

Final Factual Environmental Report for

National Grid Property Holdings Ltd.

Report on Bluelined area on the following plan at:

Maelor, Wrexham

Volume 1 of 1

NGP Site Location Code: 138

Prepared by:

Advisian, in October 2017

From an original letter report entitled:

Environmental Assessment Site Investigation Report, Maelor Works, Wrexham

Authored By: WorleyParsons, dated 04/01/2012 Project Reference 50065-29

Insofar as practicable the factual information contained in the original report named and dated above that is relevant to the bluelined area has been presented in this report. No new information has been included.

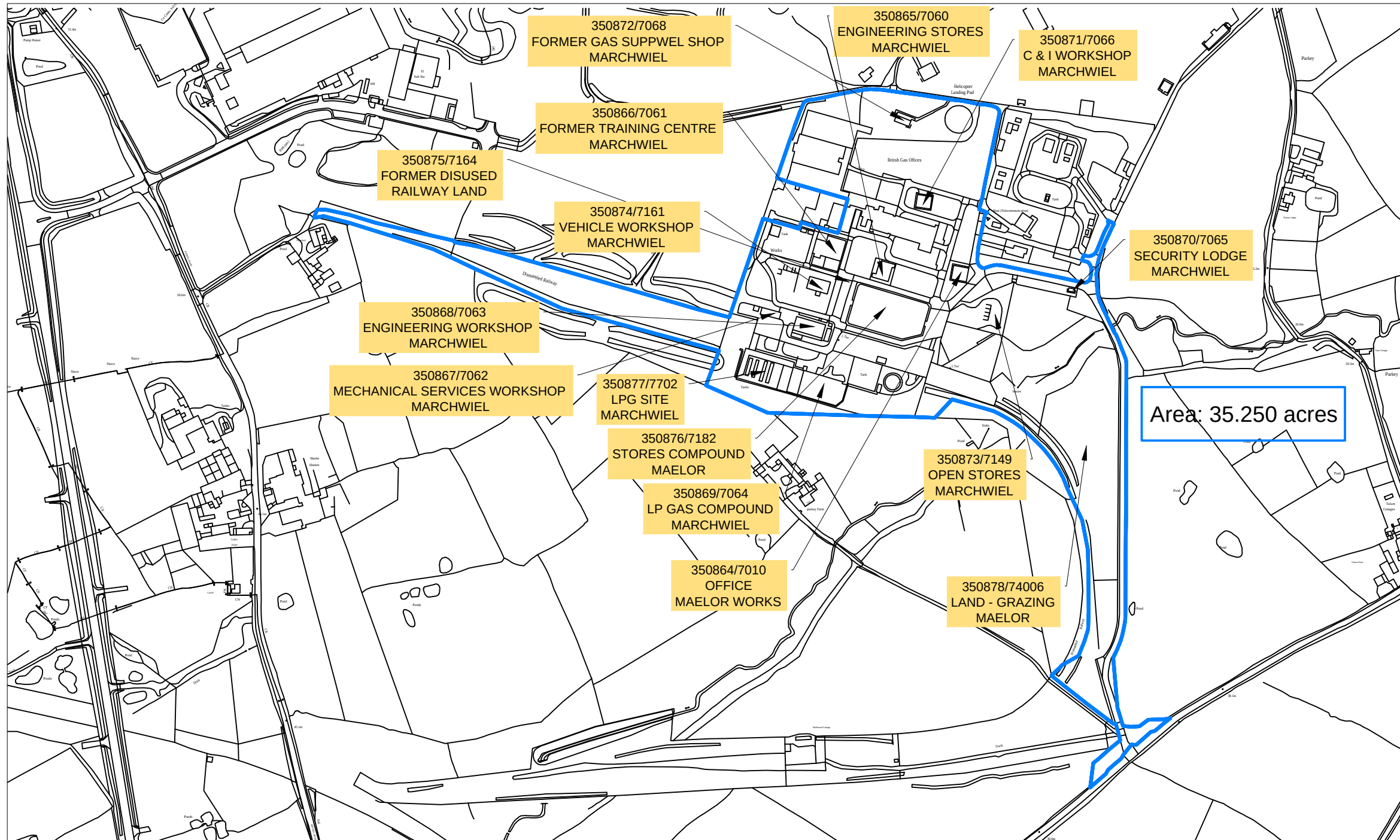
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Redaction undertaken by Advisian.

[illegible]

Drawing Reference:	Project No.	Site No.	Version No.
	B9990	138	V2



Sales Plan Explanatory Notes

The site that is the subject of this report is the blue line area plan shown on the previous page. The site may form just a part of the area considered in the original report. If a former gasworks, the site may form just a part of a former gasworks site.

- The blue line plan on the previous page shows the most probable extent of NGPH land ownership, as provided by NGPH.
 - Original file reference: *Sale Plan_2017.pdf*
- Any bluelined plans within the redacted report indicate current or former National Grid Property land ownership.
- Any redlined plans within the redacted report indicate current Wales and West Utilities Ltd. Land ownership.



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MAELOR WORKS, WREXHAM

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50065-29

4 January 2012

(MENTOR NO 000138)

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PROJECT 50065-29 - ENVIRONMENTAL ASSESSMENT SITE INVESTIGATION REPORT

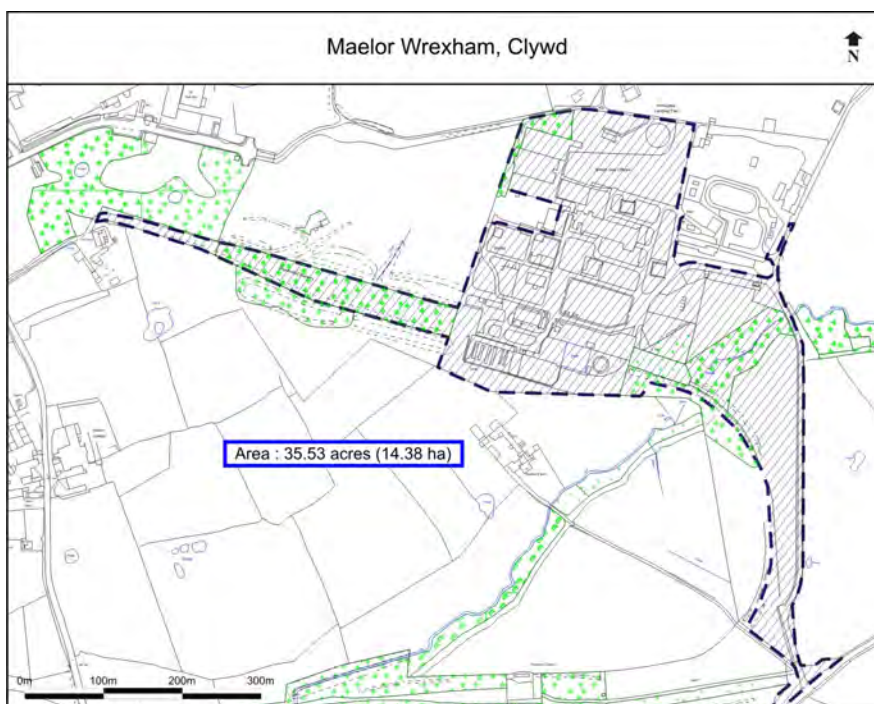
FILE LOC.: F:\50065 MAELOR\50065-30 PW\REPORT\SITE INFORMATION\APPENDIX I SITE INFORMATION\A) SITE INVESTIGATIONS\SITE INVESTIGATION 2011\MAELOR REPORT NGPH FACTUAL.DOC

CONTROLLED COPY NUMBER:

REV	DESCRIPTION	AUTHOR	REVIEW	WORLEY- PARSONS APPROVAL	DATE
A	Issued for internal review	<u> </u> A. Smith	<u> </u> N. Glynn	<u> </u> A. Shields	3 October 2011
B	Final issued to client	<u> </u> A. Smith	<u> </u> N. Glynn	<u> </u> A. Shields	4 January 2012
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Reporting Insert

Site Address:	Maelor Works, Marchwiel, Wrexham	NGP Document Tracking Code	
Report Title	ENVIRONMENTAL ASSESSMENT SITE INVESTIGATION REPORT MAELOR WORKS, WREXHAM		
Report Type	Contamination	Retention Period	Indefinitely
Site Code	138	Author (Company)	WorleyParsons
Report Date	4 January 2012	Factual/Interpretative	Factual
Draft/Final	Final	H & S File?	Yes
Work Stage*	Site Investigation		
Brief description of contents	Site investigation and generic risk assessment report		
Access Permitted	NGPH Land Regeneration Team	NGPH Contact	Gareth Jones



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MAELOR WORKS, WREXHAM

EXECUTIVE SUMMARY

Site Location/ Description and Current Site Status	The study area is located at Maelor Works, Marchwiel, Wrexham, LL13 0UW. It is located at National Grid Reference (NGR) 338000 348500, situated approximately 5 km southeast of Wrexham town centre. Area: 14.38 ha
Previous Reports	Komex Clarke Bond (1996). Environmental Site Investigation, Maelor Works, Wrexham. Komex Europe (1999). Additional Site Investigation, Maelor Works, Wrexham. Komex (2000a). Hydrological and Hydrogeological Investigation at Maelor Works, Wrexham. [REDACTED] [REDACTED] Komex (2001). Post Remediation Report, Maelor works, Wrexham. WorleyParsons (2011). Drainage Sampling at Maelor works, Wrexham.
Site History	The site was farmland until the 1940s when it formed part of an ammunitions factory (Royal Ordnance Factory, (ROF). Marchwiel Gasworks was developed in the 1950s and was operational until 1971. Currently the site has a commercial use and is used as offices and storage.
Geology/Major Structures	The site is underlain by made ground (up to 4.8 m thick) overlying sand and gravel with firm clay below. In the north, north-east and south-east of the site the sand and gravel layer is absent.
Hydrogeology	In the central part of the site groundwater lies within sands and gravels. Where sands and gravels are absent in the north, far east and south of the site, groundwater lies within made ground. [REDACTED] [REDACTED]. In the far north-eastern corner where made ground directly overlies firm clay, no groundwater was encountered. The made ground and sands and gravels are not classified by the Environment Agency. [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]



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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Hydrology

The site is covered by a combination of hard and soft cover. Precipitation on areas covered by grass or gravel is anticipated to infiltrate into the made ground materials. Surface runoff from hard covered areas is intercepted by an extensive drainage system which discharges into a Bedwell Brook or the River Clywedog via a field drain.

Bedwell Brook is located along the south eastern boundary of the site. The brook is a tributary of the River Clywedog. The water quality of the Bedwell Brook is not classified by the Environment Agency.

The River Clywedog is located 130 m to the north of the site and flows west to east. The River Clywedog is classified by the Environment Agency as a Grade B ("Good") for both water biology and water chemistry. .



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Disclaimer

This report is based upon the information available to WorleyParsons Infrastructure & Environment Limited at the time of preparing the report.

The information provided to WorleyParsons I&E Limited by the Other Consultants (as such term is defined in the Term Deed of Appointment dated 29 October 2007 (the "Term Deed")) in connection with the preparation of this report is believed to be accurate to the best of WorleyParsons I&E Limited's knowledge. In accordance with clause 7.2 of the Term Deed, WorleyParsons I&E Limited shall not be responsible for the negligence, error or omissions of the Other Consultants.

WorleyParsons I&E Limited does not accept any responsibility for the use of this report by any third party other than those third parties identified in clause 14 of the Term Deed.



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1. INTRODUCTION

1.1 Objectives

WorleyParsons was retained by National Grid Property Holdings Ltd (NGPH) to conduct an environmental assessment of the site at Maelor Works, Marchwiel, Wrexham LL13 0UW (NGPH Mentor No. 00138). The site location is shown on Figure 1.

The main objectives of the work are:

- to update the desk study for the site;
- to carry out an intrusive site investigation to investigate soil and groundwater conditions. This supplements data obtained in previous work phases;
- gather data to inform a detailed quantitative risk assessment to assess risks to both human health and controlled waters (if necessary); and,
- provide sufficient information to inform further remedial works (if necessary).

The assessment has been carried out in accordance with NGPH Guidance for Assessing and Managing Potential Contamination on National Grid Sites, Version 2.0 (NGPH, 2010), and WorleyParsons proposal dated 21 March 2011 (WorleyParsons, 2011).

1.2 Report Format

The report is subdivided as follows:

Section 1	Introduction
Section 2	Site Description and History - a general description of current and historical site conditions and a summary of the works undertaken to date.
Section 3	Site Investigation Methodology - a factual description of the field activities carried out during the investigation.
Section 4	Environmental Setting - an appraisal of the geological and hydrogeological setting of the site.
Section 5	References and Sources of Information.

Supporting information is included in Figures, Plates, Tables and Appendices following the main text of the report.



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1.3 Legislative Framework

This report has been prepared in accordance with Part 2A of the Environmental Protection Act (1990) in that the assessment has been made using an overall risk-based approach.

