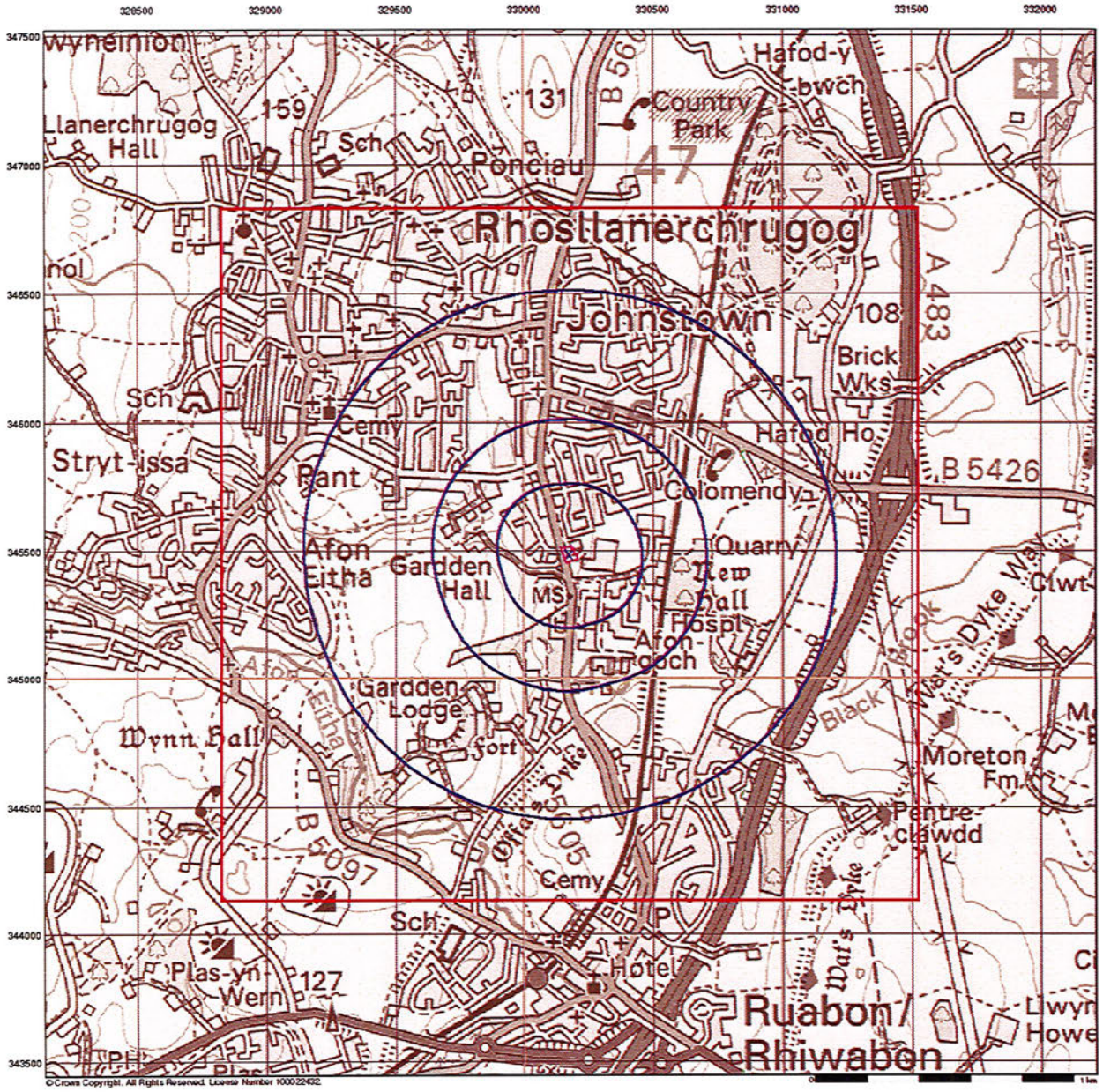
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National Grid Reference:	330170, 345490
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Bedrock Aquifer Designation

General

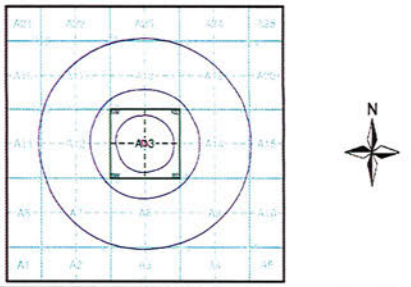
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

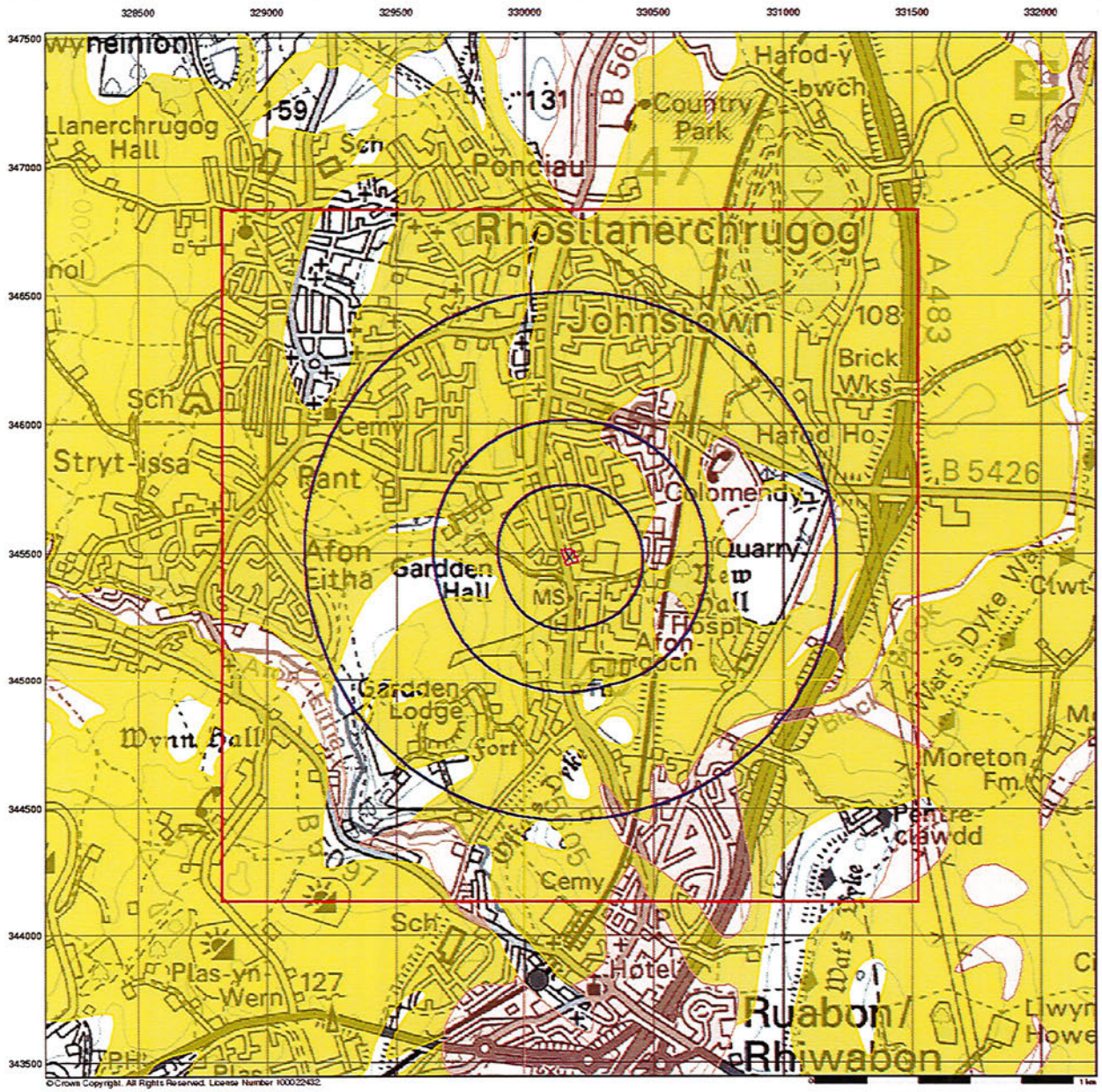
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Search Buffer (m):	1000

Site Details

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Superficial Aquifer Designation

General

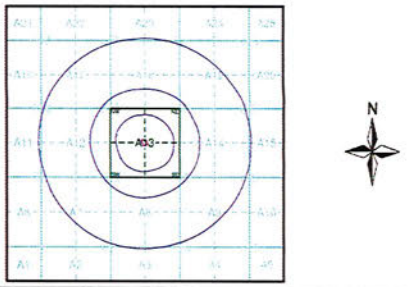
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



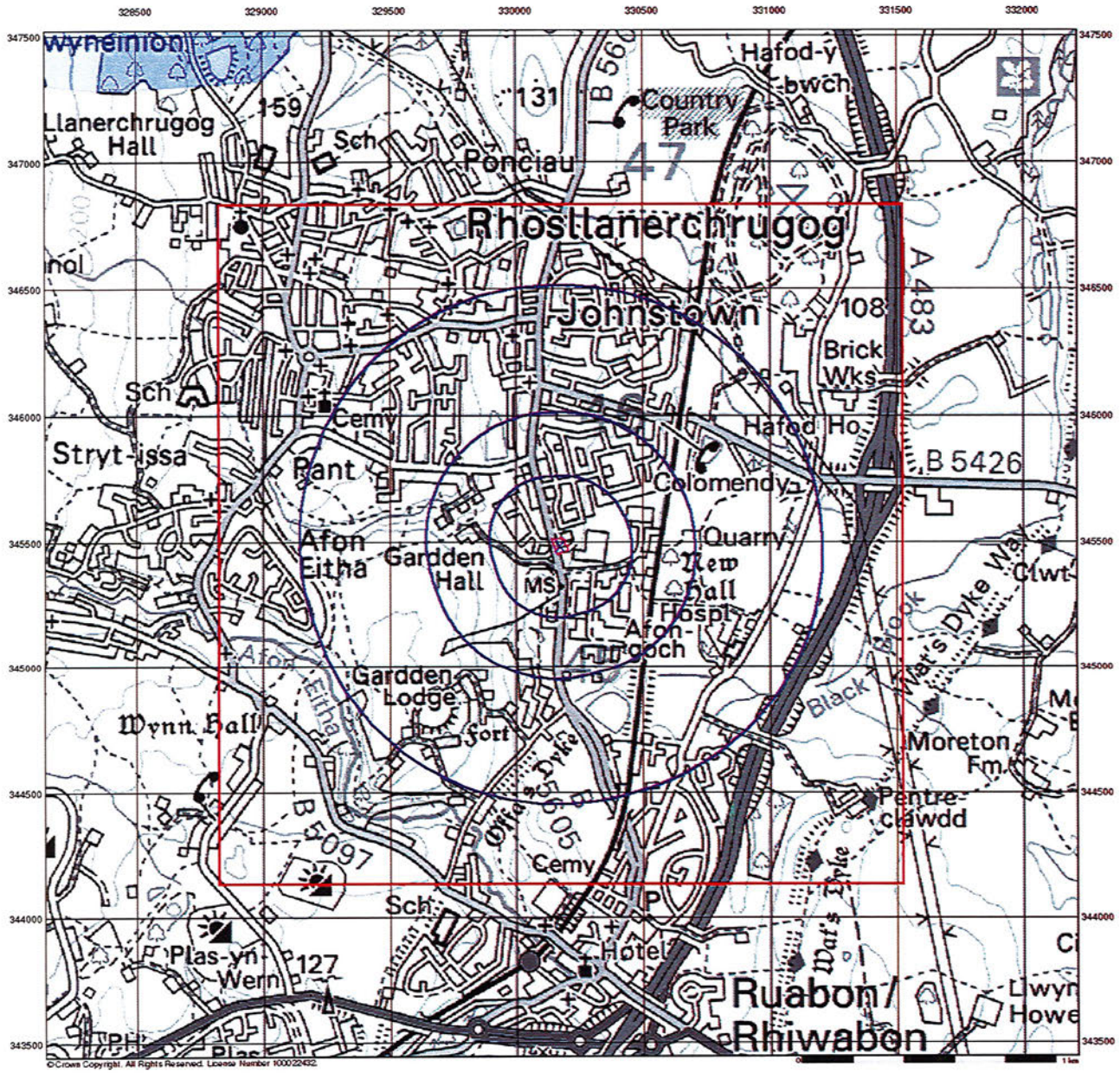
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Source Protection Zones

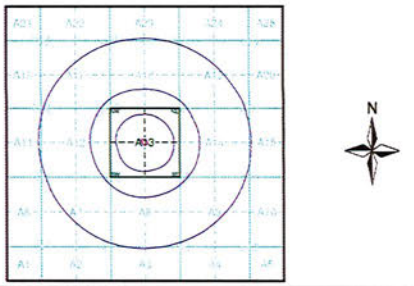
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



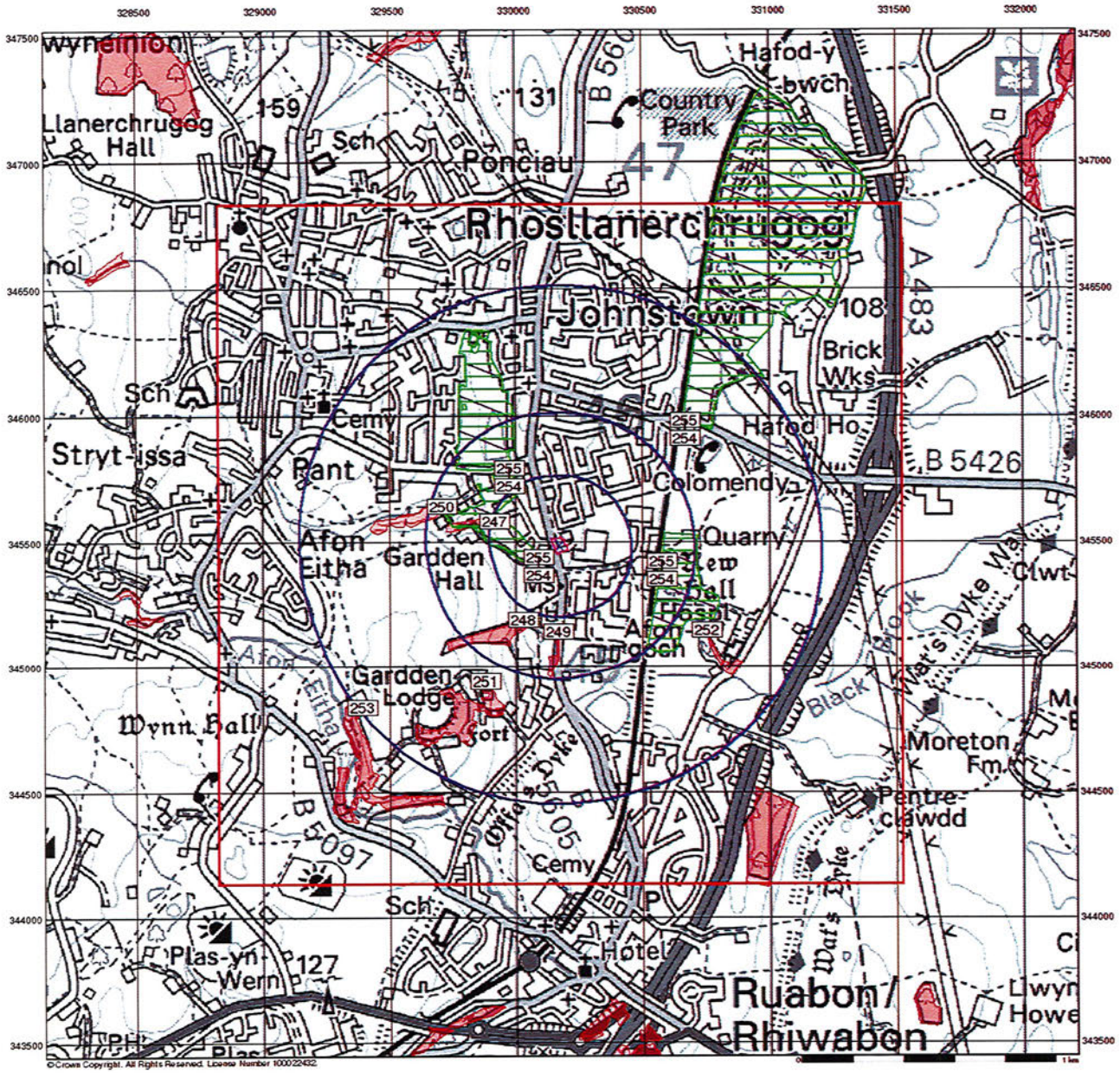
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Site Details