The statutory definition of contaminated land provided by Part 2A has also been used in the assessment of current site usage. Land is defined as contaminated when:

- a) significant harm is being caused or there is a significant possibility of such harm being caused; or,
- b) pollution of controlled waters is being, or is likely to be, caused.

The assessments made in this report follow the "suitable for use" concept applicable to both current use (regulated through Part 2A) and future use (regulated through the Local Authority development and control system).

Further details in relation to Part 2A may be found on the Environment Agency's website, at the following link'

<http://www.environment-agency.gov.uk/research/planning/33706.aspx>

1.4 Sources of Information

The first investigation carried out at the site was conducted by Komex (now known as WorleyParsons) in 1996 and was supplemented by additional investigations in 1999 and 2000. Landmark provided historical maps in 2006 which are used to gather information on the history of the site and the surrounding land. A 2011 Envirocheck report was ordered from Landmark Group for up to date regulatory and environmental information. An article regarding the opening of the gasworks and a selection of historical photos were obtained from Wales and West Utilities Ltd.

Additional information used in the compilation of this report (with contacts, where applicable), is listed in Section 8.



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2. SITE DESCRIPTION AND HISTORY

2.1 Site Location and Description

The site is located at Maelor Works, Marchwiel, Wrexham, LL13 0UW as shown on Figure 1 (National Grid Reference (NGR) 338000 348500). It is approximately 5 km southeast of Wrexham town centre and has a total area of 17.46 hectares. The site is accessed via a private drive off the B5130 through metal gates located on the eastern site boundary. The site is located within a predominantly rural area.

The land at Maelor works is owned by NGPH and Wales & West Utilities Limited (W&WU). This report focuses solely on the land owned by NGPH ('the site') which has a total area of 14.38 hectares. W&WU own an AGI compound to the north east of the site and a smaller parcel of land along the western site boundary. The NGPH site is currently tenanted by W&WU and FloGas, a light petroleum gas (LPG) supplier and distributor. The site comprises the following (Figure 2):

- site access road and surrounding land, once occupied by a railway, part of this land is used by FloGas for the storage of gas canisters;
- offices overlying the footprint of the former oil-gas plant which are currently vacant, this area is also used as a car park by site tenants (W&WU and FloGas);
- vehicle maintenance workshop/garage constructed over the footprint of the former carburetted water gas (CWG) plant and boiler house which is currently vacant;
- former retort house area, now used as a storage area with a hard covered surface;
- former compressor house and laboratory now used as offices and tenanted by W&WU;
- workshops tenanted by W&WU;
- office building tenanted by FloGas;
- fire sprinkler reservoir occupying the site of one of the former liquid distillate feedstock (LDF) tanks;
- LPG storage facility;
- concrete base of one of the former LDF tanks used by FloGas for the storage of disused gas canisters;
- former town gas purifiers, now filled with rubble;
- concrete base of one of the former gas holders; and,
- former paint store which is currently unoccupied.



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2.1.1 Site Boundaries

Pertinent information regarding the site boundaries is given in Table A below.

Table A Site Boundaries

Boundary	Length	Minimum Height	Construction *	Gradient	Condition
N	742 m	2.4 m	Palisade fencing	Steep slope down to fields particularly in the northwest	Secure and good condition
E	598 m	2.4 m	Chain link fencing with wire fence along the private driveway	Steep slope down to fields particularly in the northeast	Secure and good condition
S	985 m	2.4 m	Palisade fencing	Steep slope down to the Bedwell Brook and surrounding fields	Secure and good condition
W	1264 m	2.4 m	Palisade fencing	Steep slope down to surrounding fields	Secure and good condition

*Expressed in accordance with NGPH (2003), Appendix 12 Section C.

2.1.2 Site Topography

The site is generally flat and lies at an average elevation of approximately 35 metres above ordnance datum (mAOD). The site is believed to have been built up during its development as the site is higher than the surrounding land. The site boundaries generally consist steep slopes leading to the lower land beyond the site boundary.

2.1.3 Ground Cover

Groundcover at the site is a mixture of hardcover, gravel and made ground with areas vegetated with grass, trees and shrubs. The following summarises the approximate percentage of each type of cover:

Buildings/structures – 25 %

Hard standing – 20 %



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Exposed soil – not present

Vegetation/scrub/landscaped areas – 45 %

Gravel/Loose fill – 10 %

The north of the site is predominantly vegetated with grass, trees and shrubs, particularly on the northern embankment which borders with an access lane, beyond which is agricultural land. The centre of the site is covered with buildings and hard standing comprising concrete and tarmac. The north-west corner of the site is covered in concrete hard standing, the footprint of the former purifiers. Trees are growing through cracked portions of the concrete (Plate 1). In the south-west of the site to the north of the workshops buildings tenanted by W&WU, the ground comprises compacted gravel often with loose limestone chippings above (see Plate 2). In addition, occasional landscaped embankments exist along the roadways. In the far south of the site within the FloGas compound, the LPG bottle storage area is formed of compacted gravels (see Plate 3). The far south-east of the site comprises grass fields leading to Bedwell Brook.

2.1.4 Services

All services are shown on Figure 3 and plans can be found in Appendix I.

A high pressure gas main runs west to east across the south of the site. The gas main diverts north east towards an Above Ground Installation (AGI) compound owned by W&WU in the north east corner of the site. A high pressure gas main also runs east to west across the site north of the workshops and former North East Wales district offices.

A medium pressure gas main enters the site in the southwest, south of the former gasholder and runs to the east, passing through the access gate to the FloGas butane storage area and leads in a south-easterly direction out of the site. Low pressure gas mains transverse across the majority of the site between on-site buildings and infrastructure associated with the former gasworks.

Electricity lines cross the site feeding buildings and street lighting. BT lines, sewerage and water supply cross the site serving the various buildings. A dense network of surface drainage is also present across the majority of the site. Some of the surface water drain leads lead to a field drain in the land to the north and others lead to outlets that drain into Bedwell Brook in the southeast of the site.

Drinking water mains serve the various on-site buildings. It is known that the existing water mains are currently in a state of disrepair and not in use.

2.1.5 Site Security

A moderate level of site security is maintained, the entrance to the site comprises a double locked gate with chain-link fencing either side which is in good condition. The gate is left open during the day whilst tenants use the site but is locked at night. The majority of the boundaries comprise palisade fencing. No evidence of trespassing was observed during the site investigation.



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2.1.6 Ecology and Archaeology

No ecological or archaeological assessments were carried out as part of this site investigation. A Phase I habitat survey was conducted by Ecosulis in January 2010 in the northern portion of the site. The survey described an area of semi-natural habitat at the northern boundary of the site which is used by foraging badger and has suitability to support great crested newt, which are present within the local area. The northern area of the site also had the potential to provide a habitat for a range of wildlife including foraging bats, hedgehog and reptiles. Vegetation in the northern portion of the site may also provide a suitable habitat for breeding birds.

There are no sites of specific scientific interest (SSSI) or other ecologically significant areas listed within 1 km of the site (Landmark, 2011).

2.1.7 Unexploded Ordnance (UXO)

Prior to World War II the site at Maelor Works was rural farmland and, given its location in north east Wales, was unlikely to have been targeted by enemy bombing missions during World War I.

By the start of World War II the site had been developed to form part of Royal Ordnance Factory (ROF) Marchwiel. The factory covered an area of 1400 acres in total and employed 5000+ people in the manufacture of explosives (specifically cordite – an explosive propellant). Information indicates that this area was only used for dry storage and that no manufacturing or bulk storage of liquids took place. No munitions were produced at ROF Marchwiel; cordite produced was sent to filling factories for incorporation into shells and other ammunition. [REDACTED]

[REDACTED] Based on the history of the site and comparison with Table 5.1 of the CIRIA C681, 'Unexploded ordnance (UXO). A guide for the construction industry' (CIRIA, 2009), the site would be considered as having increased potential for aerial delivered UXO to be present.

Adrian Shields of WorleyParsons visited the Denbighshire Record Office in October 2010 to view and inspect air raid registers compiled by Denbighshire County Council and Flintshire Constabulary. No evidence to suggest the presence of unexploded aerial delivered ordnance at the site was identified. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

2.2 ADJOINING AREAS

Land use near the site is summarised in Table B.



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Table B Adjacent and Proximal Land Use

Boundary	Adjacent Land Use	Proximal Land Use (within 100 m of site boundary)
North	Agricultural pasture and W&WU AGI compound.	Agricultural pasture and TetraPak (Wrexham) factory to the north west.
East	W&WU AGI compound and access lane beyond which is agricultural pasture	Agricultural pasture
South	Agricultural pasture	Agricultural pasture and Parkey Farm to the south. Bedwell Brook, a tributary of the River Clywedog lies to the southeast. Rum Rhyd Farm lies to the south west.
West	Agricultural pasture	Agricultural pasture

2.2.1 Potentially Contaminative Land Uses

An Envirocheck Report was obtained from Landmark Information Group (Appendix II). This provides details of hydrological information, waste, hazardous substances, and industrial land uses within 1 km of the site. A summary of pertinent information from locations within 1 km of the site is summarised below and in appropriate sections throughout the report as referenced.

- There are no discharge consents held by the site although 24 discharge consents are held, within 1 km of the site, many of which are expired. The closest discharge consent that is current is at 430 m northwest of the site and relates to discharge of sewage from a domestic property to soak away.
- There are two Integrated Pollution Control (IPC) licences within 1 km of the site. The closest is 875m south east of the site held by 'The First Milk Cheese Company'. The licence permits the treating of animal raw materials.
- There are two Local Authority Integrated Pollution Control (LAIPC) licences within 1 km of the site. The closest is 362m to the west of the site held by 'Animal Waste Services Ltd' for an incinerator.
- One Local Authority Pollution Prevention Control (LAPPC) licence exists at the site for the process of odourising natural and liquefied petroleum gas. The license is held by Wales & West Utilities. The nearest off-site LAPPC is at 169 m northwest of the site held by Tetra Pak (Wrexham) Limited for printing of flexible packaging.



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- There are 33 pollution incidents to controlled waters within the vicinity of the site. The closest was at 147 m northeast, occurred in 1996 and involved algae as a pollutant. No further information was given. It was categorised as a minor incident by the Environment Agency.
- There are two permits of registered radioactive substances held at the site by National Grid Transco. The permits are for disposal of radioactive waste under S13 RSA. One of the licenses has been revoked and the other is superseded.
- One historical landfill site is recorded at 486 m southeast of the site at School Farm, Cross Lanes. The license is held by Mr Bryan Griffiths. Waste deposited included inert waste and the last deposition occurred in October 1981. A registered landfill site (at 350 m south of the site) at the same location as the historical landfill site. Authorised waste included: hardcore, concrete, builders rubble, soil and clay.
- There is one registered waste treatments or disposal site 291m to the north-west of the site and relates to Maelor Abattoir.
- There are two Control of Major Hazards Sites (COMAH) registrations at the site. One is registered to British Gas, which has ceased and the other belongs to FloGas UK Ltd, which is active.
- There is one Notification of Installations Handling Hazardous Substances (NIHHS) which relates to the site "belonging to British Gas Plc". this has ceased.
- There is one planning Hazardous Substance Consents for the site belonging to British Gas Plc for the storage of liquefied petroleum gas (LPC), the consent is active.
- There are six groundwater abstractions within 1 km of the site. All relate to Calypso Soft Drinks Ltd and abstract groundwater for food and drink process water. The closest water abstraction is 660 m east of the site.

2.2.2 Nearby Sensitive Land Uses

There is limited sensitive land use near to the site. Those particularly worthy of note include:

- Agricultural land which surrounds the site;
- The land lies within a source protection zone II (outer protection) and zone III (total protection). The source protection zones relate to groundwater abstraction by Calypso Drinks Ltd;
- Residential areas including farm houses are within 100 m of the site.

2.3 Site History

The site history is summarised from the Ordnance Survey (OS) plans provided by Envirocheck (Landmark, 2006). Photographs of the construction of the gasworks and an article on the works



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provided by W&WU (Appendix II) have also been used to supplement this discussion. This information is summarised in Table C below and illustrated in Figure 4. The Ordnance Survey (OS) plans from the Envirocheck (Landmark, 2006) report are able to provide a broad indication of site details only. In most cases, the names of buildings are not provided on the OS maps hence these titles have been inferred from gas board plans.



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Table C Site History

Date of Map/ Site Plan	Source	Included in Appendix II	Site	Surrounding Area
OS 1873 1:2,500	Landmark 2006	Yes	The site is shown as fields	Agricultural land surrounds the site. Parkey Farm is 70 m to the southwest of the site. 150 m to the east is Parkey lodge.
OS 1881 1:10,560	Landmark 2006	Yes	No apparent changes	The River Clywedog runs west to east approximately 130 m northwest of the site at its closest point.
OS 1899 1:2,500	Landmark 2006	Yes	No apparent changes	No apparent changes
OS 1899/1900 1:10,560	Landmark 2006	Yes	No apparent changes	No apparent changes
OS 1912 1:2,500	Landmark 2006	Yes	No apparent changes	No apparent changes



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Date of Map/ Site Plan	Source	Included in Appendix II	Site	Surrounding Area
OS 1913/ 1914 1:10, 560	Landmark 2006	No	No apparent changes	No apparent changes
OS 1938 1:10,560	Landmark 2006	Yes	No apparent changes	No apparent changes
1950	Photo	Yes	Various wooden sheds and a number of brick buildings are shown. ██ Bulldozers and construction plant are shown levelling the site.	The surrounding fields have sporadic buildings [from additional information it is known that these were associated with an ammunitions factory (Royal Ordnance Factory (ROF), Marchwiel). The factory extends beyond 1 km north from the site.]
1951-1952	Photo	Yes	Construction is in progress. Some concrete foundations and bunkers are visible in photos. Coke grading house under construction.	No apparent changes
1951	Aerial photo	Yes	The entire site is shown: main structures identifiable are; coke re-grading plant and retort house; above ground gasholder in the north of the site; base of gasholder in the southwest of site; loading bay,	No apparent changes



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Date of Map/ Site Plan	Source	Included in Appendix II	Site	Surrounding Area
OS 1961 1:2,500	Landmark 2006	Yes	railway line and sidings in the south of site; chimney in the southeast of site; purifiers in the north west and various other buildings. The site is labelled as a “works” and on another version with the same date as “Offices (Wales Gas Board”) with a gasholder shown in the north and west of the site. Railway tracks are evident in the south of the site. Tanks are labelled in the northwest of the site (near the former purifier area) and in the central western part of the site (near the former tar effluent and liquor tanks area).	
1964 1:10,560	Landmark 2006	Yes	No apparent changes	Mineral railway passes the south of the site from the north west and heads in a south-westerly direction. Maelor abattoir is located approximately 750 m to the southwest of the site.
1979 1:10,000	Landmark 2006	No	No apparent changes	The mineral railway is shown as dismantled.
1980	Aerial photo	Yes	Above ground gasholder is shown in the west and north of the site. Gas bullets are in the southwest corner of site [LPG storage]. Fire suppression reservoir is shown in the central south part of the site. Other than the gasholders and the purifiers all other original	No apparent changes



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Date of Map/ Site Plan	Source	Included in Appendix II	Site	Surrounding Area
			gasworks infrastructure is no longer apparent.	
OS 1984 1:2,500	Landmark 2006	No	No coverage of the site	No coverage of the surrounding land
OS 1988/1992 1:2,500	Landmark 2006	Yes	Railway tracks are no longer shown in the south of the site. Water storage tank is shown in the south of the site with a round tank to the east of this. Additional buildings are shown on the site. Two masts are labelled at the site.	No apparent changes
OS 1992 1:10,000	Landmark 2006	Yes	No coverage of the site	Some of the buildings associated with the former ammunitions factory are no longer shown. Wrexham Industrial Estate is shown at 360 m west at its closest point.
OS 1992 1:2,500	Landmark 2006	Yes	A helicopter landing pad is shown in the east of the site. The tanks in the centre of the site are no longer labelled. There are additional buildings on site and the layout in the north east of the site appears to have changed.	No apparent changes
OS 2000 1:10,000	Landmark 2006	Yes	The gasholder in the west is no longer shown. The LPG bullets associated with FloGas are shown in the south of the site.	No significant changes



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Prior to 1940 the site was open farmland. In 1940 the area was incorporated into the Royal Ordnance Factory (ROF) Marchwiell. ROF Marchwiell consisted of a number of production units, widely separated to minimise the damage done should there be an explosion. The site of the Maelor Works occupies what was an extension area to ROF Marchwiell. It is believed that this area was only used for dry storage and that no manufacturing or bulk storage of liquids took place in this particular location. ROF Marchwiell was closed down shortly after the end of World War II.

The Maelor gasworks was opened in 1953, after three years of construction. Construction scenes are depicted in many of the historical photos (see Appendix II). An article written by the Wales Gas Board in 1953 described the construction of the works (see Appendix II), Buildings and infrastructure present on the NGPH land included:

- vertical retort house comprising 25 chambers each of 3.65 tons capacity,
- coal handling plant;
- coke quenching and handling equipment;
- coke grading and storage plant;
- Carburetted Water Gas (CWG) house containing two solid fuel boilers;
- compressor and power house;
- laboratory and office block;
- two vertical water cooled condensers;
- detarrer, ammonia washer and naphthalene washer;
- five reinforced concrete above ground purifiers;
- gasholder 1, above ground with a capacity of 500,000 cu ft.;
- relief gasholder for CWG plant, above ground with a capacity of 250,000 cu ft.; and,
- underground tar and liquor storage with a total capacity of 280,000 gallons.

Maelor works supplied gas to the Wrexham, Rhos, Cefn Maew and Llangollen areas. It is estimated that the works carbonised 36,000 tonnes of coal per annum producing 2,900,000 therms of gas, 18,000 tons of coke and 435,000 gallons of tar. The plant continued to operate, without further expansion until 1968 when a new oil-gas plant, built to the north of the retort house, took over gas production.

The oil gas plant was completed in August 1968 and used a distillate of oil, [REDACTED], as a feedstock. On site storage existed for 168,000 gallons of feedstock (LEADER, 1968), although the exact location of this storage is unknown, it is believed that the old LDF storage tanks were used.



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Catalyst (comprising nickel/depleted uranium pellets), was used in the oil gas manufacturing process. The oil gas plant was dismantled in August 1971.

2.4 Previous Site Investigations Or Remediation Works

The following site investigations and remedial works have been carried out on the site:

- Komex Clarke Bond (1996). Environmental Site Investigation, Maelor Works, Wrexham.
- Komex Europe (1999). Additional Site Investigation, Maelor Works, Wrexham.
- Komex (2000a). Hydrological and Hydrogeological Investigation at Maelor works, Wrexham.
- [REDACTED]
- Komex (2001). Post Remediation Report, Maelor works, Wrexham.
- WorleyParsons (2011). Drainage Sampling at Maelor works, Wrexham.

The reports used in this summary are discussed below and previous site investigation location and remedial areas are shown on Figure 5.

2.4.1 Komex Clarke Bond (1996)

An intrusive investigation was performed in 1995 covering the former gasworks. The investigation involved the digging of 29 trial pits and the installation of six monitoring wells. It was designed to determine the nature and extent of soil and groundwater [REDACTED] beneath the site, [REDACTED]

Site investigation work was restricted in certain areas due to the operational nature of the site. [REDACTED] encountered during the investigation:

- The tar and liquor wells in the west central area where a free phase liquid tar/water mixture was observed at a depth of 0.4 m below ground level within a tank.
- The south-eastern corner of the site (TP30), between the security lodge and the brook.
[REDACTED]
- The area around the CWG plant in the southwest portion of the site. Trial pit TP21 was excavated into an underground tank in the vicinity of the tar separator tank next to the CWG plant. The tank was backfilled with building rubble and a liquid phase tar/water mixture was observed. TP 20, which was excavated approximately 40m west of the CWG plant, was stained black from 1.0 to 1.8 m below ground level, with coal tar observed to be seeping in between 1.4 and 1.6 m below ground level.



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- The former purifiers in the northwest of the site, spent oxide or 'blue billy' [REDACTED] associated with the former purifiers was identified at several locations in this area. [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

2.4.2 Komex Europe (1999)

The additional investigation involved the completion of two cone penetrometer tests, the excavation of 22 trial pits and the installation of 15 monitoring wells. The objective of this investigation was to further characterise areas [REDACTED], and to gain a greater understanding of [REDACTED] the hydrogeological and hydrological issues on site. The following [REDACTED] were observed:

[REDACTED] coal tar and hydrocarbon contamination was identified [REDACTED] in central and southern regions of site such as the former tar tank (TP23, MW99-109 and MW99-205), the former liquid distillate feedstock storage tanks (TP99-113A) and the former CWG plant (TP21 and nearby TP20). [REDACTED] liquid free phase tar were encountered within the former tar tank located in the west-central area. Hydrocarbon staining and strong odours were also noted in all the other aforementioned pits. Investigation locations were governed by the presence of buildings, underground services and restricted work areas. No [REDACTED] hydrocarbon [REDACTED] was encountered in association with the former retort house, the two former gas holders or the former oil gas plant.

Six trial pits were excavated in the vicinity of TP30 [REDACTED] [REDACTED] made ground deposits were encountered in the area and large pitch or solidified tar fragments, reaching up to 1m³ in size, were encountered in TP99-112, however, free phase coal tar was not encountered anywhere in the vicinity of TP30 during the investigation.

Spent oxide materials were encountered in one trial pit (TP99-123) during the 1999 investigation

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



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[REDACTED]
[REDACTED]
[REDACTED]

2.4.3 Komex (2000a)

The hydrological and hydrogeological investigation was performed in 1999 and reported in 2000. The objectives of the works were:

- To investigate the relationship between changes in climatic conditions and groundwater elevations on-site;
- investigate the relationship between changes in climatic conditions and [REDACTED] concentrations in groundwater;
- explore the relationship between groundwater and surface water drainage;

The investigation comprised recording groundwater elevation and sampling on five occasions over a six month period. Surface water sampling was also undertaken.

[REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

2.4.4 Komex ([REDACTED] 2001)

Selective remediation works were undertaken between 9th October 2000 and 10th November 2000. The aim of the remediation was to remove the identified easily accessible [REDACTED] sources



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of contamination. Excavation limitations existed as a consequence of the operational nature of the site and it was acknowledged that the remedial works would not remove all the contamination.

A total of 3508 tonnes of special waste and 4 tonnes of difficult waste were removed from site and sent to landfill. A total of 3371 tonnes of granular fill material and 601 tonnes of granular stabilisation material were brought onto site. The following is a summary of the works undertaken:

- Area A, removal of tar and liquor tank contents: Following dewatering, tar and liquor tank contents were excavated (which comprised tarry soil) to a depth of 4.2 mbgl. The tank structure was left intact.
- Area B, removal of an identified BTEX “hot spot”: Contaminated material was visually identified as a dark grey/green clayey silt, this material was excavated and sent off site for disposal at a suitable waste facility.
- Area D, remove an identified spent oxide hot spot: Spent oxide contamination was visually identified, the excavation continued until noted discolorations were not evident. Excavated soils were sent off site for disposal at a suitable waste facility.

[REDACTED]
[REDACTED]
[REDACTED]. All areas were backfilled to original levels with imported compacted granular material.

2.4.5 WorleyParsons (2011)

A single round of surface water drainage sampling was carried out between the 29 – 30th March 2011 which included the collection of nine water samples.

Samples were collected from surface water drains leaving the site. The samples were collected either directly from outfalls, Bedwell Brook or from the drainage system on site by lifting manhole covers and taking samples from the chamber.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



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3. SITE INVESTIGATION METHODOLOGY

Eleven boreholes were drilled and ten installed as groundwater monitoring wells between the 1st and 15th June 2011. Six trial pits were excavated between 14th and the 21st June 2011. Groundwater monitoring and sampling was carried out between the 26th July and 2nd August, 2011 and another round carried out between the 22nd August and 1st September 2011. The following is an outline of the works completed:

3.1 Scope of work

The scope of work completed was as follows;

- 1) Service location by obtaining up to date service records and non-intrusive and intrusive site services survey by specialist contactors;
- 2) Drilling of eleven boreholes, ten installed as groundwater monitoring wells;
- 3) Excavation of six trial pits;
- 4) Collection and analysis of selected soil samples;
- 5) Development of the ten new wells;
- 6) Measurement of groundwater elevation and hydraulic conductivity testing in all monitoring wells; and,
- 7) Sampling groundwater from all located on-site wells on two occasions.

3.2 Site Investigation Strategy

The rationale behind each excavation location is described in Table E below:

Table E Site Investigation Strategy

Location	Purpose	Comments
MW11-01	Investigate northern gasholder	-
MW11-02	Investigate purifiers	-
MW11-05	Investigate tar and liquor tank area, replacement of MW99-205	-
MW11-06	Investigate vicinity of effluent	-



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Location	Purpose	Comments
	tar and liquor tanks	
MW11-07	Investigate tar separator tanks and condensers	
MW11-08A & B	Investigate CWG plant	MW11-08A refusal at 0.7, location moved and renamed MW11-08B
MW11-09 (not drilled)	Replacement MW3	Not drilled as MW3 located
MW11-10	Investigate liquid distillate feedstock storage tanks	-
MW11-11	██████████ tar separator tanks and CWG plant and in vicinity of retort house	-
MW11-12	Investigate oil gas plant	-
MW11-13	██████████ tar and liquor tanks and retort house	-
MW11-14 (not drilled)	Replacement of MW99-202	Not drilled as MW99-202 located.
MW11-16	Investigate north of the site, assess risks to off-site receptors	-
TP11-01	Investigate oil gas plant	-
TP11-03 (not excavated)	Investigate cooling tower	Trial pit not excavated as MW11-06 installed in same location.
TP11-04	Investigate oil tank	Excavated to 0.4 mbgl, thick concrete encountered. Not excavated further due to close vicinity to gas main.
TP11-05	Investigate retort house	-
TP11-06	Investigate coke grading plant	-
TP11-08	Investigate settling tanks	-



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3.3 Site Management

Suitably experienced WorleyParsons staff, using approved sub-contractors, supervised the investigation. The investigation was undertaken in accordance with Construction (Design and Management) Regulations, 2007. A site and task-specific health and safety plan was prepared and used, and incident response measures were formulated and implemented. A copy of the site investigation health, safety and environment report is included as Appendix IV. Contact details for subcontractors are included in Section 8.