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Sensitive Land Uses

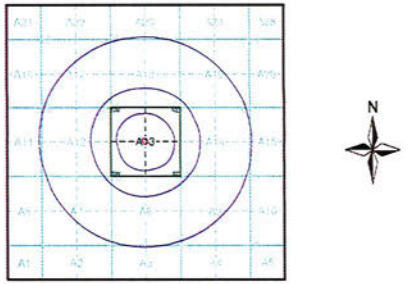
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



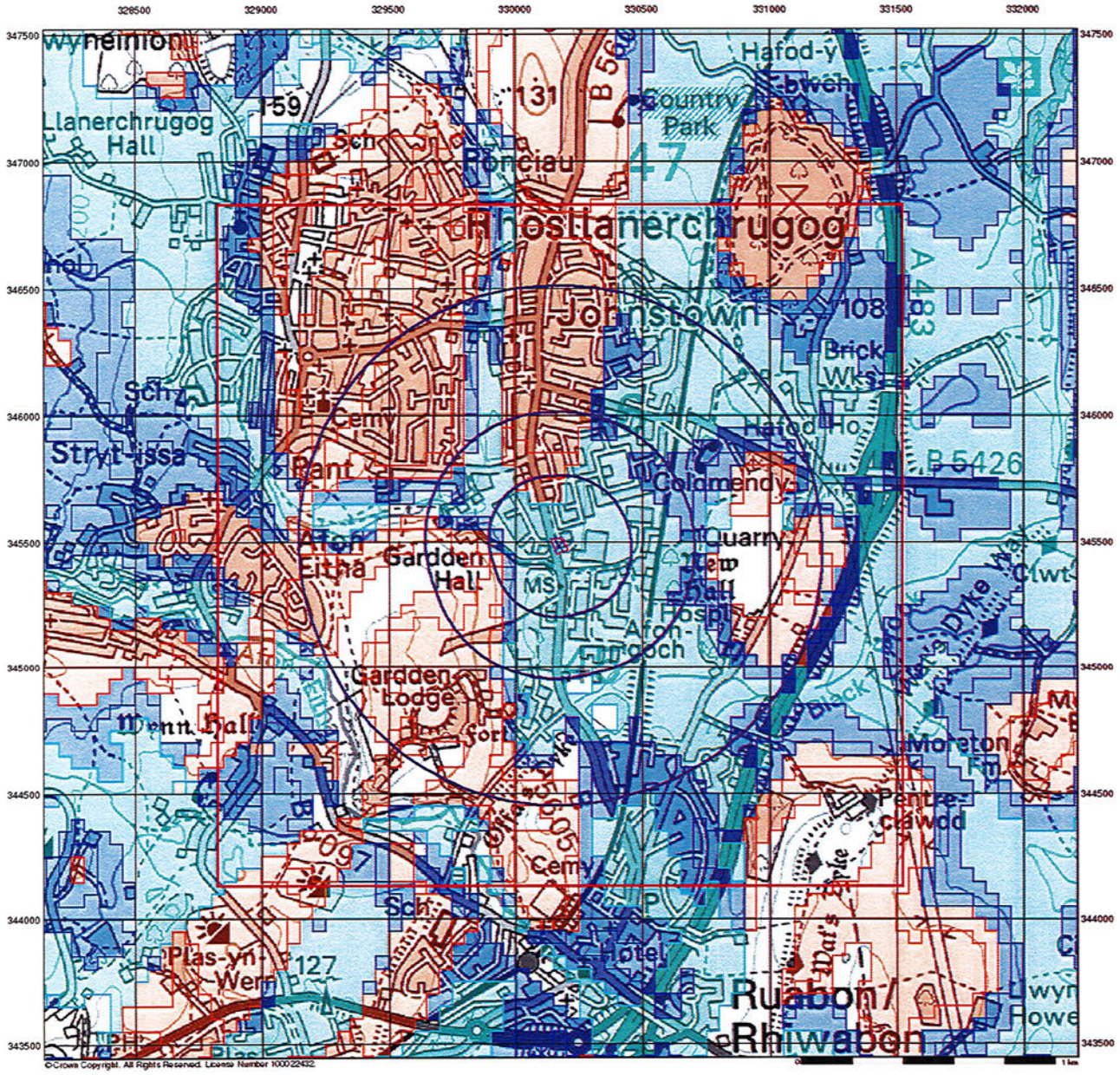
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Site Area (Ha):	0.26
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Site Details

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BGS Flood GFS Data

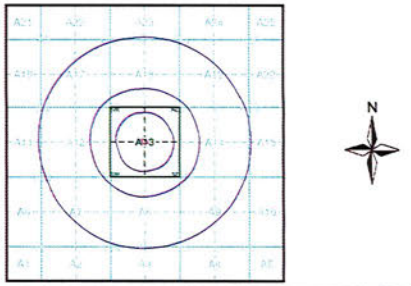
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

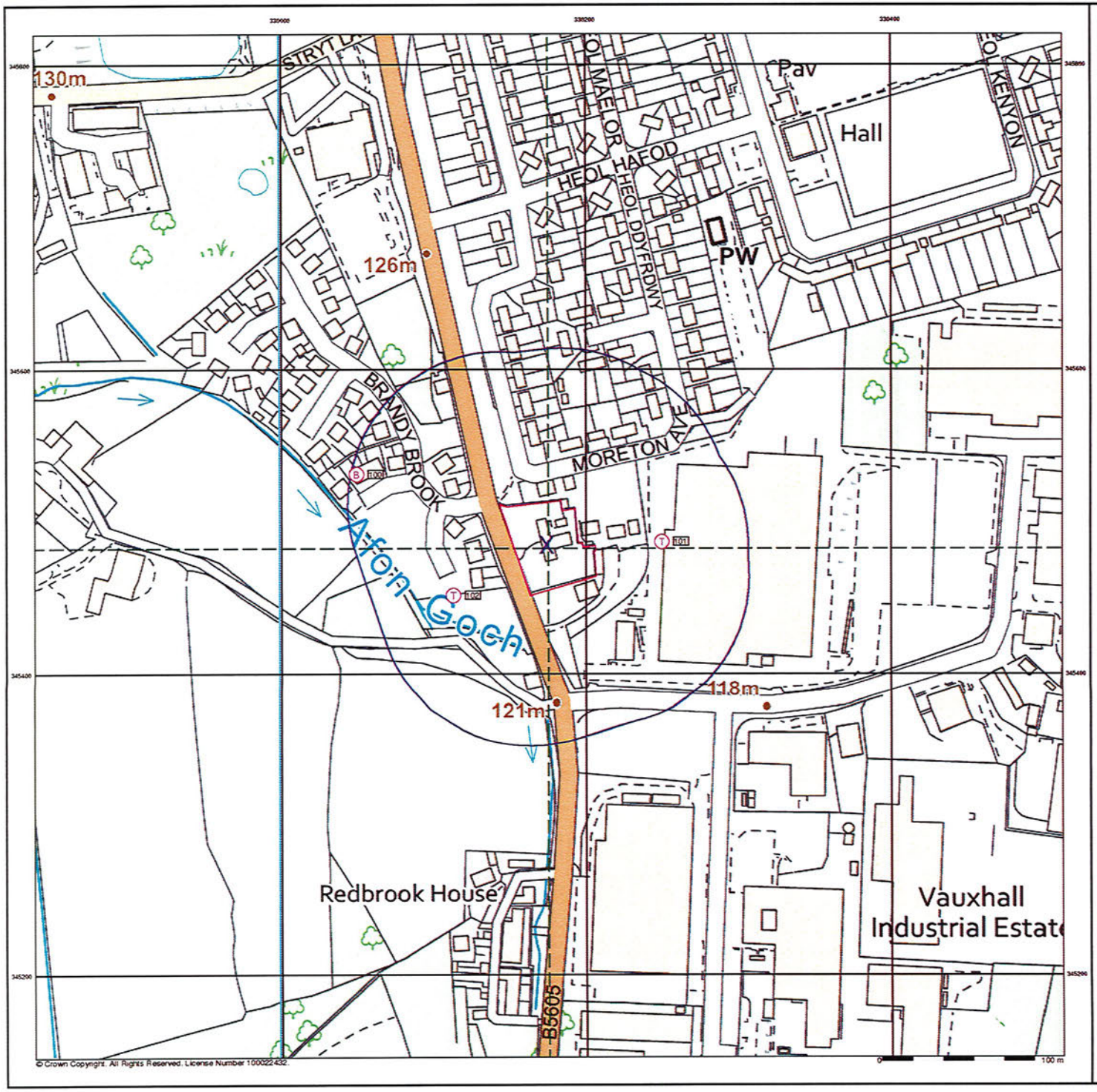
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Site Area (Ha):	0.26
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General

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Several of Type at Location

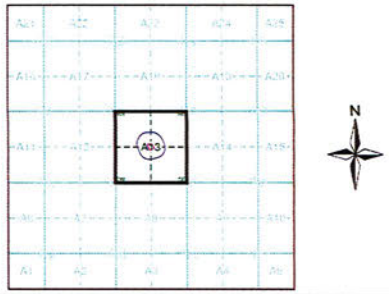
Historical Building Plans

- Area Cleared due to Enemy Action
- Asbestos
- Above Ground Fuel Tanks
- Benzene/Benzole/Naphtha, Naphthalene/Kerosene
- Electricity Generation
- Electricity Sub-Stations
- Gas Industry
- Gas Storage
- Gas Use
- Oil Industry
- Oil Storage
- Oil Use
- Paint based Oils
- Paraffin
- Petrol and Diesel Industry
- Petrol and Diesel Storage
- Petrol and Diesel Use
- Potential Fuel Gas
- Potential Fuel Oil
- Potential Fuel Use
- Potential Petrol and Diesel
- Potential Tanks
- Potentially Fuel-related Tanks
- Underground Fuel Tanks

Historical Tanks and Energy Facilities

- (B) Electrical Sub Station Facility
- (E) Electricity Industry Facility
- (G) Gas Industry Facility
- (V) Gas Monitoring Facility
- (M) Miscellaneous Power Facility
- (O) Oil Industry Facility
- (S) Petroleum Storage Facility
- (P) Potential Tank
- (T) Tank

Historical Data Report - Segment A13



Order Details

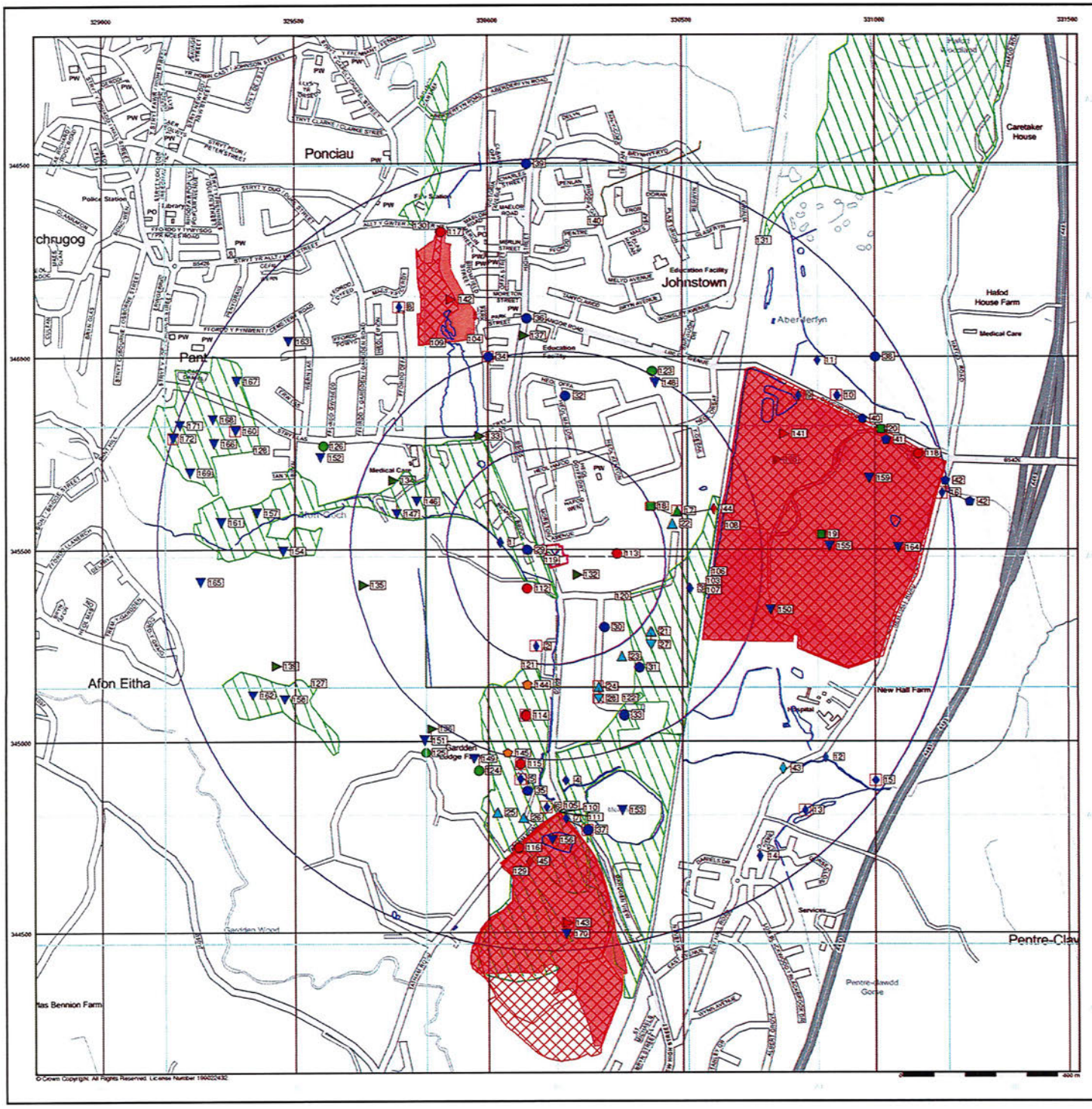
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Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Plot Buffer (m):	100

Site Details

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General
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

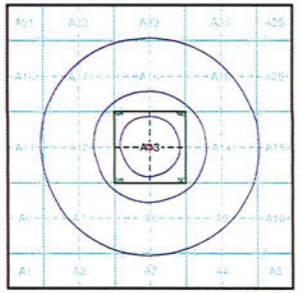
Agency and Hydrological
- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances
- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Geological
- BGS Recorded Mineral Site

Waste
- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Bertlered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



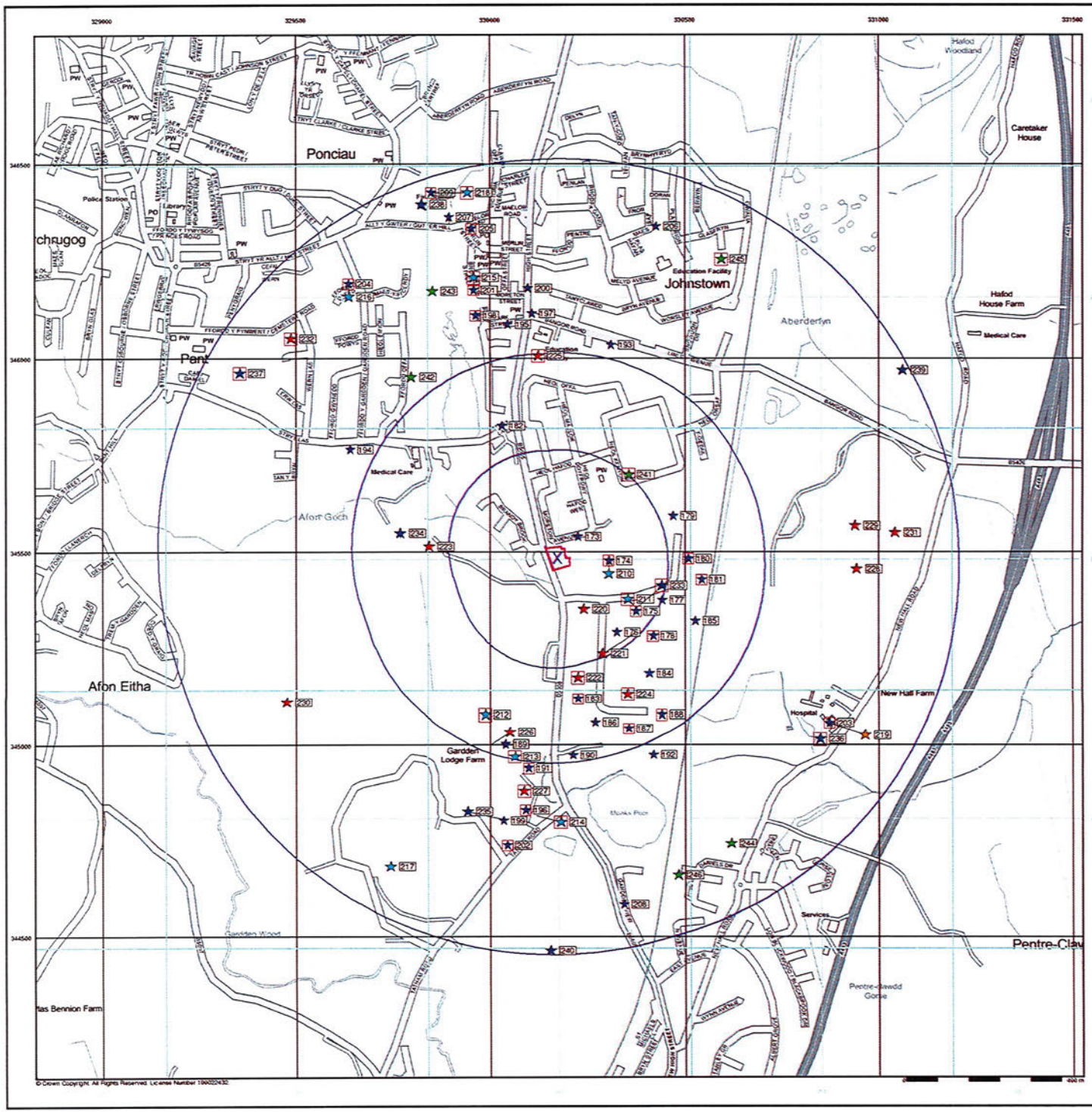
Order Details

Order Number:	273467105_1_1
Customer Ref:	2478AB
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Site Details

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Industrial Land Use Map

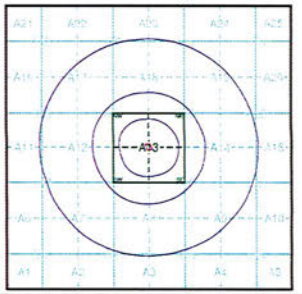
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

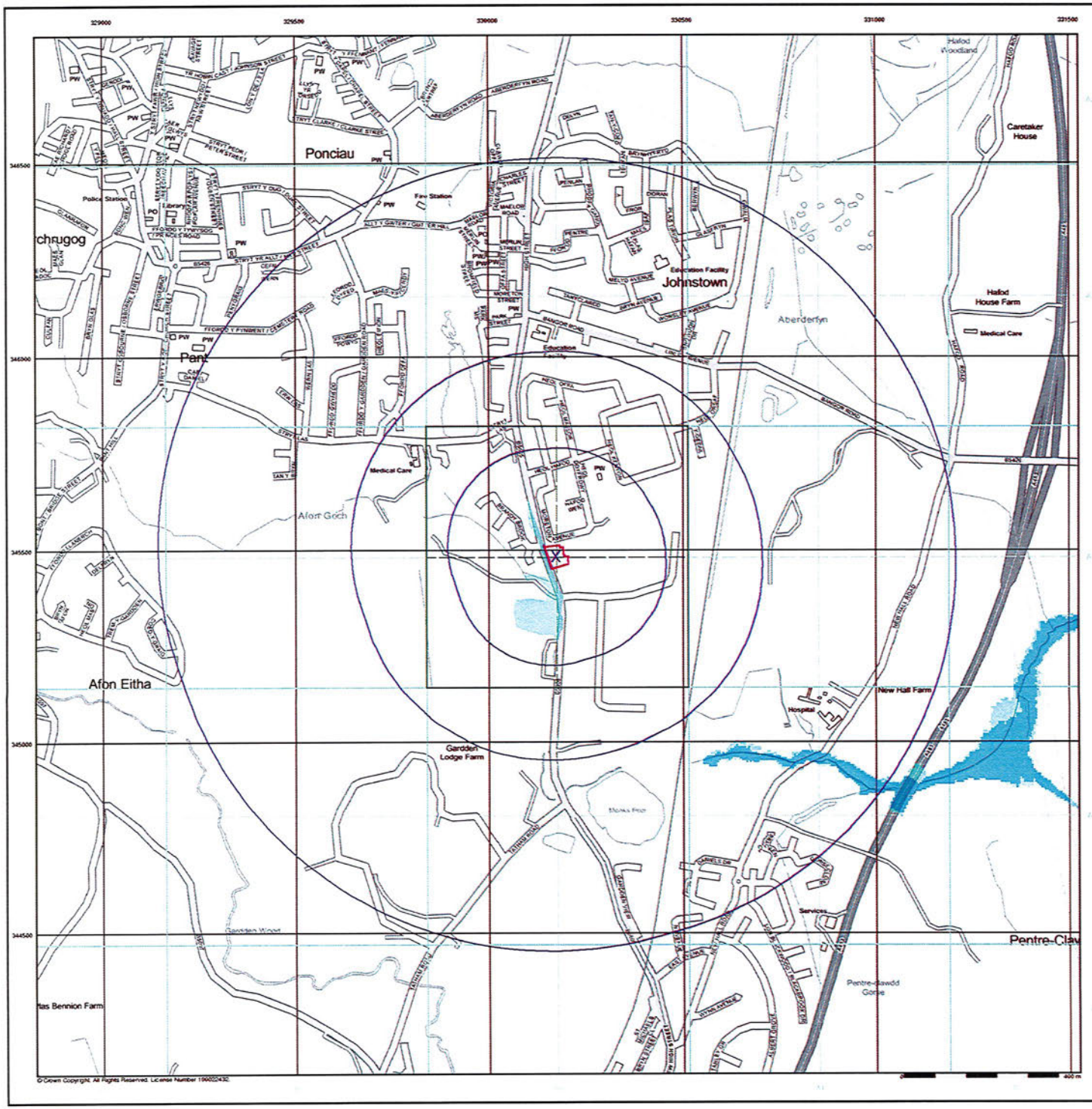
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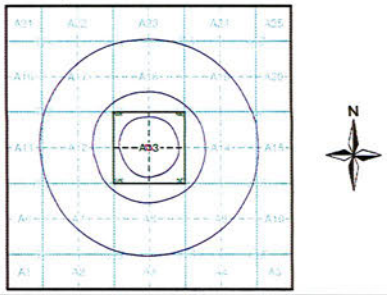
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

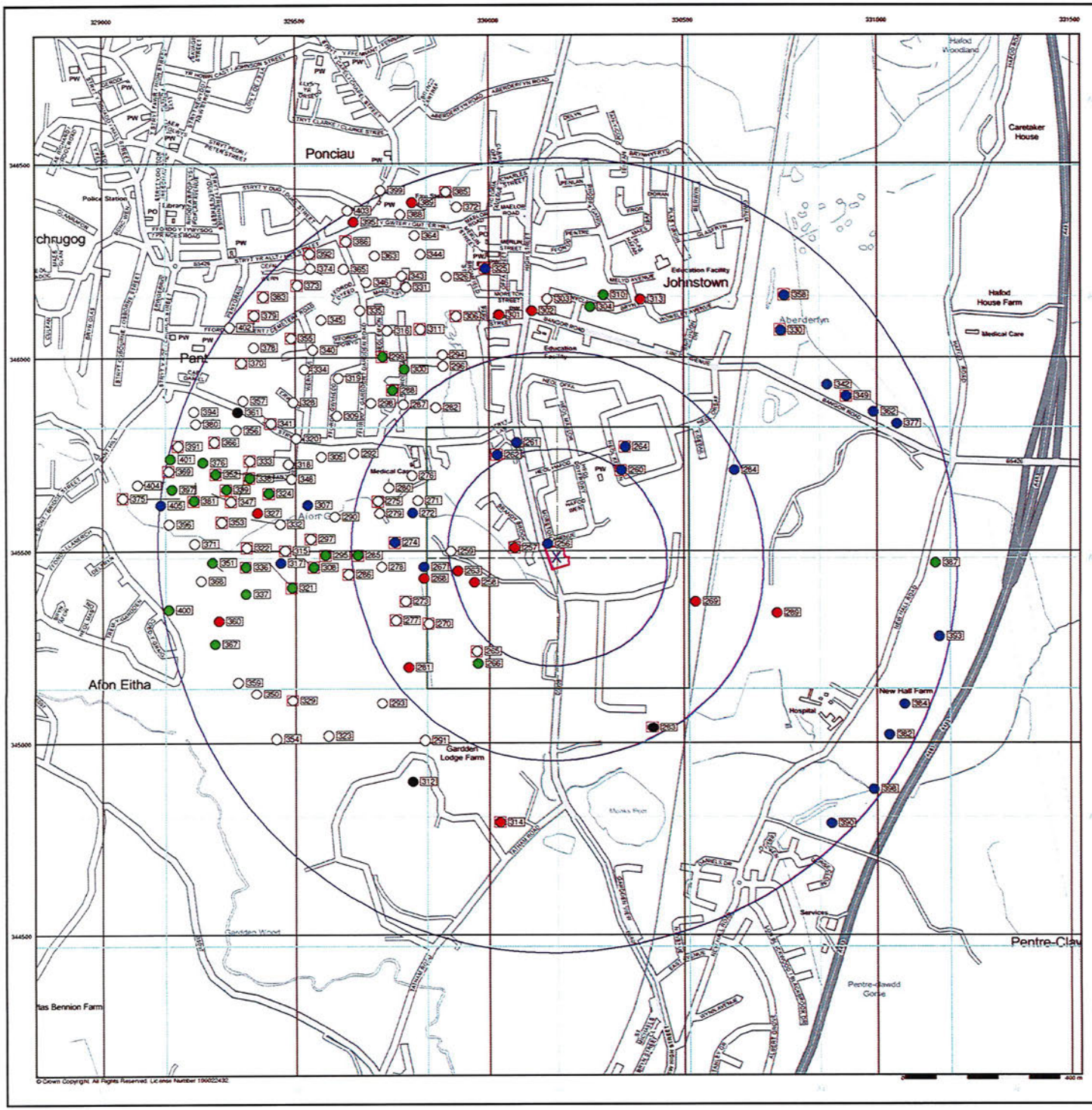
Order Number:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

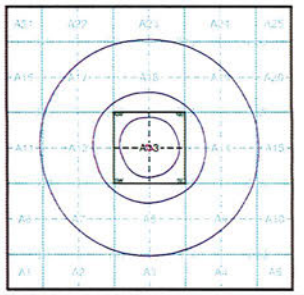
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



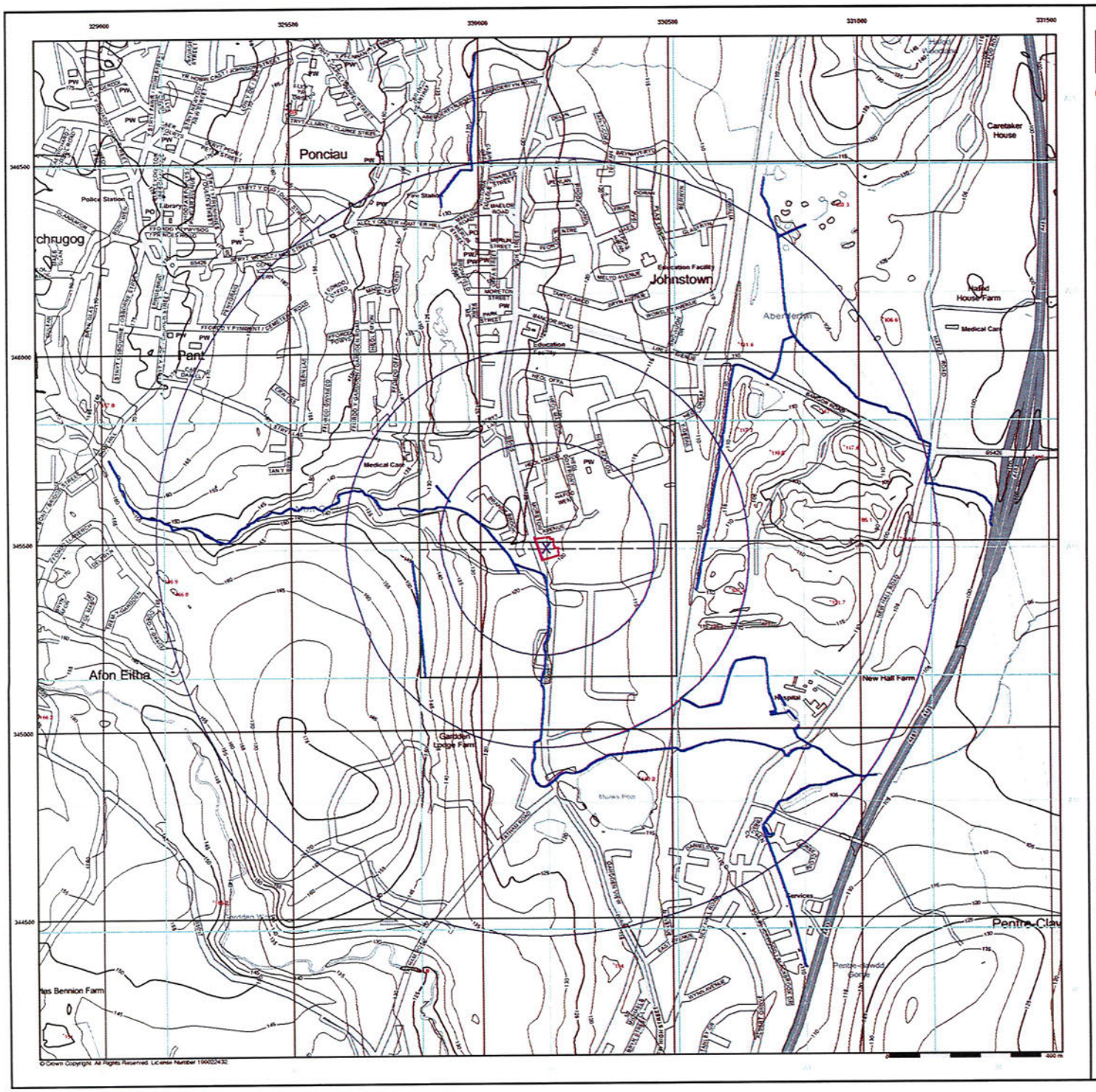
Order Details

Order Number:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

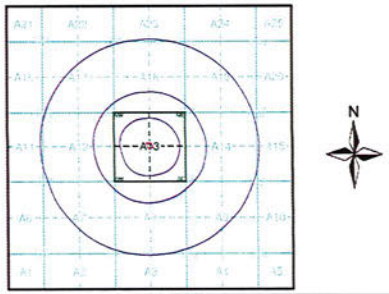
OS Water Network Data

Canal	Drain
Reservoir	Other
Foreshore	Lake
Marsh	Transfer
Tidal River	Lock Or Flight Of Locks
Inland River	Sea

Contours (height in meters)

- Standard Contour 105
- Master Contour 100 95
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