3.4 Underground Service Location

Service location works were carried out by Service Location Limited on 11th and 13th May 2011. Underground services were located using utility plans supplied by the respective utility supply companies and by visual inspection of manholes and scanning using signal generators and detectors. A cable avoidance tool (and signal generator, where appropriate) was used to clear a 30 m radius around each trial pit and borehole location before commencement of work.

Vacuum excavation to locate the exact position of services was carried out by OSDS under the supervision of WorleyParsons between the 16th and 26th of May. Starter pits were then either dug by hand or by vacuum excavation at all excavation locations. Where concrete was encountered, a diamond cutter was used to break up the concrete before hand digging to 1.5 m.

Utility service locations are shown in Figure 3 and the original drawings provided by the utility companies are provided in Appendix I. A diagram of located services completed by the cable location contractor and positively proved by vacuum excavation is also included in Appendix I.

3.5 Trial Pit Excavations

Six trial pits were excavated by a JCB 3CX excavator under the supervision of WorleyParsons between the 14th and 21st June 2011. The location of the trial pits is indicated on Figure 5 and in the topographic survey included as Appendix V. The excavator and driver were subcontracted by CC Ground Investigations.

The following information was recorded during trial pit excavation:

- 1) Material descriptions;
- 2) Groundwater presence;
- 3) Visual evidence and extent of contamination; and,
- 4) Olfactory evidence of contamination.

The geological strata were described from visual inspection of the pit walls and from the spoil piles. Particular attention was paid to any evidence of contamination, visual or olfactory, on soil or in water. The number of soil samples taken depended upon the variability of materials encountered and the perceived level of contamination. Surplus spoil was disposed of off-site, as recorded in the Waste Report (Appendix VI).



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Upon completion, the trial pits were photographed and immediately backfilled with arisings, as far as possible in reverse order to which they had been removed. Reinstatement of the trial pits was conducted on 7th and 12th July by C & S Driveways And Tarmac Services. Trial pit excavation logs are provided in Appendix VII.

3.6 Borehole Drilling and Monitoring Well Installation

Eleven boreholes were drilled as part of the investigation and ten were completed as groundwater monitoring wells. The maximum depth of drilling was 5.5 mbgl. The drilling work was carried out by CC Ground Investigations Limited using a combined dynamic sampling and water flush rotary core track mounted rig.

During vacuum excavation, hand pitting and drilling, the geology was logged from returned cores, and any evidence of contamination was recorded and photographic evidence was taken. Monitoring well logs are included in Appendix VII. Drilling equipment was jet-washed between each borehole as required, dependent upon the level of contamination encountered.

Each groundwater monitoring well was completed using 50 mm internal diameter, 0.5 mm slotted, high density polyethylene (HDPE) screen and casing. The slotted well screen was surrounded with 1-2 mm sand. A hydraulic seal of hydrated bentonite pellets was placed above the gravel pack. This prevents the well annulus acting as a conduit for potential surface contamination migrating into deeper strata. The monitoring wells were either capped at surface or raised (depending on ground cover) using lockable steel covers. Waste generated during the drilling is recorded in a Waste Report included as Appendix VI.

Between 21st July and 24th July 2011, the new and existing monitoring wells were developed by removing five well volumes of water, or until the well was dry.

Following the development of the monitoring wells, aquifer tests were performed on the 25th, 30th and 31st August 2011 to evaluate the hydraulic properties of the new wells. Rising head tests (slug) were performed in wells MW11-04, MW11-06, MW11-11, MW11-13, [REDACTED]. The tests were performed by introducing a slug of known volume into a well and recording the recovery of the groundwater level. Hydraulic conductivity testing data is presented in Appendix VIII.

All on site monitoring wells were sampled on two occasions; 26th July and 2nd August, 2011 and another round carried out between the 22nd August and 1st September 2011. All wells were sampled using a 'low flow' technique in order to minimise disturbance of fines and loss of volatiles. Water quality parameters were recorded in order to ensure representative samples were collected. Tables 1 and 2 present the groundwater elevation and water quality data for the two sampling events. Wastewater generated during the purging and sampling is recorded in a Waste Report (Appendix VI).

3.7 Waste disposal

General site waste and soil arising generated during the site investigation works and subsequent reinstatement were stored in two on-site skips prior to disposal. Borehole cores which appeared



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tarry or oily were disposed in a separate on-site waste drum prior to disposal. Wastewater generated during the development and sampling was placed into 10 L gerry cans which were subsequently decanted into 205 L waste drums. The waste was taken off site and is recorded the Waste Report (Appendix VI).

3.8 Surveying

Following completion of the work, Anthony Brookes Surveys Ltd surveyed all site investigation locations. The topographic survey is provided as Appendix V. The surveyed locations of the monitoring wells, trial pits, and some services are provided in Figure 5.

3.9 Chemical Analysis Of Samples

The laboratory used for chemical analysis of soil and groundwater samples was Scientifics (formally TES Bretby). The laboratory is also audited and approved by WorleyParsons.

3.10 Quality Assurance/Quality Control

In order to assess QA/QC procedures a total of five duplicate soil sample and five duplicate water samples were collected from site and submitted to Scientifics for laboratory analysis. Further details with regard to QA/QC are presented within Section 6.5.



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4. ENVIRONMENTAL SETTING

4.1 Geology

4.1.1 Regional Geology

The general site area is located on Pleistocene glacial till overlying the contact between the Permian-Triassic Sherwood Sandstone Group and the Carboniferous Coal Measures. The till is generally sandy where it overlies the Sherwood Sandstone and is relatively impermeable.

From borehole records in the immediate vicinity of the site, the thickness of glacial till was determined to be 60 metres thick. The till is either underlain directly by the Carboniferous Coal Measures or a shallow thickness of the Sherwood Sandstone which itself is underlain by the Coal Measures (Komex 1996).

4.1.2 Site Geology

The following geological information is based on data from the recent WorleyParsons investigation. The general geological sequence is made ground overlying sand and gravel with firm clay below. In the north and northeast and southeast of the site the sand and gravel layer is often absent.

The WorleyParsons site investigation encountered the general geological succession beneath the site summarised in Table F, and schematically shown on Figures 7 and 8. Photographs of trial pits are included within Appendix VII.

Table F Summary of Geological Conditions

Description of Stratum	Thickness (m)	Depth to Base (mbgl)
MADE GROUND: Generally comprises (sometimes clayey) sand and gravel. Gravels are often coarse with occasional cobbles. Frequently made ground comprised thick (up to 0.95 m) concrete with rebar. In some locations red brick (demolition rubble) was evident. Occasional ash and clinker was encountered.	0.3 – 4.8	0.3 – 4.8
GLACIAL TILL (SANDS AND GRAVELS): Gravels are often coarse and well sorted and comprised a mix of sandstone, mudstone and flint. Sand lenses are often orange/brown slightly gravelly and slightly clayey. In the central and western parts of the site these sand and gravel bands are above the competent clay layer.	0.3 – 3.75	1.1 – 4.25



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Description of Stratum	Thickness (m)	Depth to Base (mbgl)
GLACIAL TILL (BOULDER CLAY): Clays are described as firm becoming stiff orange/brown clay with pockets of light grey mottling. Often within the clays of the Glacial Till there are bands of either gravels or sands. In the east and north of the site the sand and gravel bands are often absent and clay is directly beneath the made ground.	not proven	>5.5

The thickness of made ground across the site varies from 0.3 m (MW11-13) to 4.8 m (MW11-05), the average thickness of made ground is approximately 0.9 mbgl. [REDACTED]

[REDACTED] MW11-05 was within remediation Area A which comprised backfill of sandy gravels. Concrete foundations [REDACTED] were encountered at various locations as detailed in Table I.

The sand and gravel deposits also vary in thickness across the site [REDACTED]. The sands and gravels [REDACTED] are not present in the far north (MW11-01 & MW11-16) and east (MW11-16) of the site where made ground directly overlies clay.

The sand and gravels/made ground deposits are underlain by Boulder Clay commencing at depths between 1.1 to 4.25 mbgl. The depth to the base of the clay deposits is unproven.

4.2 Hydrogeology

4.2.1 Regional Hydrogeology

Drift Deposits (Glacial Till)

The 2011 Landmark report and the Environment Agency website (EA, 2011) does not classify the superficial deposits (glacial till). These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

Bedrock (Sherwood Sandstone)

The 2011 Landmark report and the Environment Agency website (EA, 2011) classifies the Sherwood Sandstone bedrock underlying the site as a Principal aquifer, with high permeability



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probably resulting from significant fracturing. This strata has the potential to provide a high level of water storage. It may support water supply and/or river base flow on a strategic scale.

It is important to note that the BGS geological map (Sheet 122, Wrexham Solid and Drift Geology (1989)) indicates that the bedrock underlying the site lies beneath 60 m of clay aquitard.

4.2.2 Site Hydrogeology

[REDACTED]. In the central part of the site groundwater lies within sands and gravels which varies in thickness across the site and pinches out in the north, east and south-east of the site. Where sands and gravels are absent, groundwater lies within the made ground. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. Groundwater elevation and monitoring well details are provided in Table 1.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Monitoring wells installed during the investigation are generally screened in the made ground and/or Glacial Till (sand and gravel strata), as summarised in Table G below. Groundwater



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elevation data are presented in Table 1. The depth to groundwater in the made ground/Glacial Till was between 0.08mbgl and 3.58 mbgl, (30.69 mAOD and 36.60 mAOD).

Table G Summary of Monitoring Well Installations

Well Number	Consultant	Screened Lithology	Location
MW3	Komex Clarke Bond	Glacial Till (sand and gravel)	South central area in FloGas
MW5	Komex Clarke Bond	Glacial Till (sand)	North of engineering building in the south-western area
MW99-102	Komex	Fine to medium sand with occasional gravel	North-central area
██████	██████	████████████████████	████████████████████
██████		████████████████████	
MW99-104	Komex	Fine to medium sand with silt lenses and coarse gravel at depth	North-western corner
██████	██████	████████████████████	████████████████████
██████		████████████████████	
MW99-107	Komex	Fine to medium sand with silt bands	West-central area
MW99-110	Komex	Fine to coarse gravel with some sand	Central/west-central area
MW99-202	Komex	Made Ground and Glacial Till (clay)	South-eastern corner
MW99-204	Komex	Glacial Till (sands and gravels)	Central site area
MW11-01	WorleyParsons	Glacial Till (sands and gravels)	North central area on former gasholder
MW11-02	WorleyParsons	Made Ground and Glacial Till (sand, gravel and clay)	East of site
MW11-04	WorleyParsons	Glacial Till (sands and gravels)	West-central area
MW11-05	WorleyParsons	Made Ground	West-central area (within Area A)



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4.2.3 Hydrogeological Parameters

Hydraulic conductivity field data are presented in Appendix VIII.

Table H Hydraulic Conductivity Testing in Made Ground/Glacial Till.

Well Number	Field Test Method	Analytical Method	Test Number	Screened Unit
MW11-04	Slug Test	Bouwer-Rice	1	Sands and Gravels
MW11-06	Slug Test	Bouwer-Rice	1	Sands and Gravels
MW11-11	Slug Test	Bouwer-Rice	1	Made ground over Sands and Gravels
MW11-13	Slug Test	Bouwer-Rice	1	Sandy Peat over Clay



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[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

4.3 Hydrology

Met Office historical station data at Shawbury (30 km south-west of the site) had an average annual rainfall between 2000 and 2010 of 740.05 mm (Met Office, 2011). The site is covered by a combination of hard and soft cover. Precipitation on areas covered by grass or gravel is anticipated to infiltrate into the made ground materials across the site or evaporate. Surface runoff from hard covered areas is intercepted by an extensive drainage system which discharges into Bedwell Brook or the River Clywedog via a field drain.

Bedwell Brook is located along the south eastern boundary of the site. The brook is a tributary of the River Clywedog. The water quality of the Bedwell Brook is not classified by the Environment Agency.

The River Clywedog is located 130 m to the north of the site and flows west to east. The River Clywedog is classified by the Environment Agency as a Grade B ("Good") for both water biology and water chemistry.