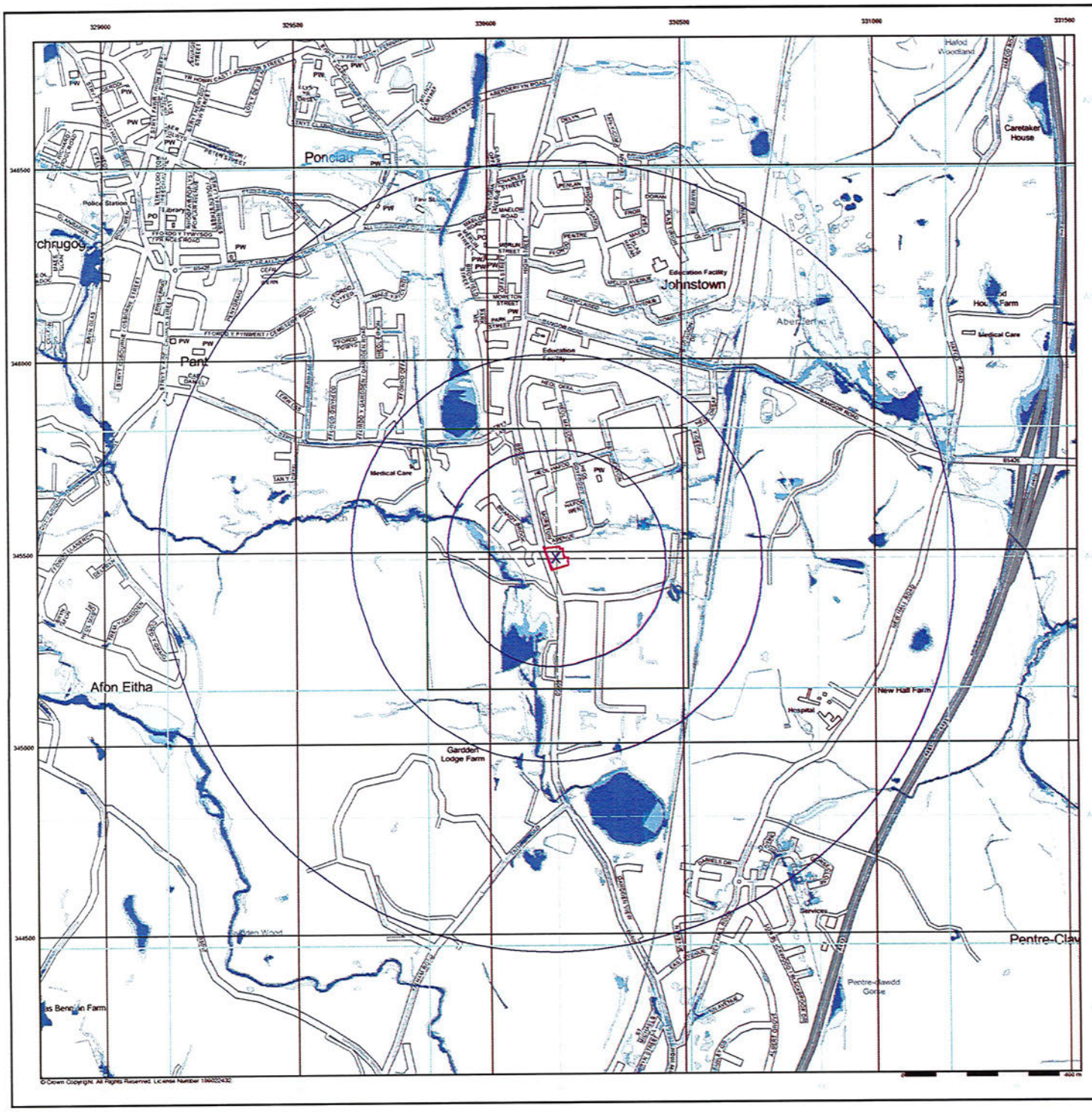
Order Details

Order Number:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Risk of Flooding from Surface Water

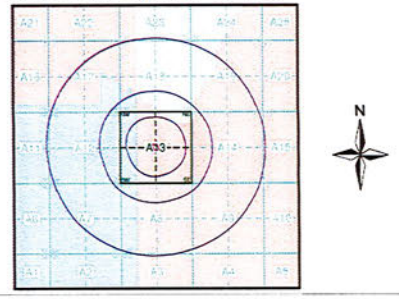
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



Order Details

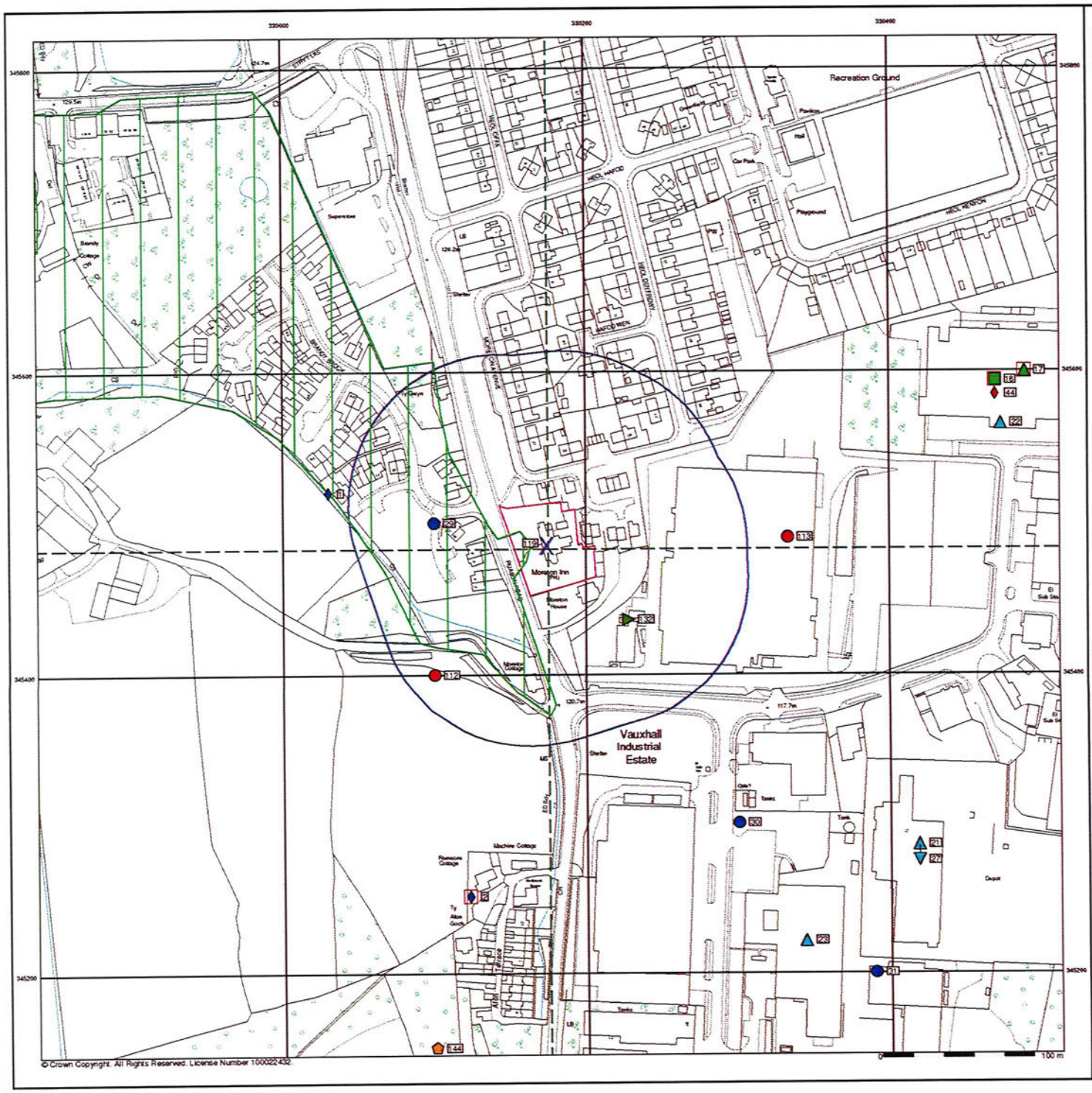
Order Number:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several or Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

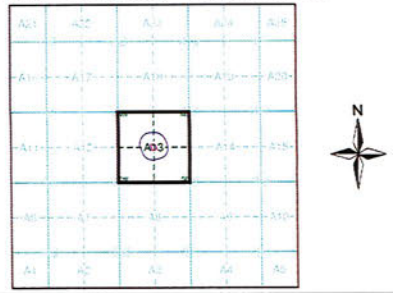
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



Order Details

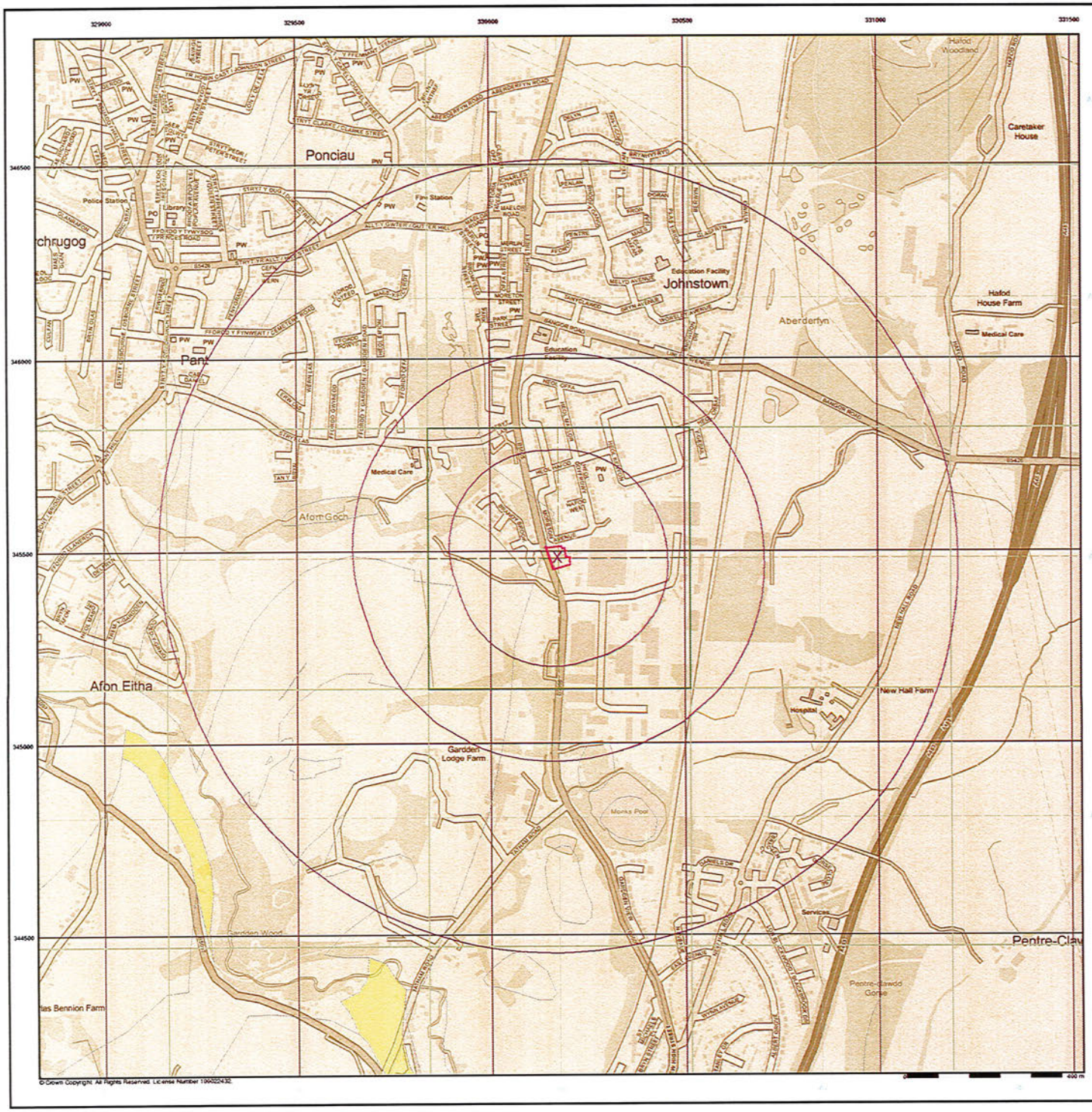
Order Number:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Plot Buffer (m):	100

Site Details

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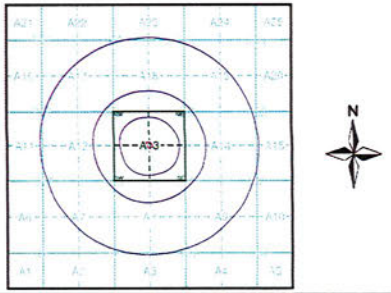
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A



Order Details

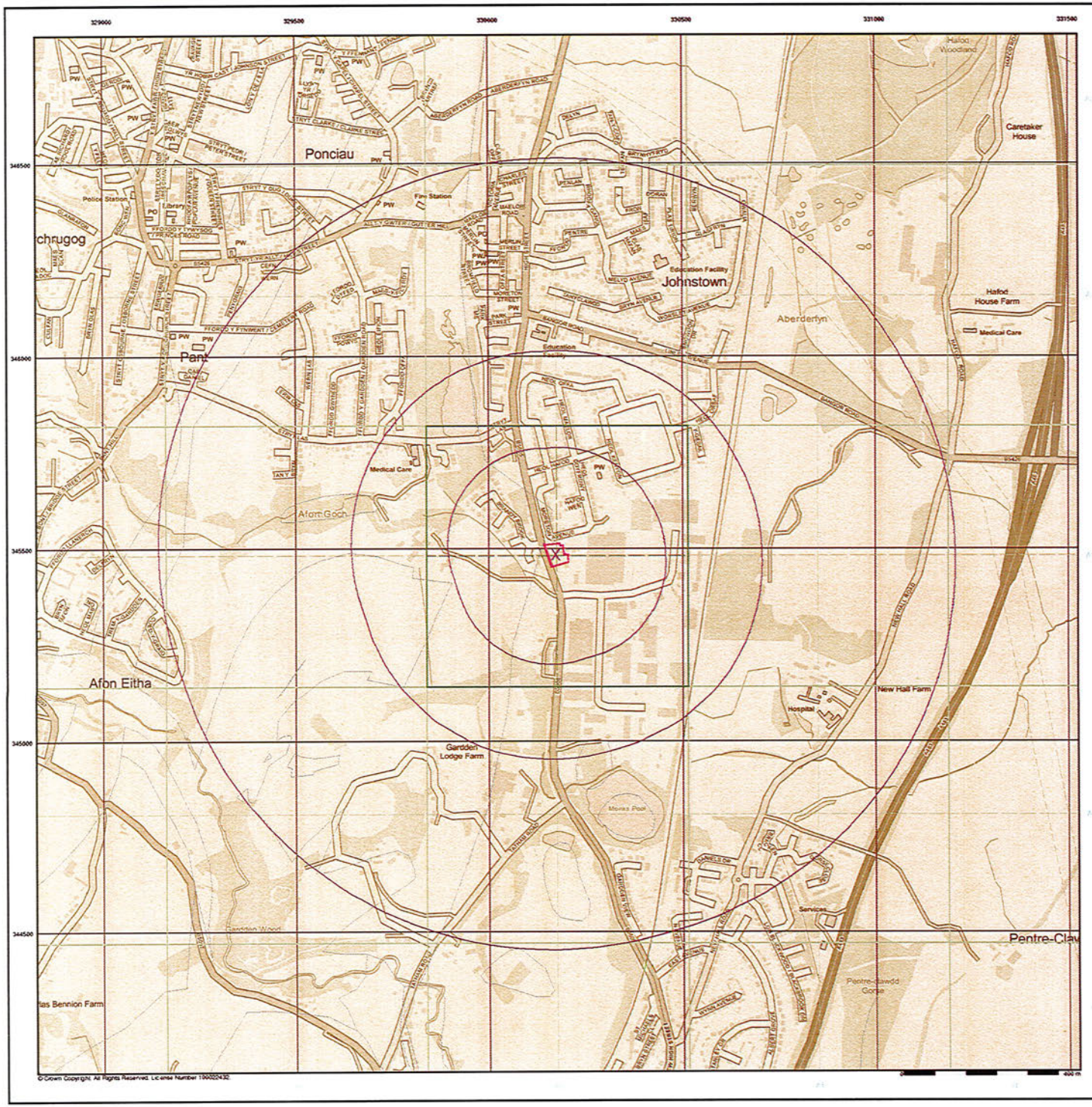
Order Details:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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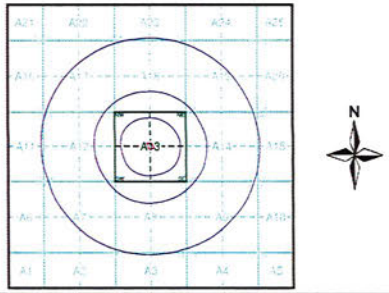
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



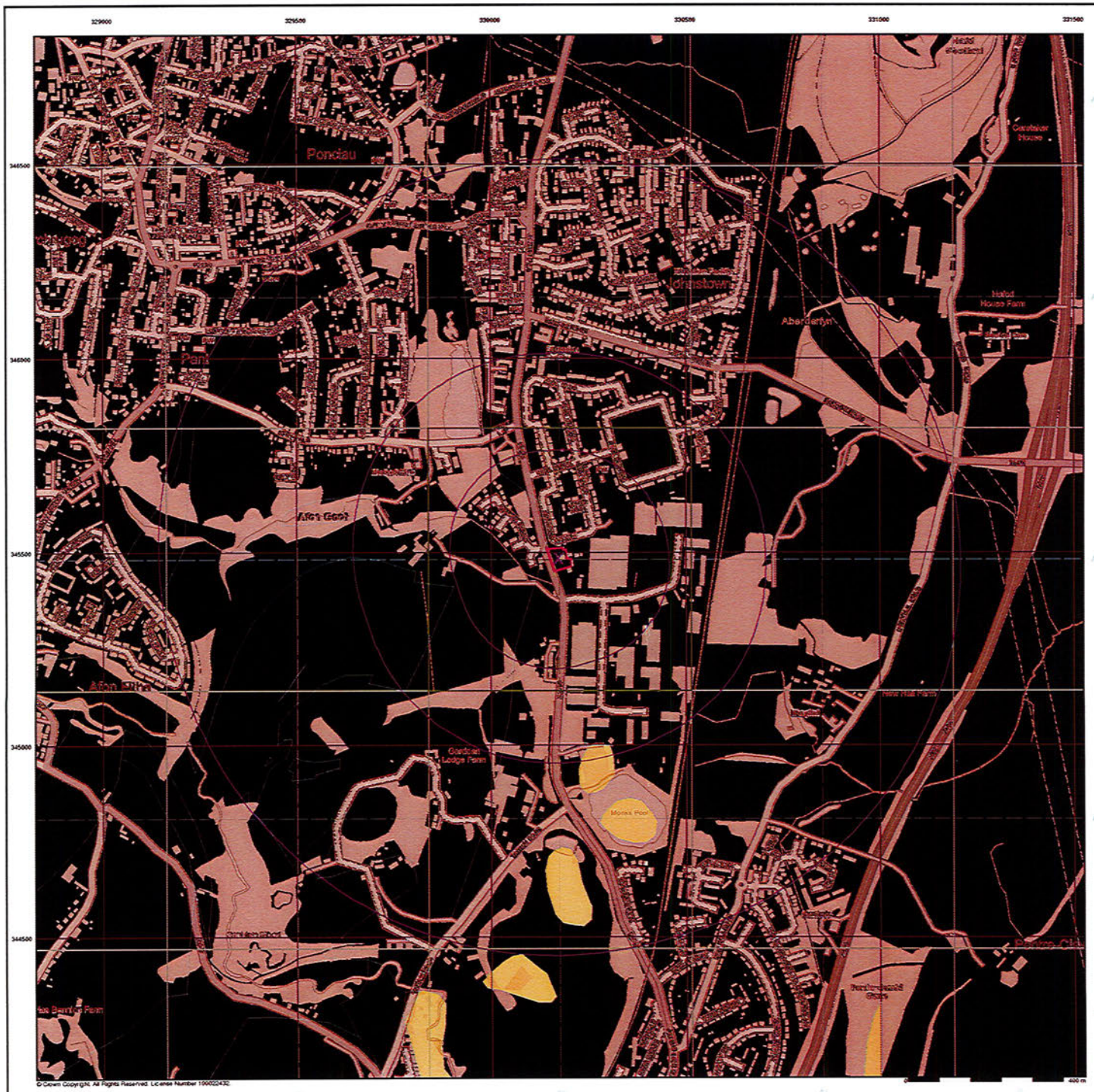
Order Details

Order Details:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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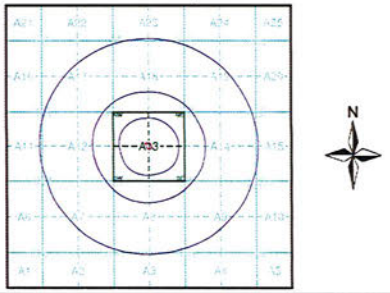
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



Order Details

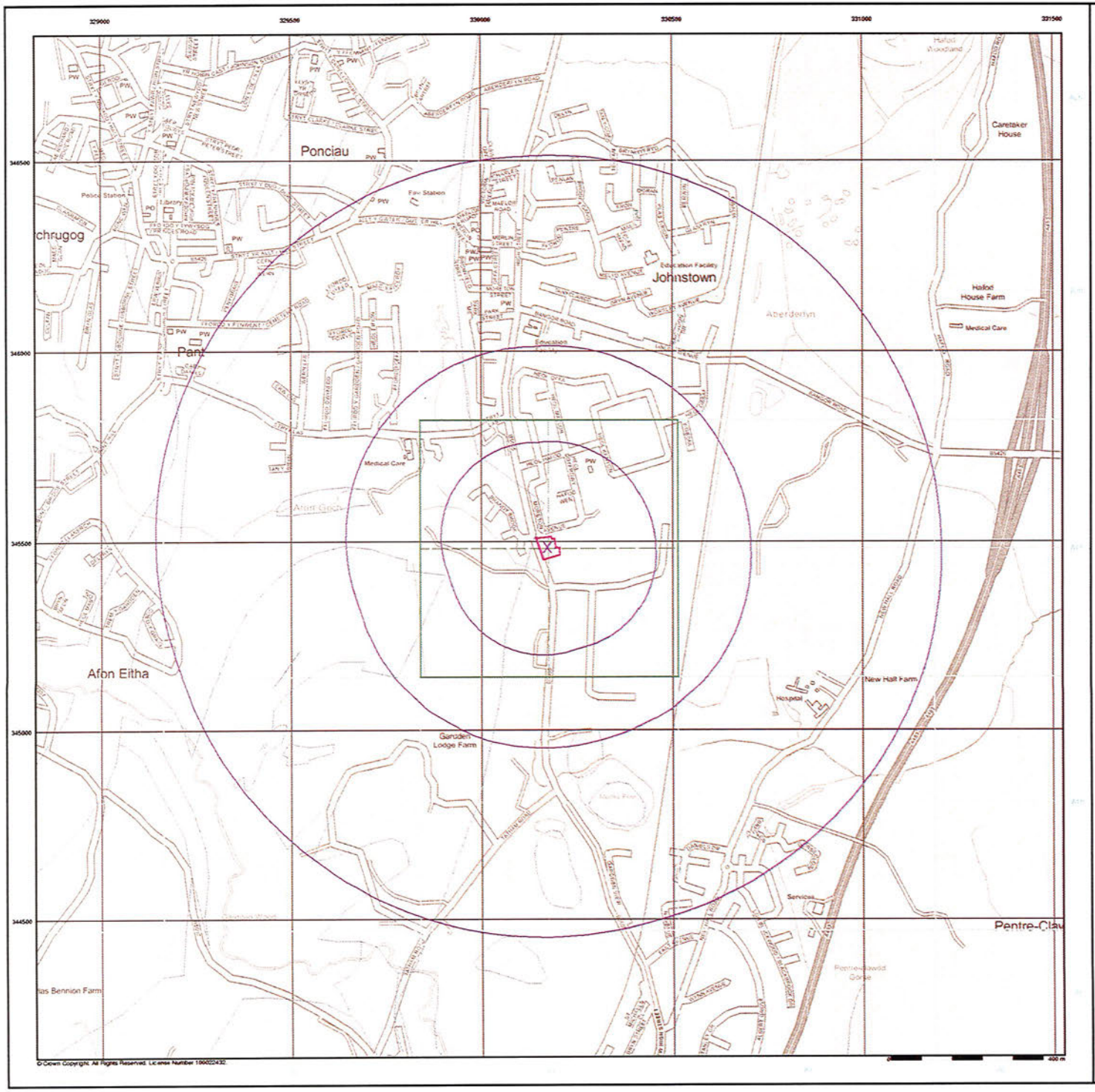
Order Details:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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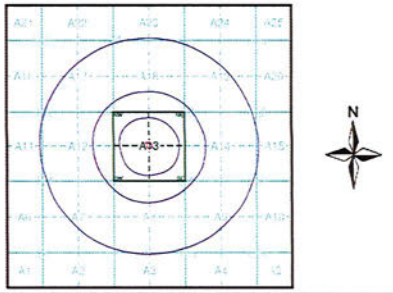
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



Order Details

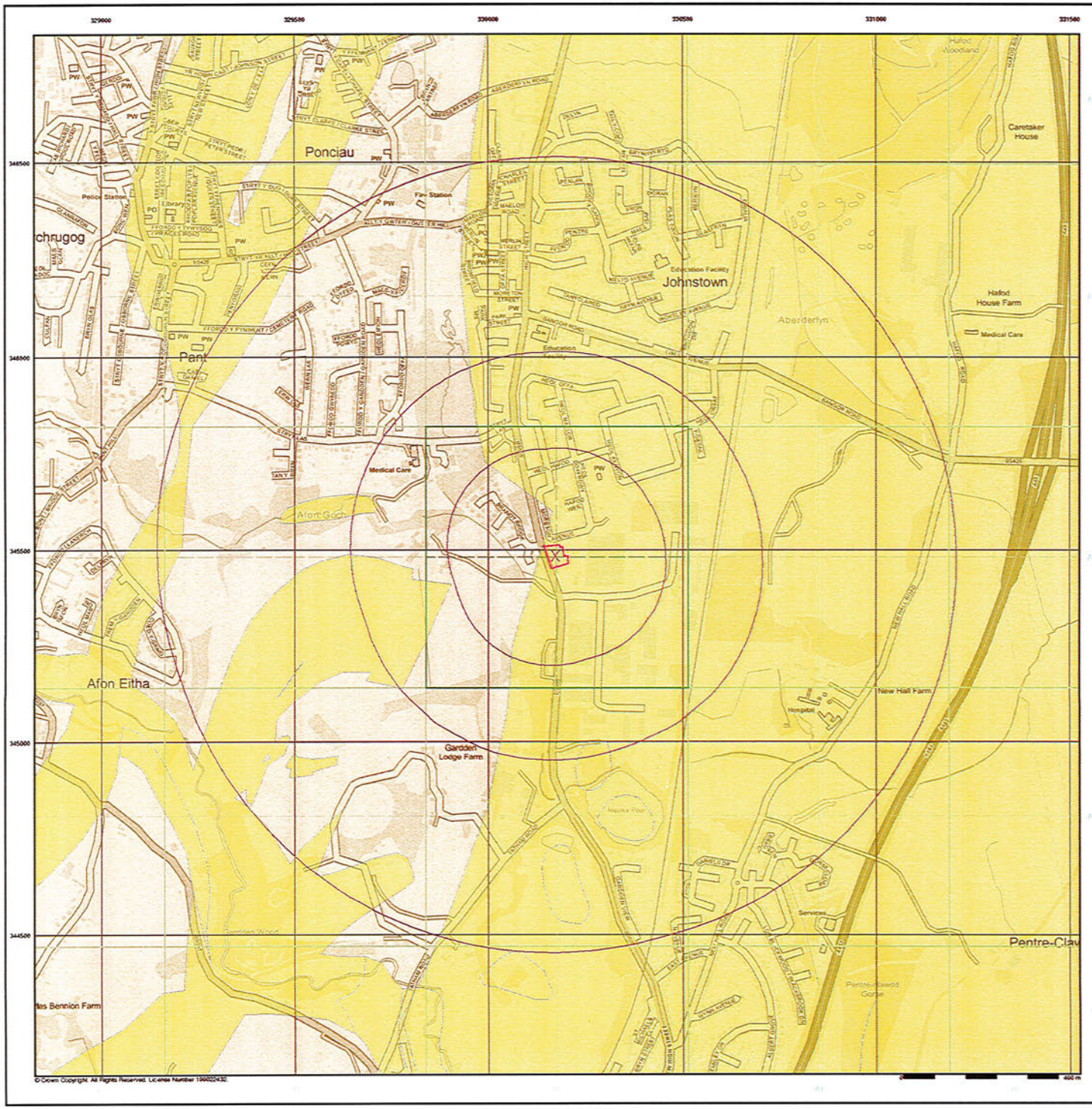
Order Details:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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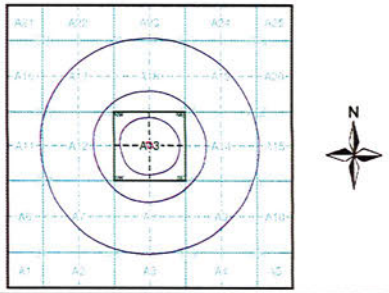
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



Order Details

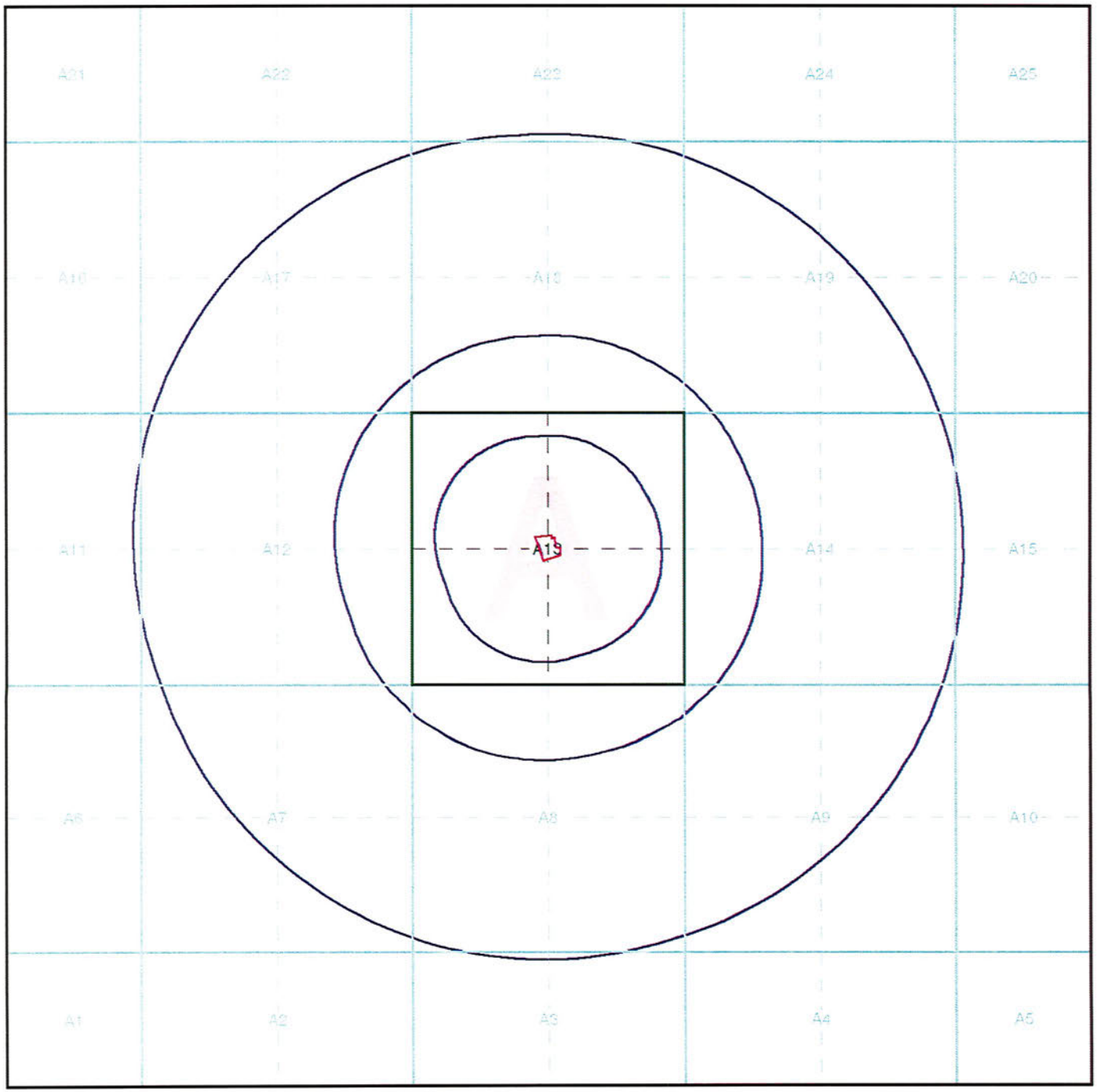
Order Details:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330170, 345490
Slice:	A
Site Area (Ha):	0.26
Search Buffer (m):	1000

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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Cyfoeth Naturiol Cymru
Natural Resources Wales

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr M Scott, GroundSolve Ltd, Unit 1, Well House Barns, Chester Road, Bretton, Flintshire, CH4 0DH

Order Details

Order Number:	273467105_1_1
Customer Ref:	2478AB
National Grid Reference:	330180, 345480
Site Area (Ha):	0.26
Search Buffer (m):	1000