[REDACTED]

[REDACTED]

[REDACTED]



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Groundwater was observed to be ponding on the site along the southern boundary and in the north of the site. Groundwater was also observed to be ponding on the fields adjacent to the northern site boundary.

The site is located within an Environment Agency (EA) nominated floodplain with the area around the Bedwell Brook at risk from flooding with a 1 per cent (1 in 100) or greater chance of happening each year.

4.4 Buried Structures Encountered

A number of subsurface structures were encountered during the site investigation. Structures encountered are summarised in Table I and discussed below.

Table I Summary of Subsurface Structures

Structure Details	Excavated By
Sloping concrete slabs (possible settling tank) in east of trial pit 1.4 – 1.6 mbgl	WorleyParsons 2011, TP11-08
Concrete base 1.6 – 1.8 mbgl	WorleyParsons 2011, MW11-05
Concrete slab with rebar 0.5 – 1.1 mbgl	WorleyParsons 2011, MW11-07
Concrete 0.7 mbgl (0.15 – 0.7 mbgl)	WorleyParsons 2011, MW11-08A and MW11-08B
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
Concrete slab (0.17 m thick) encountered at 0.6 mbgl	WorleyParsons 2011, TP11-07

Most of the structures encountered were horizontal areas of concrete hard standing. [REDACTED]

[REDACTED] Where the trial pit or borehole was advanced through concrete, the thickness of the concrete is indicated in Table I.



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4.5 Visual and Olfactory Indications of Contamination

Trial Pits

In trial pit TP11-07 in the south of the site a strong hydrocarbon odour was detected from 0.45 – 1.4 mbgl within sand deposits. Groundwater ingress within the trial pit at 1.4 mbgl also had a grey sheen and hydrocarbon odour.

In the starter pits of MW11-07 and MW11-08 (dug with vacuum excavation) in the vicinity of the tar separator tanks and condensers and CWG plant, black ashy material was encountered. This had a strong gasworks odour and groundwater ingress at 1.1 mbgl and 1.4 mbgl, respectively had a black/grey sheen.

Ash and clinker were encountered within the made ground of TP11-08 and TP11-06A. Within a sand layer of TP11-08 (1.9 – 2.1 mbgl) a slight hydrocarbon odour was noted.

Boreholes

Ash was encountered within the made ground of MW11-08A (from surface) and MW11-16 at 0.6 – 1 mbgl. A hydrocarbon odour was noted in the made ground of MW11-08A between 0.5 – 0.7 mbgl. In MW11-08B within the gravels a strong hydrocarbon odour and black staining with oily sheen was observed between 0.7 – 1.6 mbgl (see Plate 6).

In MW11-07 between 0.1 – 0.5 mbgl strong hydrocarbon odour and black staining were observed (see Plate 7). Below this at 1.1 – 1.4 mbgl a strong hydrocarbon odour and black tarry staining was encountered within the gravels. Below 1.4 m within a clay layer there was no visual or olfactory sign of contamination.

In MW11-16 suspected asbestos was encountered within the made ground at 0.6 - 1.0 mbgl.



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5. REFERENCES AND SOURCES OF INFORMATION

5.1 References

Table J References

Alvarez, P.J.J and Illman, W.AI,	2006	Bioremediation and natural attenuation, John Wiley & Sons
British Geological Survey (BGS)	1989	Geological Map Sheet 122 (Wrexham), Solid and Drift, 1:50,000
Department for Environment, Food and Rural Affairs and Environment Agency	2002a	Assessment of risks to human health from land contamination; and overview of the development of soil guideline values and related research. (CLR7).
Department of Environment, Transport and Regions	2000	DETR Circular 2/2000 Contaminated Land: Implementation of Part IIA of the Environmental Protection Act 1990 http://www.environment-agency.gov.uk/research/planning/33706.aspx
DEFRA	2010	The Water Supply (Water Quality) (Amendment) Regulations 2010
Environment Agency	2002	Proposed Environmental Quality standard for Methylphenols (Cresols) in water, R&D Technical Report P2-115/TR2, Environment Agency
Environment Agency	2002b	Proposed Environmental Quality Standards for Ethylbenzene in water, R&D Technical Report P2-115/TR4,
Environment Agency	2008	Compilation of data for priority organic pollutants for derivation of Soil Guideline Values (SR7)
Environment Agency	2009	Value for equivalent indicator compound used as stated within Petroleum Hydrocarbons in Groundwater: Supplementary Guidance for Hydrogeological Risk Assessment
Environment Agency	2009a	Human Health Toxicological Assessment of Contaminants in Soil (report SR2)
Environment Agency	2011	www.environment-agency.gov.uk for UK General Quality Assessment Criteria For Freshwater, Flood Risk



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		information.
Komex Clarke Bond	1996	Environmental Site Investigation, Maelor Works, Wrexham
Komex Europe	1999	Additional Site Investigation, Maelor Works, Wrexham
Komex	2000a	Hydrological and Hydrogeological Investigation at Maelor works, Wrexham
Komex	2000b	Post Remediation Report, Maelor works and Wrexham
Landmark	2011	Envirocheck Report
Met Office 2011		http://www.metoffice.gov.uk/climate/uk/stationdata/shawburydata.txt
National Grid Property Holdings Ltd.	2010	The assessment has been carried out in accordance with NGPH Guidance for Assessing and Managing Potential Contamination on National Grid Sites, Version 2.0 (NGPH, 2010),
UK Environmental Quality Standards	2010	The River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2010
WorleyParsons	2011	Drainage Sampling at Maelor works, Wrexham.



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Contacts

Table K Contacts

Client	St Catherine's Lodge Bearwood Rd Wokingham Berkshire RG41 5BN	Contact name: Scott Lewis Telephone: 01926 654718 07795 666320
Consultant / Principal Contractor	WorleyParsons 3-8 Redcliffe Parade West Bristol BS1 6SP	Project Manager: Natasha Glynn Telephone: 0117 9105 123 0117 925 1304 Mobile: 07979 738 859 Site Supervisor: Alan Smith Mobile: 07917 330 784 HSSE Advisor: Tim Bartlett Telephone: 0117 9105 103 Mobile: 0796 880 7496
CDM Co-ordinator	Confluence PCM, Level 1, 8 Heron Quays, London E14 4JB	Contact name: Ken Buchanan Telephone: 0207 5102485 Mobile: 077017760121
Public Relations	JBP The White House 6 Whiteladies Road Clifton Bristol BS8 1PD	0117 907 3400
National Grid Gas (Plant Protection)	Wales and West Utilities (WWU)	Contact name: Karl Toozer Telephone: 01978 782 903
Service Tracing and Equipment	Service Location UK Ltd Survey House 22 Hillview Lane, Twynning, Tewkesbury, Gloucestershire, GL20 6JN	Contact name: Rob Asquith Telephone: (07979) 367282
Vacuum Excavation	OSDS Ltd 238 Menlove Avenue, Liverpool L18 3JF	Contact name: Steve Dunmore Telephone: 0151 222 6140 Mobile: 07802 966995



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Sample Analysis (soils and groundwater)	Scientifics (formally TES Bretby) ESG House Bretby Business Park Ashby Rd Bretby Burton Upon Trent DE15 0XD	Contact name: S Hulligan Telephone: 01283 554467
Equipment	Pollution Control Technologies 3 – 8 Redcliffe Parade West Bristol BS1 6SP	Contact name: Emily Smith Telephone: 0117 925 1304
Solid & Liquid Waste Disposal	ChemTech Waste Alchemy House Coppice Side Industrial Park Brownhills WS8 7EU	Contact name: Dawn Silk Telephone: 0870 608 8840
Topographical Survey	Anthony Brooks 24 Church Road Stoke Gifford Bristol BS34 8QA	Contact name: Anthony Brooks Telephone: 0117 9315 325
Drilling/Trial Pits	CC Ground Investigations Ltd Unit A2 Innsworth Technology Park Innsworth Lane Gloucs GL3 1DL	Contact name: Jim Constantine Telephone: 01452 739 165
Tarmac Reinstatement	C & S Driveways C & S Driveways 26 Brook Street, Rhosllanerchrugog Wrexham LL14 2ED	Contact name: Craig Matthews or Amy Matthews Telephone: 07599 118652 01978 842837

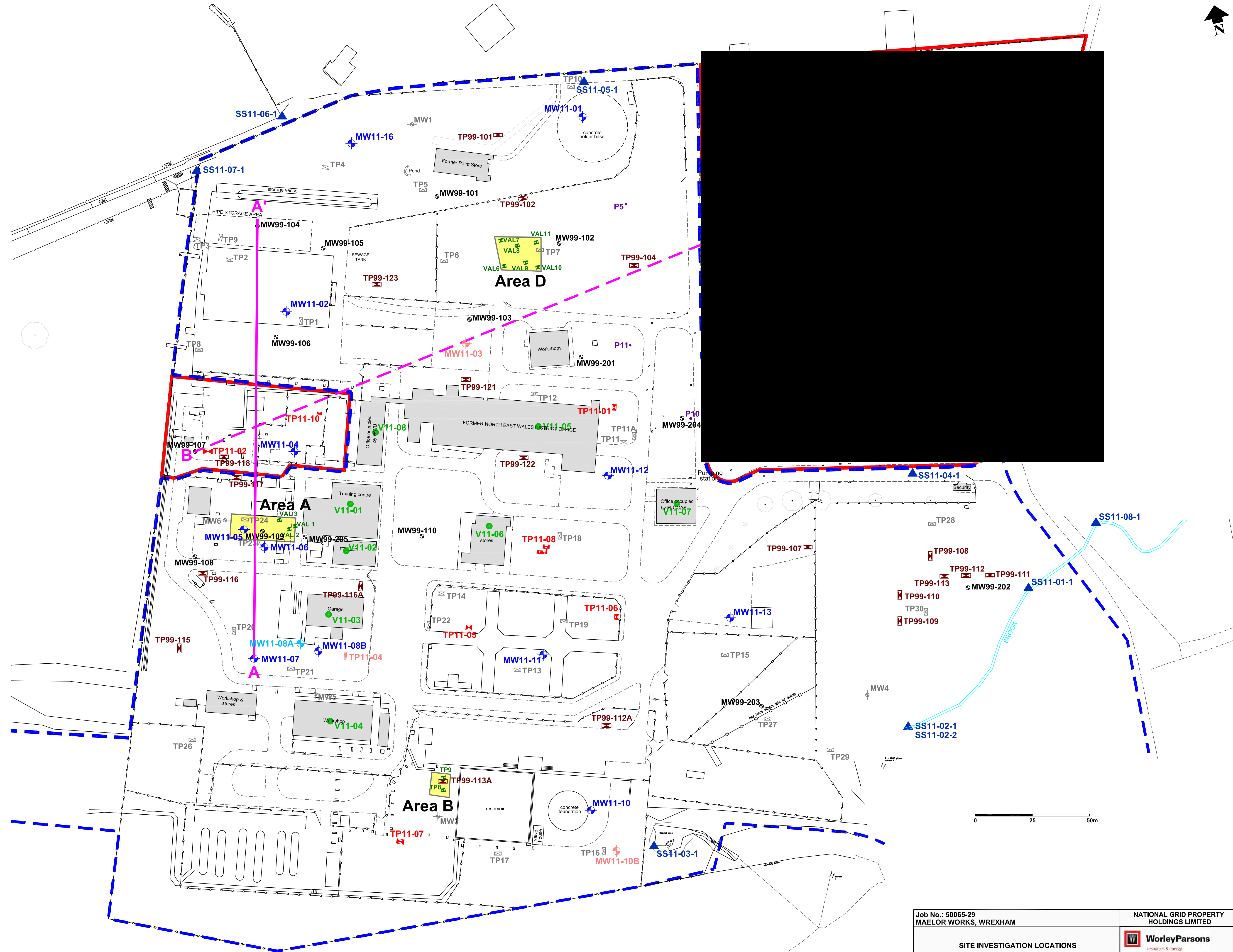
- Legend**
- National Grid Property Holdings Ltd Boundary
 - Wales & West Utilities Boundaries
 - Current Structures
 - Fenceline
 - Cross-section locations

Site Investigation Locations (2011)

- TP11-01 WorleyParsons trial pit location
- MW11-01 WorleyParsons monitoring well location
- MW11-03 WorleyParsons shallow sample from vacuum excavation (monitoring well not installed)
- SW11-01 WorleyParsons drainage sample location (approx.)
- V11-05 Proposed WorleyParsons air monitoring location
- WorleyParsons Hand Dug Pit (started but not carried on)