Site Details

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http://www.landmarkinfo.co.uk/Terms/Show/515

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APPENDIX D

TRIAL PIT LOGS

TRIAL PIT 01

Depth (m)	Strata
0.00 – 0.10	Tarmac (MADE GROUND)
0.10 – 0.45	Loose dark brown black silty GRAVEL. Gravel is angular to subrounded fine to coarse with occasional brick and pottery. (MADE GROUND)
0.45 – 0.65	Soft dark brown slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse of mixed lithologies. (GLACIAL TILL)
0.65 – 1.10	Loose brown slightly gravelly silty SAND. Gravel is subangular to subrounded fine to coarse with occasional coal, sandstone and cobbles. (GLACIAL SANDS & GRAVELS)
1.10 – 2.40	Firm brown mottled grey slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mixed lithologies with some cobble content. (GLACIAL TILL)

Notes

1. Pit sides stable,
2. Pit Dimension 1.9m x 0.6m,
3. No Water Encountered,
4. Samples 0.3m, 0.9m, 1.2m, 2.1m
5. HSV at 1.8m – 38/56/56kPa,



Trial Pit 01



Trial Pit 01 - Spoil

TRIAL PIT 02

Depth (m)	Strata
0.00 – 0.10	Tarmac (MADE GROUND)
0.10 – 0.30	White grey angular sub-base of limestone. (MADE GROUND)
0.30 – 0.50	Soft brown dark brown slightly silty CLAY with occasional brick and coal. (MADE GROUND)
0.50 – 1.00	Loose to medium dense brown slightly gravelly fine SAND. Gravel is subangular to subrounded fine to coarse of mixed lithologies. (GLACIAL SANDS & GRAVELS)
1.00 – 1.30	Loose to medium dense brown slightly silty slightly clayey SAND. (GLACIAL SANDS & GRAVELS)
1.30 – 2.00	Firm brown slightly gravelly CLAY. Gravel is subangular to subrounded of mixed lithologies (GLACIAL TILL)

Notes

1. Pit sides stable,
2. Pit Dimension 1.8m x 0.6m,
3. No Water Encountered,
4. Soakaway Test carried out at 2.0m,
5. Samples 1.5m,



Trial Pit 02



Trial Pit 02 - Spoil

TRIAL PIT 03

Depth (m)	Strata
0.00 – 0.60	Grass over loose black slightly gravelly slightly sandy SILT with rootlets. Gravel is subangular to subrounded fine coarse of mixed lithologies. (TOPSOIL)
0.60 – 1.40	Soft brown reddish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mixed lithologies. (GLACIAL TILL)
1.40 – 2.50	Firm brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mixed lithologies. (GLACIAL TILL)

Notes

1. Pit sides stable,
2. Pit Dimension 2.0m x 0.6m,
3. No Water Encountered,
4. Soakaway Test carried out at 2.5m,
5. Samples 0.25m, 0.95m, 1.1m, 2.0m,
6. HSV at 1.8m – 44/58kPa,



Trial Pit 03



Trial Pit 03 - Spoil

TRIAL PIT 04

Depth (m)	Strata
0.00 – 0.60	Grass over loose black slightly sandy slightly gravelly SILT with rootlets. Gravel is subangular to subrounded fine to coarse of mixed lithologies with occasional brick and pottery. (TOPSOIL)
0.60 – 1.10	Soft brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mixed lithologies with some cobbles. (GLACIAL TILL)
1.10 – 1.70	Loose brown slightly gravelly SAND. Gravel is subangular to subrounded fine to coarse of mixed lithologies. (GLACIAL SANDS & GRAVELS)
1.70 – 2.10	Soft to firm brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mixed lithologies. (GLACIAL TILL)
2.10 – 2.50	Loose to medium dense slightly gravelly clayey SAND. Gravel is subangular to subrounded fine to coarse of mixed lithologies. (GLACIAL SANDS & GRAVELS)
2.50 – 2.90	Firm brown slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mixed lithologies. (GLACIAL TILL)

Notes

1. Pit sides stable,
2. Pit Dimension – 2.2m x 0.6m,
3. Dampness noted at 1.9m,
4. Water Seepage at 2.4m,
5. Samples 0.15m, 0.85m, 1.4m, 1.9m, 2.3m, 2.8m,



Trial Pit 04



Trial Pit 04 - Spoil

APPENDIX E

SOAKAWAY TEST RESULTS

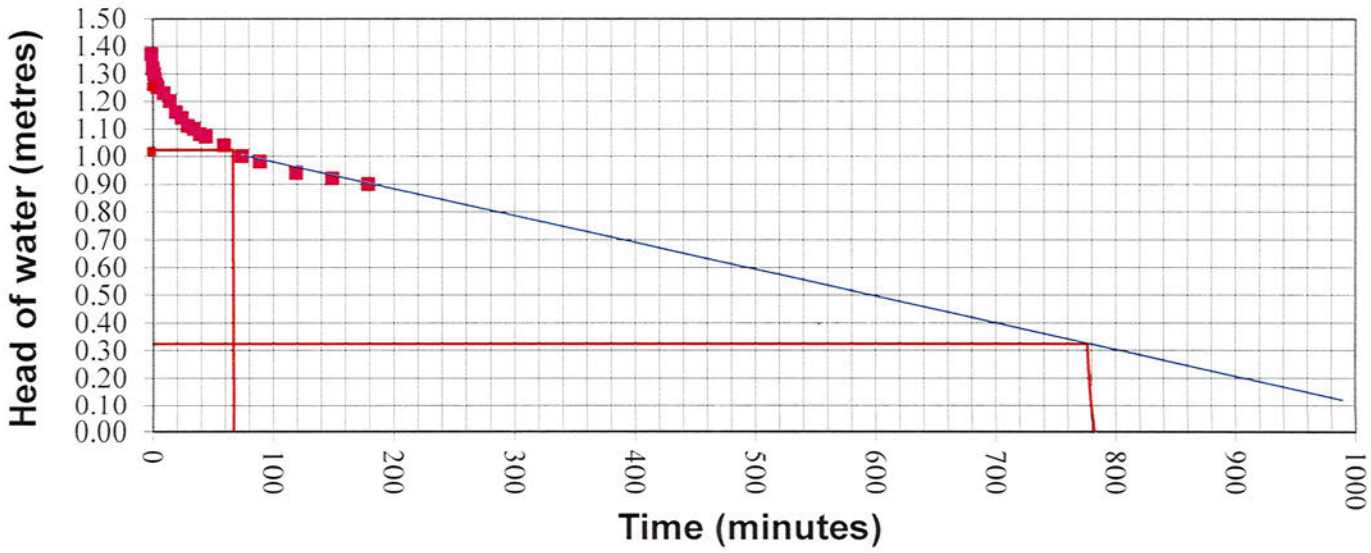
Time (Mins)	Depth of Water	Head of Water
0	0.63	1.37
1	0.68	1.32
2	0.70	1.30
3	0.72	1.28
4	0.74	1.26
5	0.75	1.25
10	0.77	1.23
15	0.80	1.20
20	0.84	1.16
25	0.86	1.14
30	0.89	1.11
35	0.90	1.10
40	0.92	1.08
45	0.93	1.07
60	0.96	1.04
75	1.00	1.00
90	1.02	0.98
120	1.06	0.94
150	1.08	0.92
180	1.10	0.90

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2478, Moreton Inn

TP02 Test 1

01/03/21



Depth	Length	Width	Head at 75% Vol	Head at 25% Vol	Water depth(t=0)	Effective Area	Vp75-Vp25	Adjustment Factor *	t75	t25	Infiltration
(m)	(m)	(m)	(m)	(m)	(m)	Ap50 m2	Volume of water m3		(mins)	(mins)	rate m/s
2.00	1.80	0.60	1.028	0.34	1.37	4.368	0.740	1.00	64	780	3.942E-06

* with gravel filter adjustment factor = 0.30, with no filter = 1.0

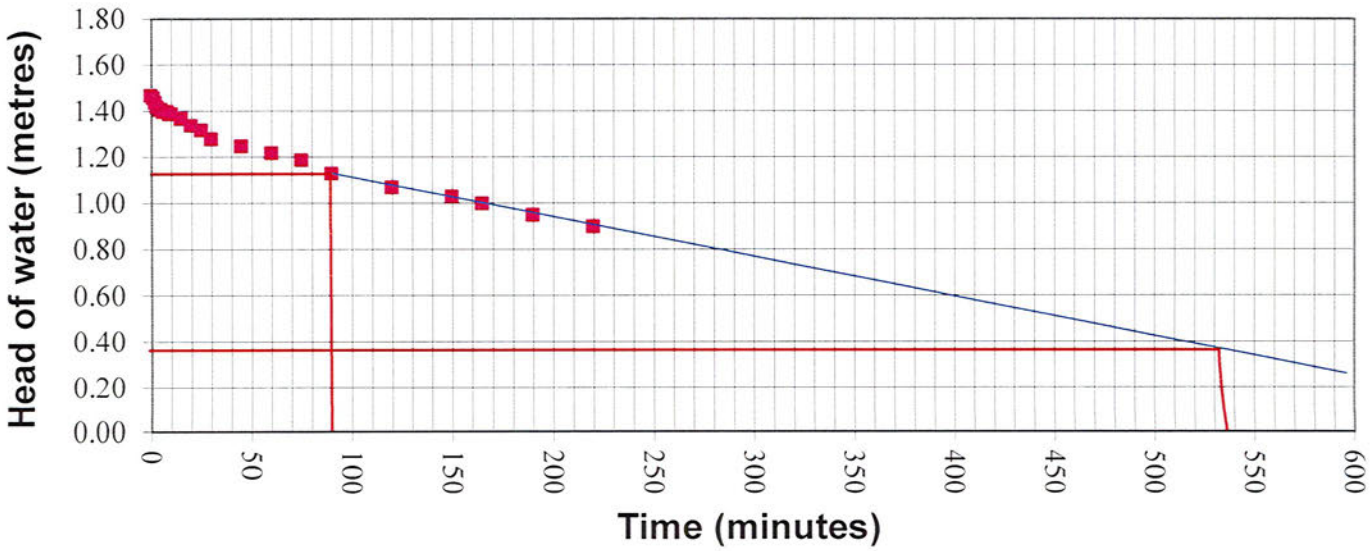
Time (Mins)	Depth of Water	Head of Water
0	0.53	1.47
1	0.54	1.46
2	0.56	1.44
3	0.58	1.42
4	0.59	1.41
5	0.59	1.41
6	0.60	1.40
7	0.60	1.40
8	0.60	1.40
9	0.61	1.39
10	0.61	1.39
15	0.63	1.37
20	0.66	1.34
25	0.68	1.32
30	0.72	1.28
45	0.75	1.25
60	0.78	1.22
75	0.81	1.19
90	0.87	1.13
120	0.93	1.07
150	0.97	1.03
165	1.00	1.00
190	1.05	0.95
220	1.10	0.90

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TP02 Test 2

01/03/21



Depth	Length	Width	Head at 75% Vol	Head at 25% Vol	Water depth(t=0)	Effective Area	Vp75-Vp25	Adjustment Factor *	t75	t25	Infiltration
(m)	(m)	(m)	(m)	(m)	(m)	Ap50 m2	Volume of water m3		(mins)	(mins)	rate m/s
2.00	1.80	0.60	1.103	0.37	1.47	4.608	0.794	1.00	80	570	5.859E-06

* with gravel filter adjustment factor = 0.30, with no filter = 1.0

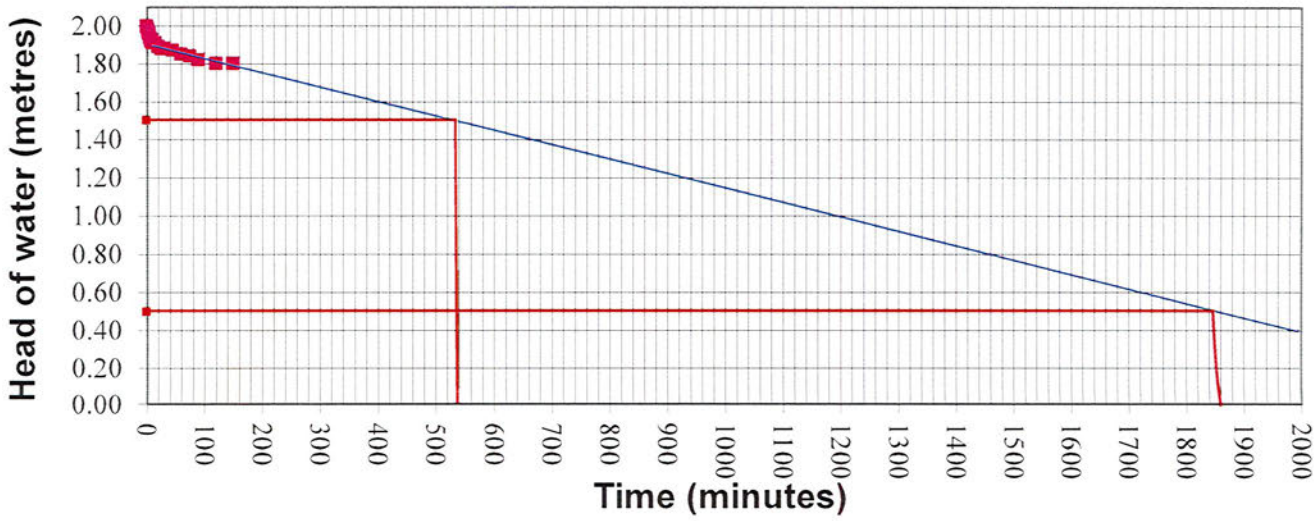
Time (Mins)	Depth of Water	Head of Water
0	0.50	2.00
1	0.51	1.99
2	0.52	1.98
3	0.53	1.97
4	0.54	1.96
5	0.55	1.95
6	0.56	1.94
7	0.57	1.93
8	0.58	1.92
9	0.58	1.92
10	0.59	1.91
15	0.59	1.91
20	0.61	1.89
25	0.62	1.88
30	0.62	1.88
45	0.63	1.87
60	0.65	1.85
75	0.66	1.84
90	0.68	1.82
120	0.70	1.80
150	0.70	1.80

GroundSolve Ltd

2478, Moreton Inn

TP03 Test 1

01/03/21



Depth	Length	Width	Head at 75% Vol	Head at 25% Vol	Water depth(t=0)	Effective Area	Vp75-Vp25	Adjustment Factor *	t75	t25	Infiltration
(m)	(m)	(m)	(m)	(m)	(m)	Ap50 m2	Volume of water m3		(mins)	(mins)	rate m/s
2.50	2.00	0.60	1.500	0.50	2.00	6.400	1.200	1.00	540	1855	2.376E-06

* with gravel filter adjustment factor = 0.30, with no filter = 1.0

APPENDIX F

CBR TEST RESULTS

Units 1 & 2
Deltic Place
Deltic Way
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L33 7BU

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CC GEOTECHNICAL LTD
Consulting Geoenvironmental and Geotechnical Engineers

LABORATORY REPORT

CONTRACT NUMBER: CCG-C-21-12166

CONTRACT TITLE: MORETON INN, RHOSLLANERCHRUGOG

CLIENT: GROUNDSOLVE LTD
Unit 1 Charter Court, Well House Barns, Chester Road, Bretton, Flintshire, CH4 0DH

DATE RECEIVED: 22/02/21
DATE COMMENCED: 01/03/21
DATE COMPLETED: 01/03/21
REPORT DATE: 02/03/21

Test Description	Qty
Dynamic Cone Penetrometer (TRRL Method) (#)	7

Notes: Observations and interpretations are not accredited by UKAS
All testing undertaken at laboratory permanent facilities
# denotes non-accredited test
a denotes UKAS accredited test
s denotes test undertaken by approved subcontractor

Test locations determined and recorded by client

This report is issued in accordance with the requirements of the United kingdom Accreditation Services and EN ISO/IEC 17025:2005. The results reported herein relate only to the material supplied to the laboratory. This report shall not be reproduced except in full, without the prior written approval of the laboratory.
Approved Signatories: Chris Bolan (Managing Director) – Daniel Kerfoot (Laboratory Manager)

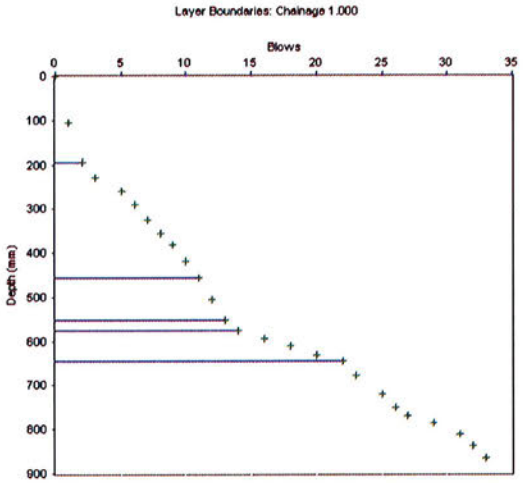
Dynamic Cone Penetrometer Strength Analysis Report

Site: MORETON INN, RHOSLLANERCHRUGOG
Location: DCP1 commenced at 470mmbgl
Cone Angle: 60 degrees
Zero Error: 74
Test Date: 01.03.2021

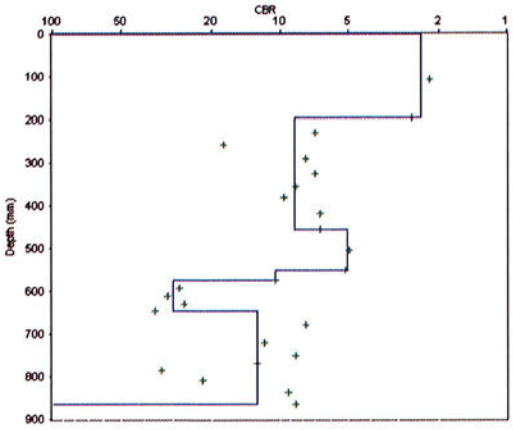
Job Number: CCG-C-21-12166
Surface Type:
Thickness (mm):

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	74	0
2	1	1	180	106.0
3	1	2	269	89.0
4	1	3	304	35.0
5	2	5	333	14.5
6	1	6	365	32.0
7	1	7	400	35.0
8	1	8	429	29.0
9	1	9	455	26.0
10	1	10	492	37.0
11	1	11	529	37.0
12	1	12	578	49.0
13	1	13	625	47.0
14	1	14	649	24.0
15	2	16	668	9.5
16	2	18	685	8.5
17	2	20	705	10.0
18	2	22	720	7.5
19	1	23	752	32.0
20	2	25	795	21.5

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
21	1	26	824	29.0
22	1	27	844	20.0
23	2	29	860	8.0
24	2	31	884	12.0
25	1	32	911	27.0
26	1	33	940	29.0



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	2	195	195	739	
2	9	260	455	999	
3	5	96	551	1095	
4	10	24	575	1119	
5	30	71	646	1190	
6	13	220	866	1336	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: TARMAC

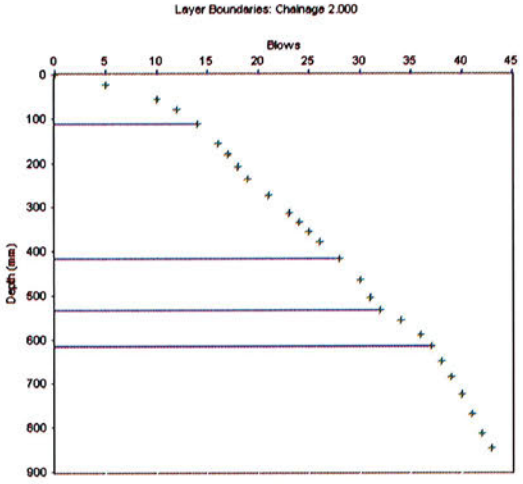
Dynamic Cone Penetrometer Strength Analysis Report

Site: MORETON INN, RHOSLLANERCHRUGOG
Location: DCP2
Cone Angle: 60 degrees
Zero Error: 85
Test Date: 01.03.2021

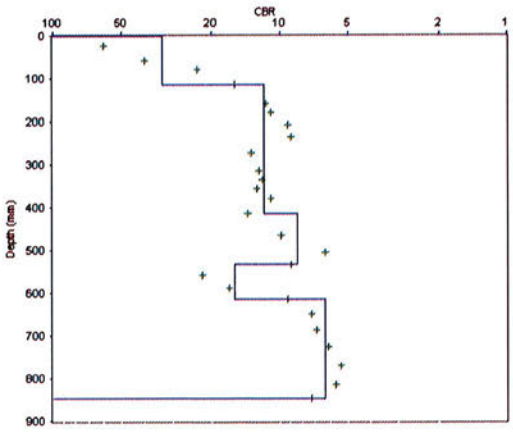
Job Number: CCG-C-21-12166
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	85	0
2	5	5	108	4.6
3	5	10	142	6.8
4	2	12	165	11.5
5	2	14	198	16.5
6	2	16	242	22.0
7	1	17	265	23.0
8	1	18	292	27.0
9	1	19	320	28.0
10	2	21	358	19.0
11	2	23	399	20.5
12	1	24	420	21.0
13	1	25	440	20.0
14	1	26	463	23.0
15	2	28	500	18.5
16	2	30	551	25.5
17	1	31	590	39.0
18	1	32	618	28.0
19	2	34	642	12.0
20	2	36	673	15.5

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
21	1	37	700	27.0
22	1	38	734	34.0
23	1	39	770	36.0
24	1	40	810	40.0
25	1	41	855	45.0
26	1	42	898	43.0
27	1	43	932	34.0



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	33	113	113	198	
2	12	302	415	500	
3	8	118	533	618	
4	16	82	615	700	
5	6	232	847	932	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: TARMAC

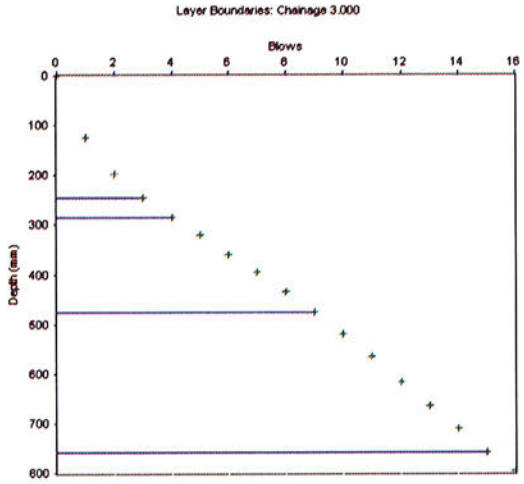
Dynamic Cone Penetrometer Strength Analysis Report

Site: MORETON INN, RHOSLLANERCHRUGOG
Location: DCP3
Cone Angle: 60 degrees
Zero Error: 160
Test Date: 01.03.2021

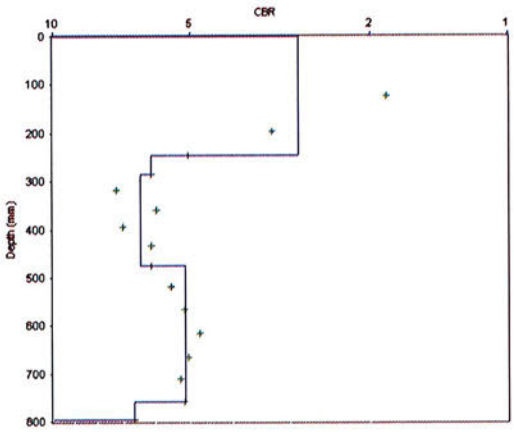
Job Number: CCG-C-21-12166
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	160	0
2	1	1	285	125.0
3	1	2	357	72.0
4	1	3	405	48.0
5	1	4	445	40.0
6	1	5	479	34.0
7	1	6	520	41.0
8	1	7	555	35.0
9	1	8	595	40.0
10	1	9	635	40.0
11	1	10	679	44.0
12	1	11	726	47.0
13	1	12	777	51.0
14	1	13	825	48.0
15	1	14	871	46.0
16	1	15	918	47.0
17	1	16	955	37.0

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	3	245	245	405	
2	6	40	285	445	
3	6	190	475	635	
4	5	283	758	918	
5	7	37	795	955	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: GRASSED TOPSOIL

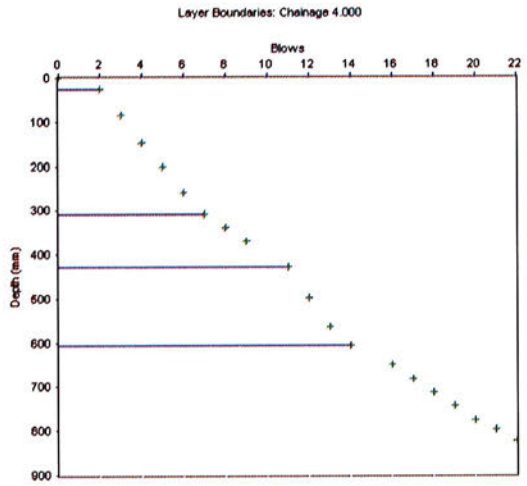
Dynamic Cone Penetrometer Strength Analysis Report

Site: MORETON INN, RHOSLLANERCHRUGOG
Location: DCP4
Cone Angle: 60 degrees
Zero Error: 117
Test Date: 01.03.2021

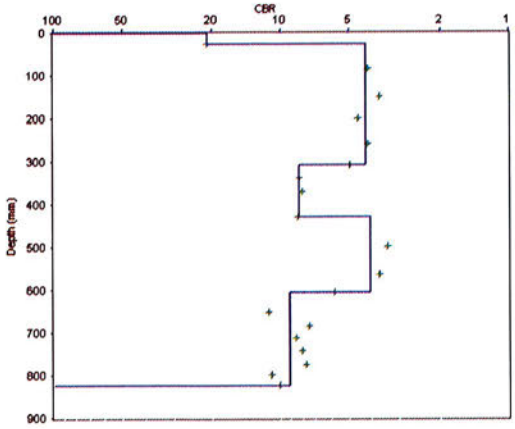
Job Number: CCG-C-21-12166
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	117	0
2	2	2	142	12.5
3	1	3	200	58.0
4	1	4	265	65.0
5	1	5	318	53.0
6	1	6	376	58.0
7	1	7	425	49.0
8	1	8	455	30.0
9	1	9	486	31.0
10	2	11	545	29.5
11	1	12	615	70.0
12	1	13	680	65.0
13	1	14	722	42.0
14	2	16	767	22.5
15	1	17	800	33.0
16	1	18	829	29.0
17	1	19	860	31.0
18	1	20	892	32.0
19	1	21	915	23.0
20	1	22	940	25.0

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	21	25	25	142	
2	4	283	308	425	
3	8	120	428	545	
4	4	177	605	722	
5	9	218	823	940	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: GRASSED TOPSOIL

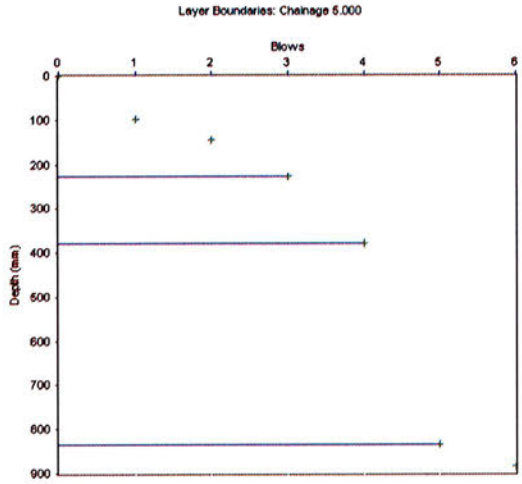
Dynamic Cone Penetrometer Strength Analysis Report

Site: MORETON INN, RHOSLLANERCHRUGOG
Location: DCP5
Cone Angle: 60 degrees
Zero Error: 60
Test Date: 01.03.2021

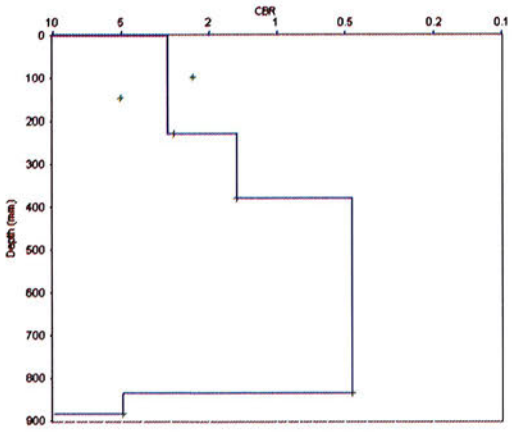
Job Number: CCG-C-21-12166
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	60	0
2	1	1	158	98.0
3	1	2	206	48.0
4	1	3	287	81.0
5	1	4	438	151.0
6	1	5	895	457.0
7	1	6	944	49.0

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	3	227	227	287	
2	2	151	378	438	
3	0	457	835	895	
4	5	49	884	944	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: GRASSED TOPSOIL

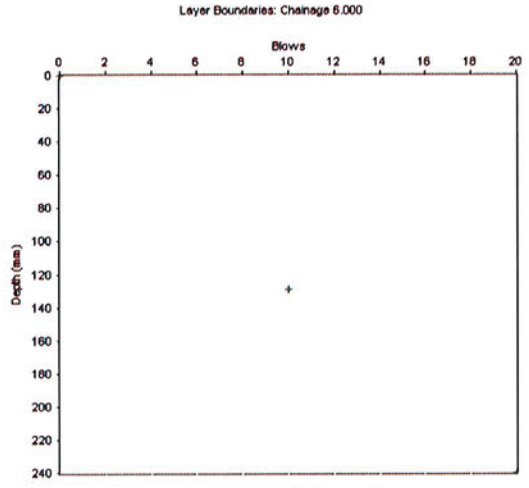
Dynamic Cone Penetrometer Strength Analysis Report

Site: MORETON INN, RHOSLLANERCHRUGOG
Location: DCP6
Cone Angle: 60 degrees
Zero Error: 76
Test Date: 01.03.2021

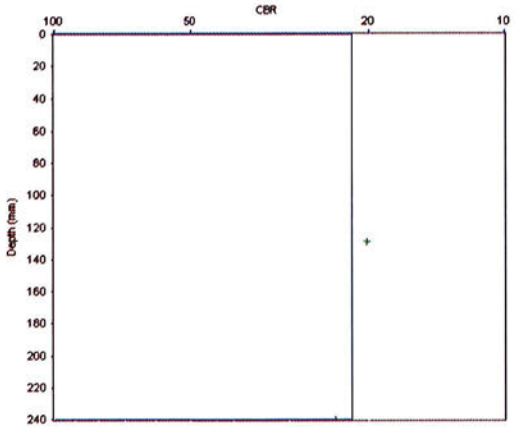
Job Number: CCG-C-21-12166
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	76	0
2	10	10	205	12.9
3	10	20	316	11.1

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	22	240	240		

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: GRASSED TOPSOIL
Refusal at 316mmbgl

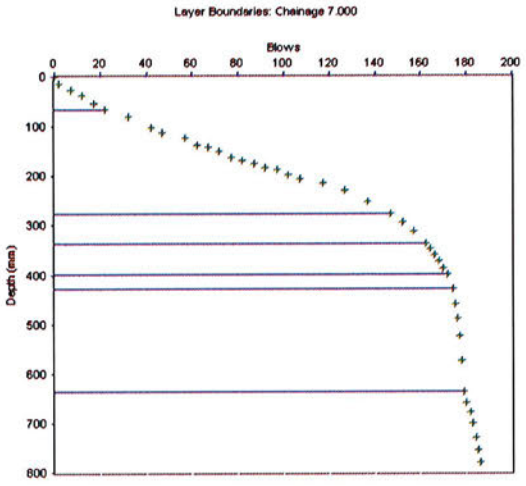
Dynamic Cone Penetrometer Strength Analysis Report

Site: MORETON INN, RHOSLLANERCHRUGOG
Location: DCP7
Cone Angle: 60 degrees
Zero Error: 168
Test Date: 01.03.2021

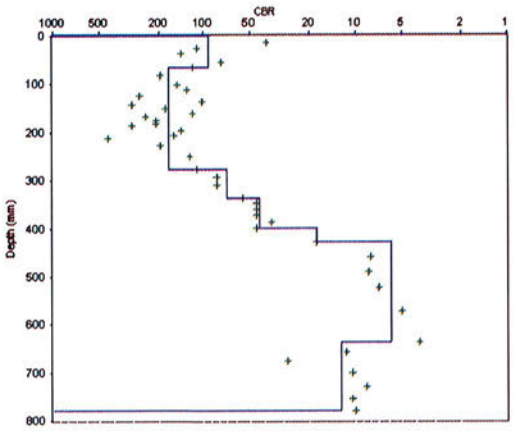
Job Number: CCG-C-21-12166
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	168	0
2	2	2	182	7.0
3	5	7	195	2.6
4	5	12	205	2.0
5	5	17	223	3.6
6	5	22	235	2.4
7	10	32	250	1.5
8	10	42	269	1.9
9	5	47	280	2.2
10	10	57	291	1.1
11	5	62	305	2.8
12	5	67	310	1.0
13	5	72	318	1.6
14	5	77	330	2.4
15	5	82	336	1.2
16	5	87	343	1.4
17	5	92	350	1.4
18	5	97	355	1.0
19	5	102	365	2.0
20	5	107	374	1.8
21	10	117	381	0.7
22	10	127	396	1.5