Former Site Investigation Locations

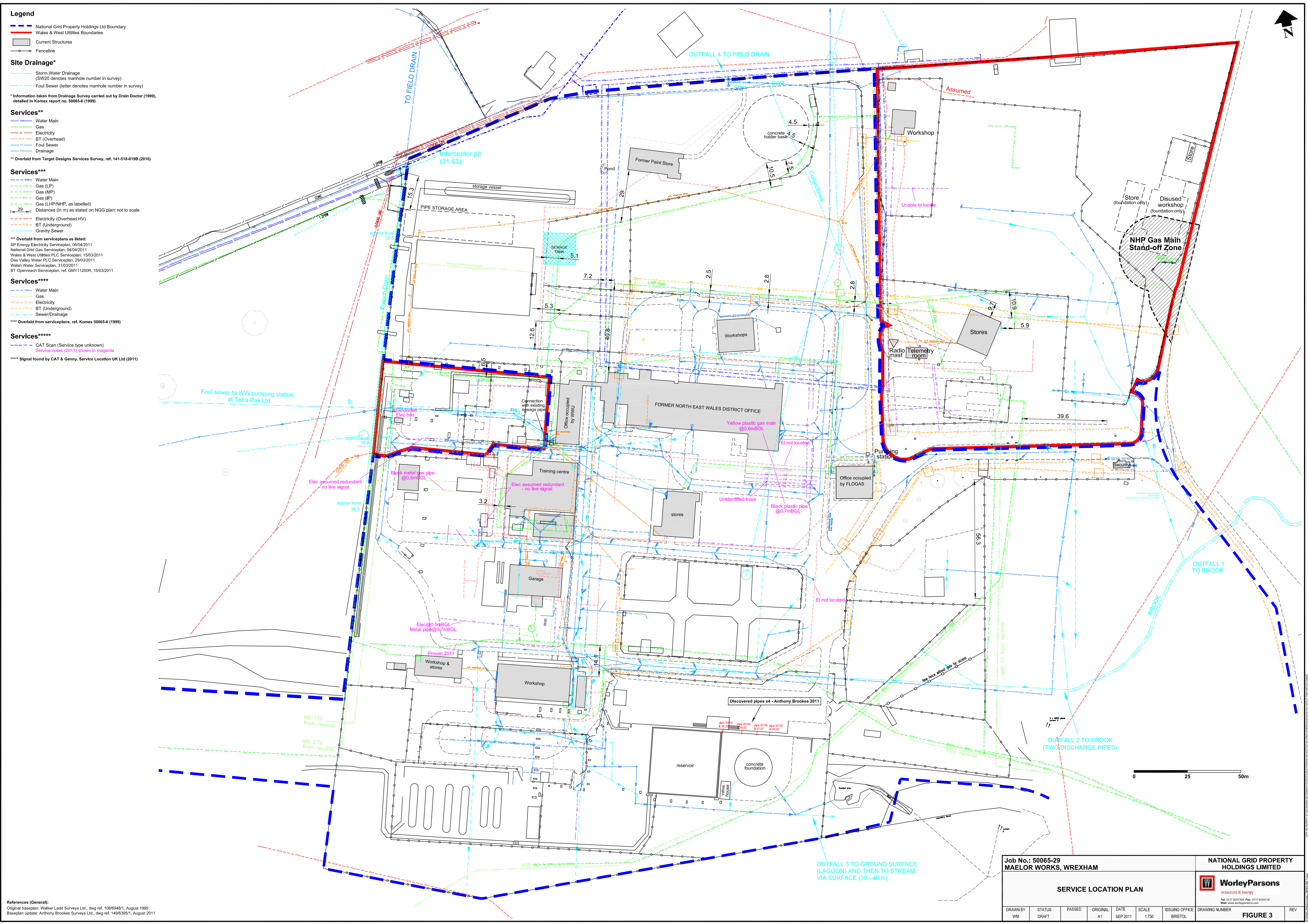
- TP99-106 Komex Trial pit (1999)
- P7 Komex Cone Penetrometer test location (1999)
- MW99-204 Komex Monitoring well (1999)
- MW2 Komex Monitoring well (1995)
- TP2 Komex Trial pit (1995)
- Remediation Areas (2000)
- VAL11 Remediation Validation Samples (2000)

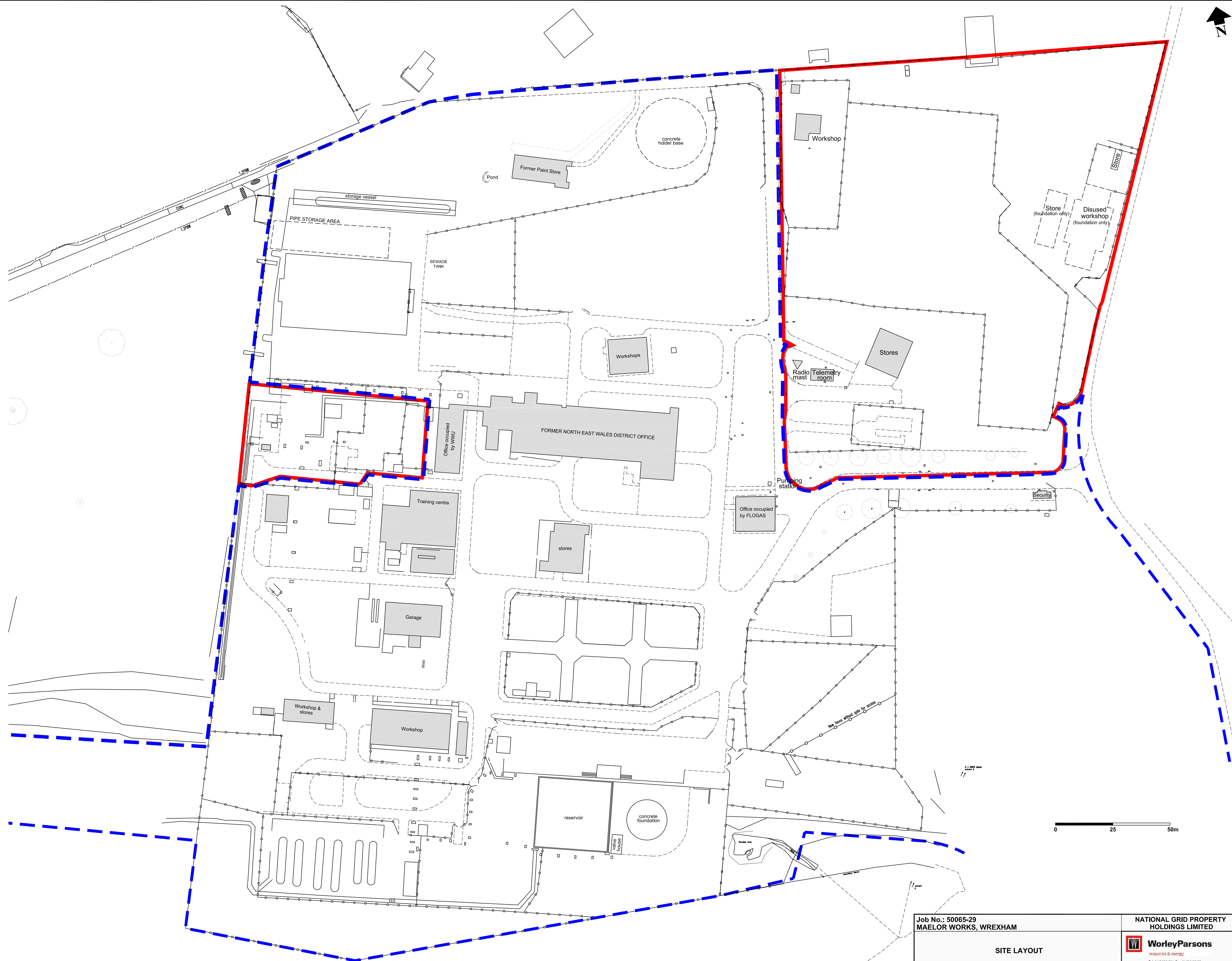


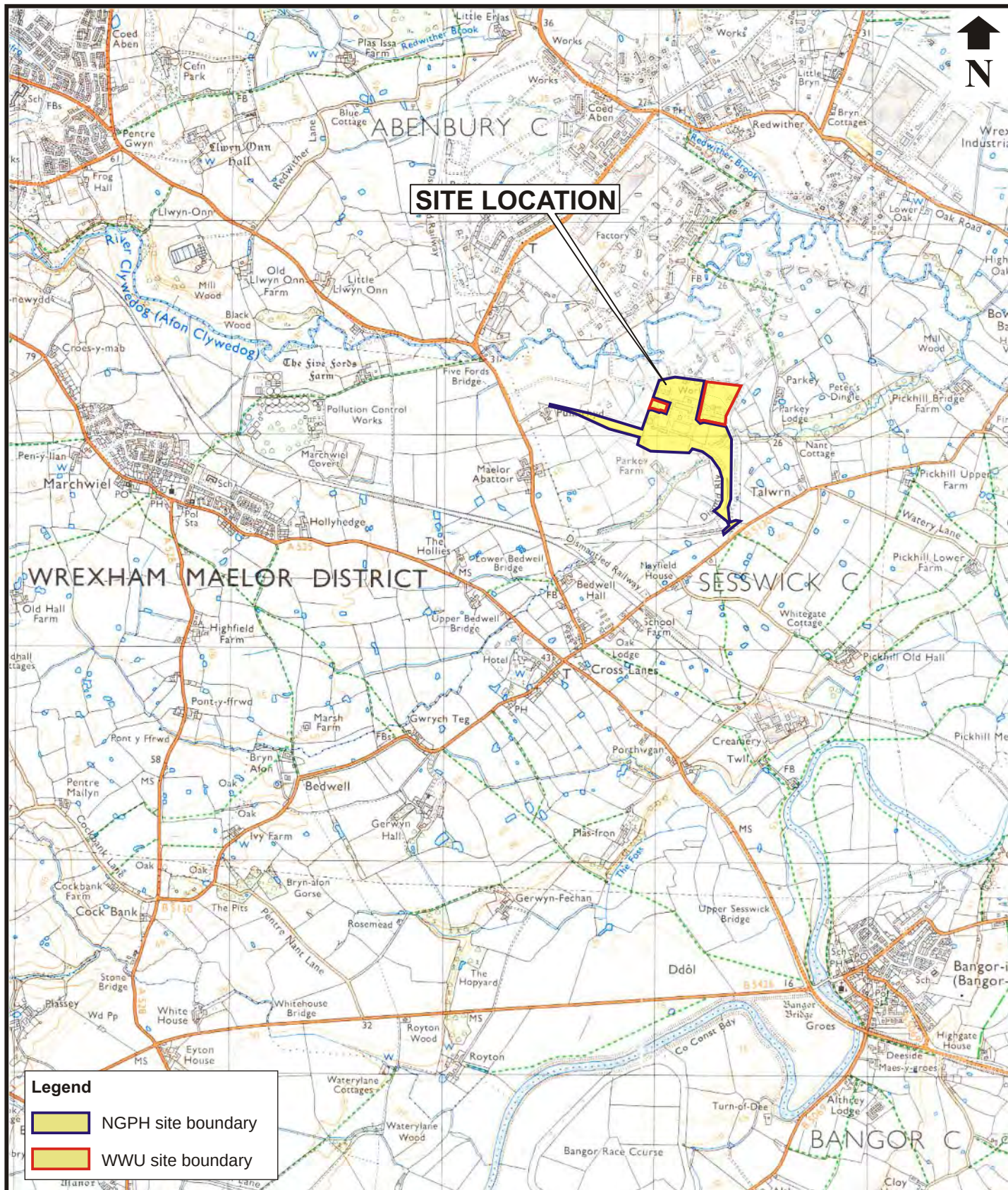
References (General):
Original baseplan: Walker Ladd Surveys Ltd., dwg ref. 108/6948/1, August 1995
Baseplan update, 2011 trial pits/monitoring wells: Anthony Brookes Surveys Ltd., dwg ref. 149/6395/1, August 2011

Job No.: 50065-29 MAELOR WORKS, WREXHAM							NATIONAL GRID PROPERTY HOLDINGS LIMITED	
SITE INVESTIGATION LOCATIONS							 WorleyParsons resources & energy Tel: 0117 9251204 Fax: 0117 9105139 Web: www.worleyparsons.com	
DRAWN BY BS	STATUS DRAFT	PASSED	ORIGINAL A1	DATE SEP 2011	SCALE 1:750	ISSUING OFFICE BRISTOL	DRAWING NUMBER FIGURE 5	REV









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JOB NO.: 50065-29
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SITE LOCATION



WorleyParsons

resources & energy

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DRAWN BY BS	STATUS DRAFT	PASSED	ORIGINAL A4	DATE SEP 2011	SCALE 1:25,000	ISSUING OFFICE BRISTOL
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DRAWING NUMBER