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
23	10	137	419	2.3
24	10	147	445	2.6
25	5	152	462	3.4
26	5	157	479	3.4
27	5	162	504	5.0
28	2	164	516	6.0
29	2	166	528	6.0
30	2	168	540	6.0
31	2	170	555	7.5
32	2	172	567	6
33	2	174	596	14.5
34	1	175	627	31
35	1	176	657	30
36	1	177	692	35
37	1	178	741	49
38	1	179	804	63
39	1	180	826	22
40	2	182	845	9.5
41	1	183	869	24
42	1	184	898	29
43	1	185	922	24
44	1	186	947	25



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	93	67	67		
2	175	210	277		
3	71	59	336		
4	43	63	399		
5	18	29	428		
6	6	208	636		
7	12	143	779		

CBR Derived by TDR equation $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{penetration rate})$

Remarks Surface material description: TARMAC

APPENDIX G

PHYSICAL TEST RESULTS

LABORATORY RESULTS - *Atterberg Limit*

Project 2478 - MORETON INN **Project No:** PC218132

Sample					Results								
Hole	Depth (Specimen Depth) m	Type	Sample Ref	Description	Test Type	Point Data		Symbol	þ %	>425 sieve µm	w_L %	w_p %
						Cone Pene.	Water % (Factor)					
TP03	2.00 (2.00)	D	C58475	Brown slightly sandy slightly gravelly CLAY.	Fall Cone 4pt with increasing water content, cone type: 80g/30, washed over 425um sieve			CL	14	24%	29	15
TP04	0.85 (0.85)	D	C58476	Brown clayey slightly gravelly SAND with roots.	Fall Cone 4pt with increasing water content, cone type: 80g/30, washed over 425um sieve			CL	7	31%	22	15
TP04	1.90 (1.90)	D	C58478	Brown slightly sandy slightly gravelly CLAY.	Fall Cone 4pt with increasing water content, cone type: 80g/30, washed over 425um sieve			CI	18	21%	41	23

Remarks AGS

GEOTECHNICS
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LABORATORY RESULTS - Chemical Analysis

Project 2478 - MORETON INN **Project No:** PC218132

Sample					Sulphate				pH	Loss on Ignition	Chloride		
					In Soil			In Water			In Soil		In Water
Hole	Depth (Specimen Depth) m	Type	Sample Ref	Description	% Finer 2mm	Acid Soluble %	Water Soluble g/l	g/l		(Organic Content) %	Acid Soluble %	Water Soluble g/l	g/l
TP01	0.90 (0.90)	D	C58469	Reddish brown slightly clayey slightly gravelly SAND.	64.5		0.009 (0.01)		7.72				
TP02	1.50 (1.50)	D	C58472	Brown slightly sandy slightly gravelly CLAY.	70.7		0.010 (0.01)		7.69				
TP03	0.95 (0.95)	D	C58473	Reddish brown clayey slightly gravelly SAND.	55.7		0.012 (0.01)		7.69				
TP04	0.85 (0.85)	D	C58476	Brown clayey slightly gravelly SAND with roots.	60.8		0.005 (0.01)		7.59				

Remarks For Standards followed please see Laboratory Test Certficate
Sulphate reported as SO3, results in brackets reported as SO4

GEOTECHNICS
geotechnical and geoenvironmental specialists

LABORATORY RESULTS - *Classification and Strength*

Project 2478 - MORETON INN **Project No:** PC218132

Sample					Classification					Strength					
Hole	Depth (Specimen Depth) m	Type	Sample Ref	Description	Symbol	I_p (>425) %	w_L %	w_p %	w (p_d) %	Test	γ_b (γ_d) Mg/m^3	σ_3 kN/m^2	$\sigma_1 - \sigma_3$ kN/m^2	c_u kN/m^2	c_{Avg} kN/m^2
TP03	2.00 (2.00)	D	C58475	Brown slightly sandy slightly gravelly CLAY.	CL	14 (24%)	29	15	16.9						
TP04	0.85 (0.85)	D	C58476	Brown clayey slightly gravelly SAND with roots.	CL	7 (31%)	22	15	16.5						
TP04	1.90 (1.90)	D	C58478	Brown slightly sandy slightly gravelly CLAY.	CI	18 (21%)	41	23	17.0						

Remarks AGS NST - Not suitable for Test
For Standards followed see Laboratory Test Certficate
w% - ^ = Rock water content test; x = Aggregate moisture content test
QUT Water Contents: <Failure Zone>, [After test]

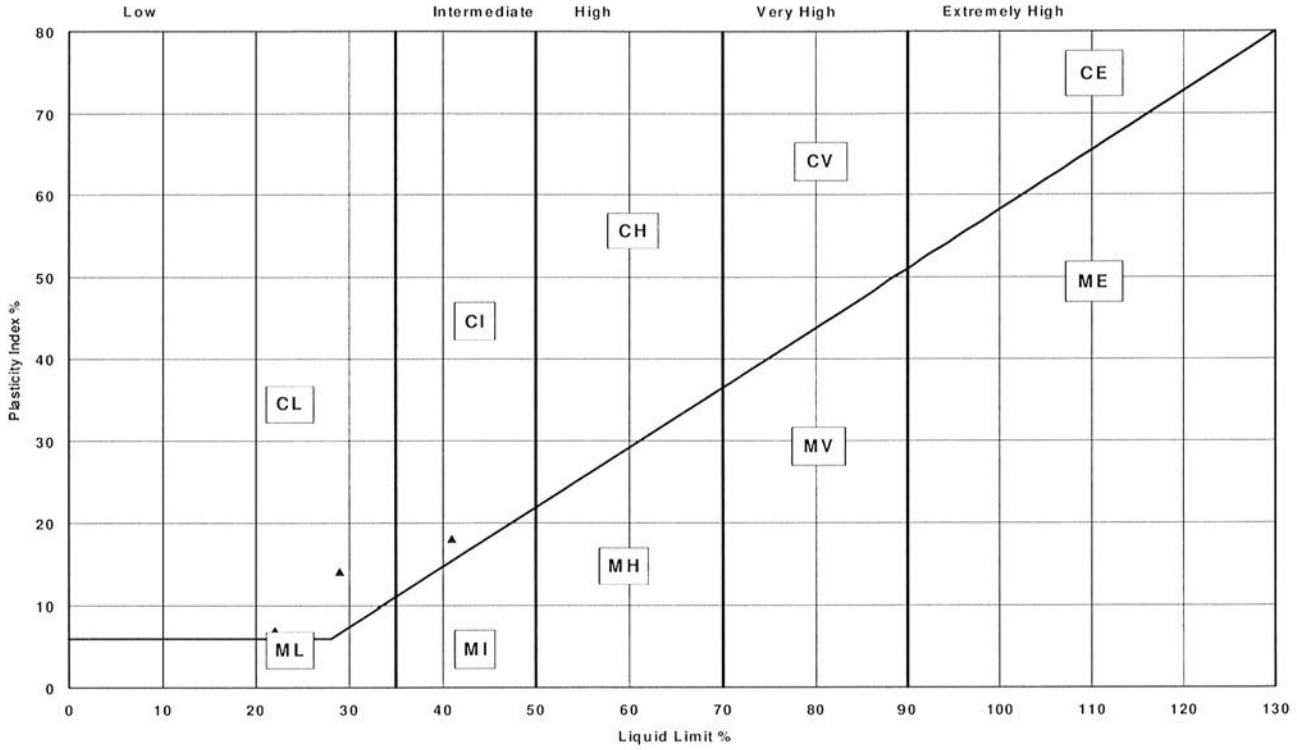
GEOTECHNICS
geotechnical and geoenvironmental specialists

LABORATORY RESULTS - *Classification Chart*

Project: 2478 - MORETON INN

Project No: PC218132

PLOT OF PLASTICITY INDEX AGAINST LIQUID LIMIT
for all items tested



Soil Type	Plasticity Characterisics
C Clay	L Low
	I Intermediate
M Silt	H High
	V Very High
	E Extremely High

Table of Soil Types and Plasticity Characteristics from BS 5930 : 1999

Remarks

22/03/2021

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LABORATORY RESULTS - *Particle Size Distribution*

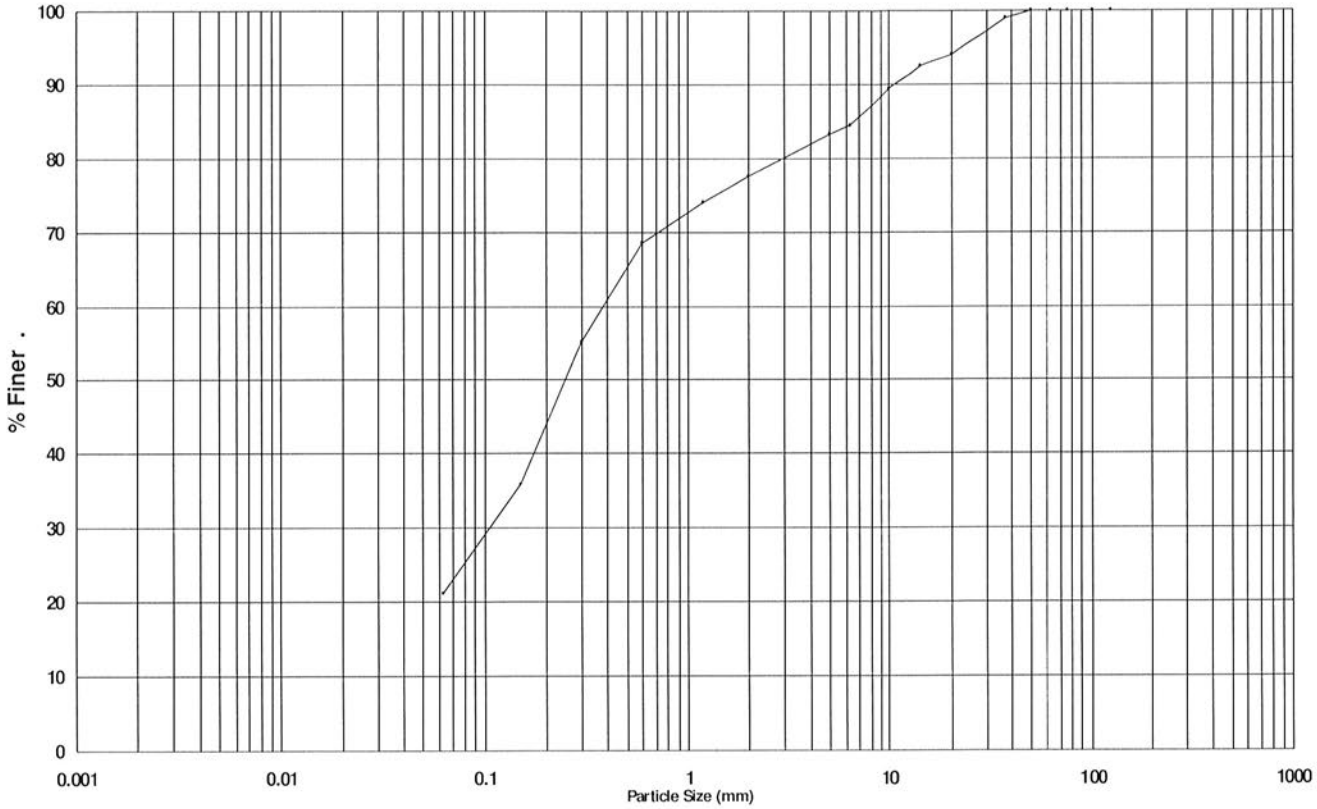
Project: 2478 - MORETON INN

Project No: PC218132

Hole TP04
Sample Depth 1.40m
Sample Type B
Sample Ref C58477

Sample Description

Brown very silty very gravelly SAND with occasional roots.



Classification	CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	Cobbles	Boulders
		SILT			SAND			Gravel				

Classification	% of each
SILT (including CLAY)	21
SAND	57
GRAVEL	22
COBBLES	0
BOULDERS	0

Size	% Finer
125 mm	100
100 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	99
20 mm	94
14 mm	93
10 mm	89
6.3 mm	84
5 mm	83
2 mm	78
1.18 mm	74
600 µm	69
300 µm	55
150 µm	36

Size	% Finer
63 µm	21

Uniformity Coefficient	
Not Available	
Sieving Method	
Wet sieve	
Fine Particle Analysis	
Method	
Pre-treated with	
% loss on Pre-treatment	
Particle Density	

Remarks Sieve:-Test performed in accordance with BS EN ISO 17892-4:2016

22/03/2021

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APPENDIX H

CHEMICAL TEST RESULTS

Certificate of Analysis

Certificate Number	21-04551	*Issued:*	15-Mar-21

Client GroundSolve Limited
Unit 1
Well House Barns
Bretton
Flintshire
FAO Adam Fenwick
CH4 0DH

Our Reference	21-04551
Client Reference	(not supplied)
Order No	(not supplied)
Contract Title	Moreton Inn
Description	3 Soil samples.
Date Received	04-Mar-21
Date Started	04-Mar-21
Date Completed	15-Mar-21
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]

Adam Fenwick
Contracts Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Soil Samples

Our Ref 21-04551
Client Ref
Contract Title Moreton Inn

				Lab No	1811548	1811549	1811550
				.Sample ID	TP01	TP03	TP04
				Depth	0.30	0.25	0.15
				Other ID			
				Sample Type	SOIL	SOIL	SOIL
				Sampling Date	01/03/2021	01/03/2021	01/03/2021
				Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	8.2	13	8.9
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	0.4	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.9	2.2	0.5
Chromium	DETSC 2301#	0.15	mg/kg	12	19	13
Chromium III	DETSC 2301*	0.15	mg/kg	12	19	13
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	50	92	27
Lead	DETSC 2301#	0.3	mg/kg	50	240	73
Mercury	DETSC 2325#	0.05	mg/kg	0.09	0.21	0.08
Nickel	DETSC 2301#	1	mg/kg	24	18	16
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	170	320	92
Inorganics							
pH	DETSC 2008#		pH	8.0	6.4	6.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	0.5	0.3
Organic matter	DETSC 2002#	0.1	%	0.6	4.9	2.7
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	16	12	24
Sulphide	DETSC 2024*	10	mg/kg	84	< 10	< 10
Sulphur (free)	DETSC 3049#	0.75	mg/kg	11	< 0.75	< 0.75
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4
Aliphatic C35-C40	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4
Aromatic C35-C40	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 21-04551
Client Ref
Contract Title Moreton Inn

				Lab No	1811548	1811549	1811550
				.Sample ID	TP01	TP03	TP04
				Depth	0.30	0.25	0.15
				Other ID			
				Sample Type	SOIL	SOIL	SOIL
				Sampling Date	01/03/2021	01/03/2021	01/03/2021
				Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg		0.10	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg		0.07	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.52	0.05	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg		0.22	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg		1.1	0.18	0.06
Pyrene	DETSC 3303#	0.03	mg/kg		1.1	0.18	0.05
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.48	0.09	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg		0.59	0.11	0.04
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		1.2	0.13	0.04
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.45	0.05	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		1.1	0.09	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.65	0.04	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		0.14	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.84	0.04	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		8.6	0.95	0.18
Phenols							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		< 0.3	< 0.3	< 0.3

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 21-04551
Client Ref
Contract Title Moreton Inn

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1811548	TP01 0.30	SOIL	NAD	none	Lee Kerridge
1811549	TP03 0.25	SOIL	NAD	none	Lee Kerridge
1811550	TP04 0.15	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 21-04551
Client Ref
Contract Moreton Inn

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1811548	TP01 0.30 SOIL	01/03/21	GJ 250ml, GJ 60ml x2, PT 1L		
1811549	TP03 0.25 SOIL	01/03/21	GJ 250ml, GJ 60ml x2, PT 1L		
1811550	TP04 0.15 SOIL	01/03/21	GJ 250ml, GJ 60ml x2, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report