FIGURE 1

REV

Monitoring Well	Date	Pre/ Post Sampling	Temperature	pH	Conductivity	Dissolved Oxygen	Oxidation-Reduction Potential	Field Observations
	dd-mmm-yy		Degrees C	pH Units	µS/cm @25C	%	mV	
MW11-05	02-Aug-11	Pre (0.5 L)	16.00	9.81	2653	3.6	-128.0	
		Pre (1.0 L)	16.20	9.82	2680	2.1	-97.6	
		Pre (1.5 L)	16.20	9.83	2679	2.0	-97.3	
		Post	16.00	9.56	2611	3.0	-68.5	
	31-Aug-11	Pre (0.5 L)	15.54	9.33	2578	16.3	-145.6	
		Pre (1.0 L)	15.51	9.29	2616	9.0	-137.0	
		Pre (1.5 L)	15.50	9.29	2616	8.6	-142.8	
		Post	15.86	9.51	2590	6.8	-114.3	
MW11-06	02-Aug-11	Pre (1.0 L)	18.00	11.25	1170	1.9	-162.9	
		Pre (2.0 L)	18.20	11.29	1041	1.4	-195.8	
		Pre (3.0 L)	18.00	11.39	1139	1.1	-250.0	
		Pre (4.0 L)	19.00	11.40	1154	1.1	-253.4	
		Post	17.90	11.43	1412	1.7	-205.9	
	31-Aug-11	Pre (0.5 L)	17.21	11.48	1660	12.6	-202.4	
		Pre (1.0 L)	17.26	11.42	1644	5.3	-204.4	
		Pre (1.5 L)	17.77	11.42	1640	5.2	-202.0	
		Post	17.08	11.40	1421	13.2	-180.4	
MW11-07	02-Aug-11	Pre (0.5 L)	17.10	7.40	1273	6.6	-121.9	
		Pre (1.0 L)	17.60	7.11	995	3.2	-100.2	
		Pre (1.5 L)	17.60	7.10	995	3.3	-100.0	
		Post	18.00	6.85	925	4.6	-71.0	
	01-Sep-11	Pre (0.5 L)	18.97	7.57	1206	7.6	-75.7	
		Pre (1.0 L)	18.87	7.52	1174	8.8	-83.9	
		Pre (1.5 L)	16.91	7.51	1176	8.3	-85.1	
		Post	17.07	7.59	1125	12.9	-75.2	
MW11-08	02-Aug-11	Pre (1.0 L)	19.00	6.95	1088	2.3	-122.0	
		Pre (2.0 L)	18.60	6.94	1073	1.3	-149.1	
		Pre (2.5 L)	18.60	6.94	1073	1.3	-149.7	
		Post	19.20	6.90	1077	3.0	-137.6	
	01-Sep-11	Pre (0.5 L)	17.22	7.45	1074	13.6	-131.1	Globules of product noted - no post YSI
		Pre (1.0 L)	17.22	7.43	1074	10.5	-132.2	
		Pre (1.5 L)	17.20	7.43	1073	10.1	-132.6	
		Post	*	*	*	*	*	
MW11-10	01-Aug-11	Pre (0.5 L)	19.30	11.36	919	9.0	-40.7	
		Pre (1.0 L)	19.30	11.38	987	5.0	-65.0	
		Pre (1.5 L)	19.30	11.39	998	5.0	-68.4	
		Post	19.40	11.64	1151	10.0	-83.9	
	23-Aug-11	Pre (0.5 L)	19.72	11.49	925	11.7	60.2	
		Pre (1.0 L)	19.64	11.22	972	11.2	28.0	
		Pre (1.5 L)	19.65	11.20	975	5.6	22.1	
		Pre (2.0 L)	19.61	11.14	975	4.9	-12.5	
		Pre (2.5 L)	19.64	11.13	973	4.6	-16.1	
		Post	19.74	10.96	905	9.1	-16.7	
MW11-11	27-Jul-11	Pre (0.5 L)	18.10	7.21	906	23.1	42.3	
		Pre (1.0 L)	18.22	7.31	825	11.5	57.9	
		Pre (2.0 L)	18.30	7.32	827	10.5	59.0	
		Post	18.90	7.54	626	23.7	86.2	
	24-Aug-11	Pre (0.5 L)	18.45	7.66	701	19.5	174.6	
		Pre (1.0 L)	18.61	7.61	687	15.4	164.6	
		Pre (1.5 L)	18.64	7.60	686	15.2	162.9	
		Post	18.99	7.67	683	12.0	145.0	
MW11-12	27-Jul-11	Pre (1.0 L)	17.00	9.27	818	4.7	39.5	
		Pre (2.0 L)	16.80	8.77	990	3.8	45.4	
		Pre (3.0 L)	16.70	8.75	999	3.8	45.0	
		Post	16.90	7.86	1088	6.9	97.4	
	30-Aug-11	Pre (0.5 L)	16.26	8.39	759	15.9	29.3	
		Pre (1.0 L)	16.24	8.15	815	7.7	30.5	
		Pre (1.5 L)	16.24	8.12	823	7.5	31.2	
		Post	16.19	7.61	992	26.4	71.0	
MW11-13	27-Jul-11	Pre (1.0 L)	15.90	6.92	666	10.6	-14.3	
		Pre (2.0 L)	16.10	6.79	656	6.9	-14.7	
		Pre (3.0 L)	16.20	6.79	658	6.4	-15.0	
		Post	15.40	6.77	690	12.4	-46.5	
	24-Aug-11	Pre (0.5 L)	16.04	7.48	627	24.5	10.0	
		Pre (1.0 L)	16.06	7.38	623	29.1	16.6	
		Pre (1.5 L)	16.09	7.35	623	27.1	18.1	
		Post	15.48	7.35	653	26.5	-4.8	
MW11-16	28-Jul-11	Pre (0.5 L)	13.00	6.67	1607	18.6	-9.2	
		Pre (1.0 L)	12.60	6.69	1582	10.7	-13.8	
		Post	14.10	6.73	1611	24.3	-12.2	
	26-Aug-11	Pre (0.5 L)	15.21	6.62	1572	231.2	3.5	
		Pre (1.0 L)	13.90	6.65	1577	29.1	-6.7	
		Pre (1.5 L)	13.83	6.65	1577	24.8	-9.0	
		Post	13.60	6.78	1585	24.8	-7.9	

-- No post sample YSI taken - Insufficient water remaining in well

F:\50065 Maelor\50065-29\Report\Tables\[Table 2 Well Field Data.xls]MW YSI readings NGPH

Table 1: Groundwater Elevation and Well Installation Summary

Monitoring Well	Ground Elevation	Top of inner casing	Screened Interval		Date	Total Depth	Depth to Product		Groundwater Level		Screened Lithology	Comments
	m AOD		m AOD	top			bottom	depth	elevation	depth		
			m bgl	m bgl	dd-mm-yy	m btoic	m AOD	m btoic	m AOD			
MW3	37.230	37.200	1.200	4.300	22-Jun-11	4.250	1.328	35.872	1.329	35.871	Glacial Till (sand and gravel)	
					26-Jul-11	4.310	--	--	1.410	35.790		
					22-Aug-11	4.315	--	--	1.555	35.645		
MW5	37.560	37.520	1.500	3.100	22-Jun-11	2.420	--	--	1.685	35.835	Glacial Till (sand)	
					26-Jul-11	2.735	--	--	1.710	35.810		
					22-Aug-11	2.795	--	--	1.800	34.725		
MW99-102	36.180	36.380	2.650	3.650	22-Jun-11	3.775	--	--	2.083	34.297	Glacial Till (fine to medium sand with occasional gravel)	
					26-Jul-11	4.020	--	--	2.130	34.250		
					22-Aug-11	4.020	--	--	2.220	34.160		
MW99-104	36.590	36.620	4.000	5.800	22-Jun-11	5.730	--	--	3.060	33.560	Glacial Till (sand)	
					26-Jul-11	5.735	--	--	3.015	33.605		
					22-Aug-11	5.94*	--	--	3.34*	--		
MW99-110	36.720	36.680	2.000	3.500	22-Jun-11	3.230	--	--	1.802	34.878	Glacial Till (fine to coarse gravel with some sand)	
					26-Jul-11	3.210	--	--	1.685	34.995		
					22-Aug-11	3.270	--	--	1.875	34.805		
MW99-202	33.630	34.000	1.800	3.300	22-Jun-11	3.775	--	--	3.234	30.766	Made Ground and Glacial Till (clay)	
					26-Jul-11	3.790	--	--	3.300	30.700		
					22-Aug-11	3.775	--	--	3.315	30.685		
MW99-204	35.780	35.830	1.500	3.000	22-Jun-11	3.168	--	--	1.113	34.717	Glacial Till (sand)	
					26-Jul-11	3.170	--	--	1.260	34.570		
					22-Aug-11	3.165	--	--	1.205	34.625		
MW11-01	33.400	33.290	0.500	4.000	22-Jun-11	4.020	--	--	0.285	33.005	Made Ground and Glacial Till	
					26-Jul-11	4.020	--	--	0.395	32.895		
					22-Aug-11	4.025	--	--	0.615	32.675		
MW11-02	36.970	37.050	0.700	4.700	22-Jun-11	4.600	--	--	2.125	34.925	Made Ground and Glacial Till (sand, gravel and clay)	
					26-Jul-11	4.600	--	--	2.595	34.455		
					22-Aug-11	4.575	--	--	2.720	34.330		
MW11-05	36.760	36.730	1.000	5.000	22-Jun-11	4.350	--	--	0.403	36.327	Made Ground	
					26-Jul-11	4.310	--	--	0.490	36.240		
					22-Aug-11	4.300	--	--	0.720	36.010		
MW11-06	36.630	36.500	1.000	2.700	22-Jun-11	2.490	--	--	0.318	36.182	Glacial Till (sand, gravel and clay)	
					26-Jul-11	2.510	--	--	0.540	35.960		
					22-Aug-11	2.660	--	--	0.750	35.750		
MW11-07	36.880	36.750	0.500	2.000	22-Jun-11	1.850	--	--	0.717	36.033	Made Ground and Glacial Till (sand and clay)	
					26-Jul-11	1.835	--	--	0.790	35.960		
					22-Aug-11	1.850	--	--	0.950	35.800		
MW11-08B	36.860	36.700	0.500	2.000	22-Jun-11	1.750	0.966	35.734	0.098	36.602	Made Ground and Glacial Till (gravel and clay)	
					26-Jul-11	1.745	--	--	0.981	35.719		
					22-Aug-11	1.745	1.235	35.465	1.236	35.464		
MW11-10	35.430	35.380	0.100	0.700	22-Jun-11	NA	--	--	--	--	Made Ground and Glacial Till (gravel)	On the 22/6/11 the area was under flood
					26-Jul-11	0.550	--	--	0.080	35.300		
					22-Aug-11	0.520	--	--	0.200	35.180		
MW11-11	36.910	36.790	0.500	3.500	22-Jun-11	3.410	--	--	0.464	36.326	Made Ground and Glacial Till (sand and clay)	
					26-Jul-11	3.390	--	--	0.830	35.960		
					22-Aug-11	3.400	--	--	0.890	35.900		
MW11-12	36.770	36.650	1.300	3.300	22-Jun-11	2.660	--	--	1.860	34.790	Glacial Till (sand, gravel and clay)	
					26-Jul-11	2.770	--	--	1.810	34.840		
					22-Aug-11	2.745	--	--	1.990	34.660		
MW11-13	36.420	36.310	3.000	3.400	22-Jun-11	3.120	--	--	1.370	34.940	Glacial Till (clay)	
					26-Jul-11	3.110	--	--	1.310	35.000		
					22-Aug-11	3.090	--	--	1.490	34.820		
MW11-16	36.380	36.190	3.000	4.000	22-Jun-11	3.970	--	--	3.050	33.140	Made Ground and Glacial Till (sand and clay)	
					26-Jul-11	4.310	--	--	3.520	32.670		Measurement to outer casing
					22-Aug-11	4.310	--	--	3.575	32.615		

m AOD = metres Above Ordnance Datum
m bgl = metres below ground level
btoic= below top of inner casing
Inner casing is defined as the highest point on the installed 50 mm pipework

F:\50065 Maelor\50065-29\Report\Tables\[Table 1 NGPH MW and GW Data_aug11.xls]MW Elevation WWU



**NATIONAL GRID PROPERTY HOLDINGS LIMITED
ENVIRONMENTAL ASSESSMENT SITE INVESTIGATION REPORT
MAELOR WORKS, WREXHAM**



Plate 1. Vegetation growing through concrete base of the former purifiers in the north-west of the site.



Plate 2. Gravel ground cover in the central/south of the site.



**NATIONAL GRID PROPERTY HOLDINGS LIMITED
ENVIRONMENTAL ASSESSMENT SITE INVESTIGATION REPORT
MAELOR WORKS, WREXHAM**



Plate 3. Ground cover in the south of the site (within the FloGas compound).



Plate 4. Ponding of water in the fields to the north of the site.



**NATIONAL GRID PROPERTY HOLDINGS LIMITED
ENVIRONMENTAL ASSESSMENT SITE INVESTIGATION REPORT
MAELOR WORKS, WREXHAM**



Plate 5. Pond in the south of the site (iron staining evident).



Plate 6. Contamination evident in cores retrieved from MW11-08B.



**NATIONAL GRID PROPERTY HOLDINGS LIMITED
ENVIRONMENTAL ASSESSMENT SITE INVESTIGATION REPORT
MAELOR WORKS, WREXHAM**



Plate 7. Contamination encountered during service location using vacuum excavation.



WorleyParsons

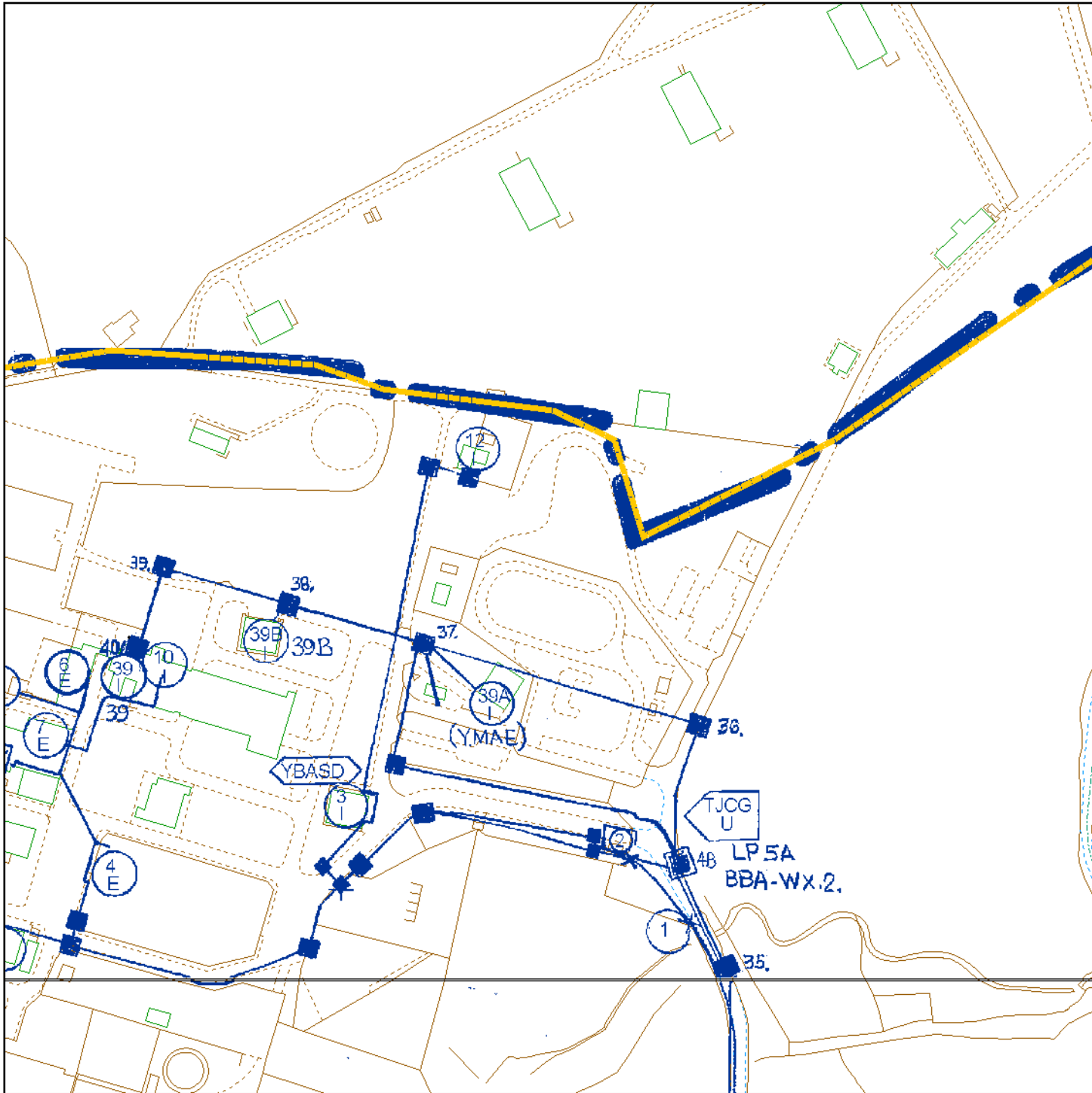
resources & energy

EcoNomics

**NATIONAL GRID PROPERTY HOLDINGS LTD
ENVIRONMENTAL ASSESSMENT SITE INVESTIGATION REPORT
MAELOR WORKS, WREXHAM**

Appendix I Service Plans

Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy.

It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

DIAL BEFORE YOU DIG

FOR PROFESSIONAL ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS

ADVANCE NOTICE REQUIRED
(Office hours: Monday-Friday 08.00 to 17.00)

Tel: 0800 9173993
E-mail: dbyd@openreach.co.uk
Website: www.dialbeforeyoudig.com

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KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	OTHER BT BOUNDARY		PROPOSED BOX

Other proposed plant is shown using dashed lines. BT symbols not listed above may be disregarded. Existing BT plant may not be recorded. Information valid at the time of preparation.

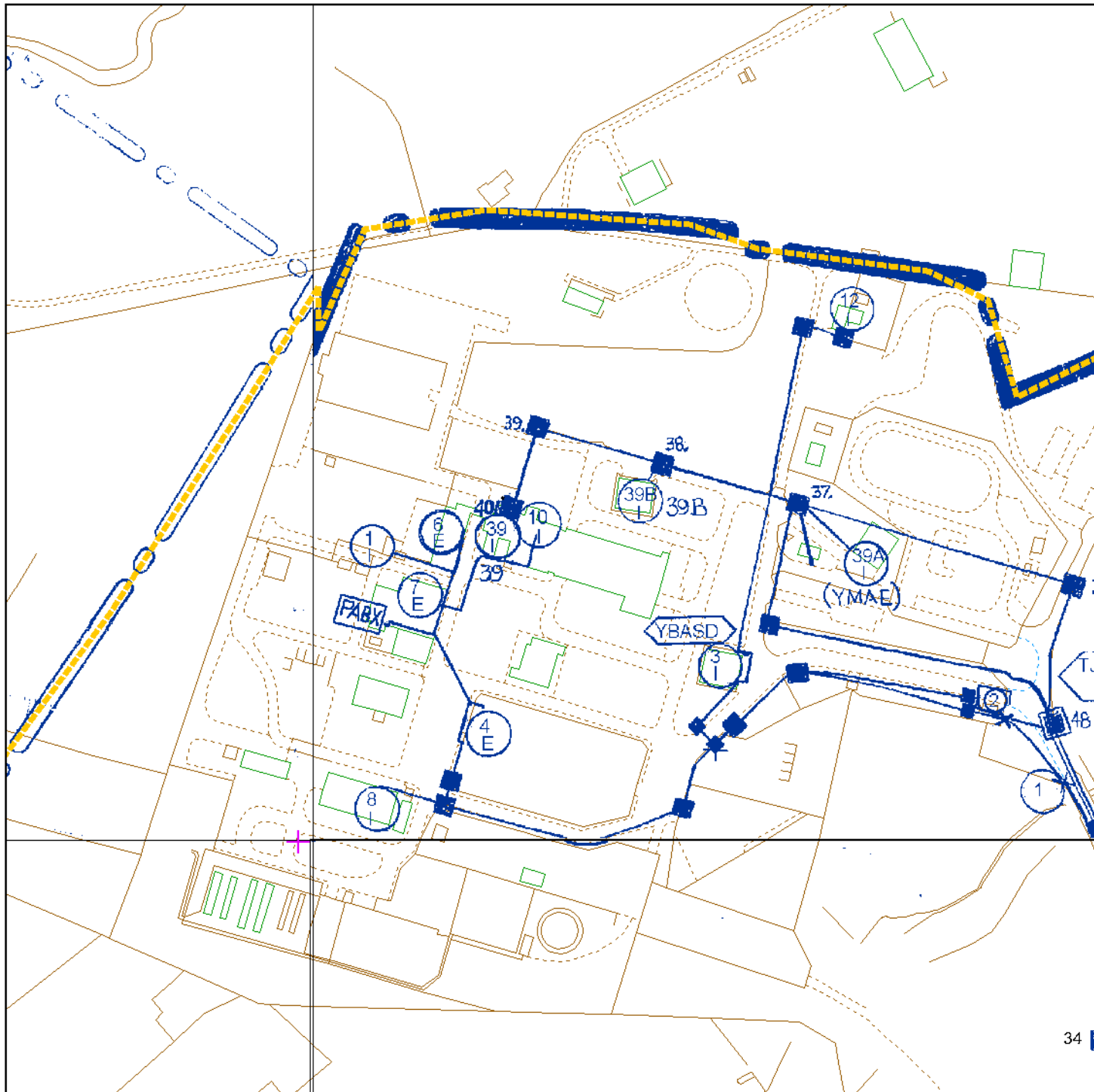
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BT ref: WIH11360V

Map reference (centre): SJ3828048198

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Maps by email Plant Information Reply



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	JOINT BOX		BURIED JOINT
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	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	OTHER BT BOUNDARY		PROPOSED BOX

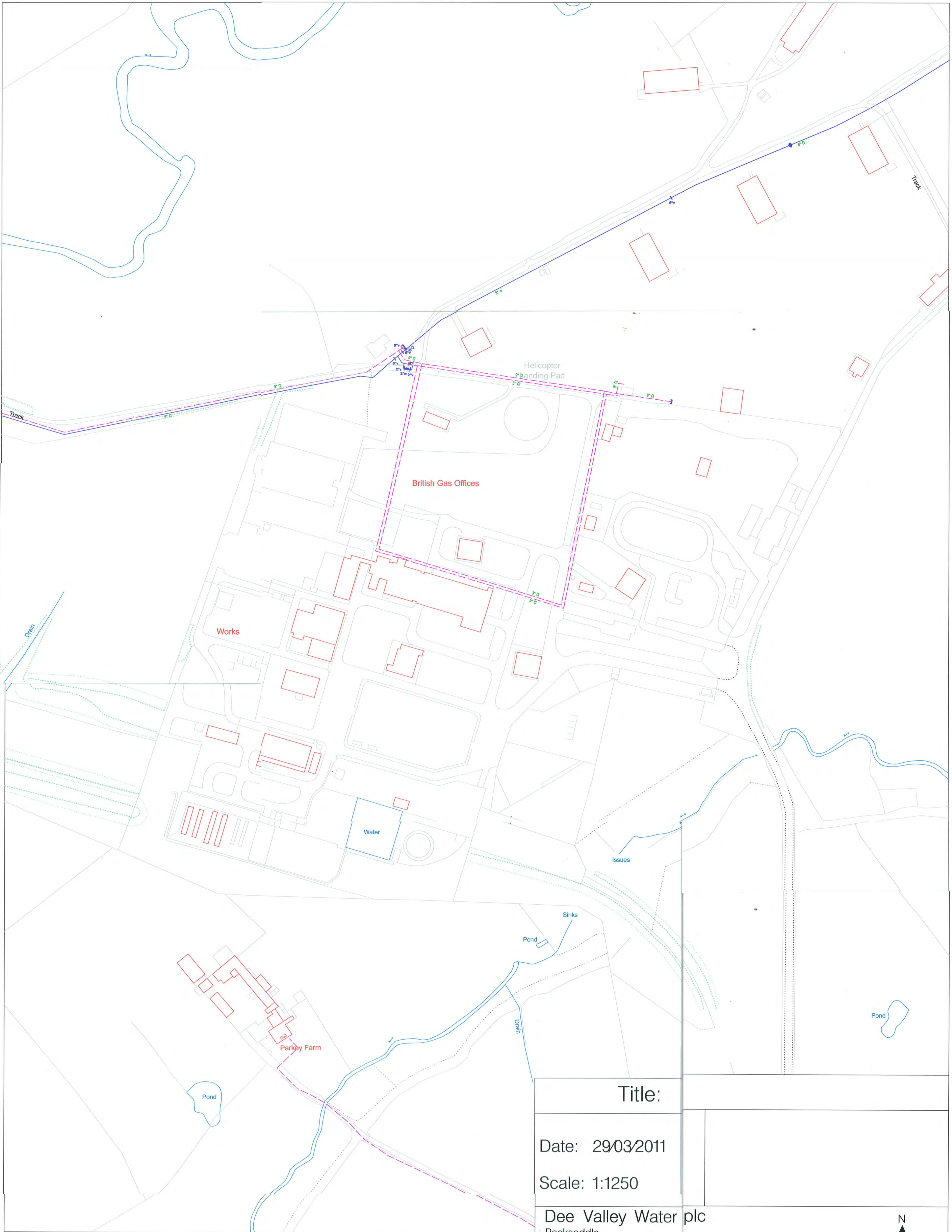
Other proposed plant is shown using dashed lines. BT symbols not listed above may be disregarded. Existing BT plant may not be recorded. Information valid at the time of preparation.

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BT ref: GMY11200R

Map reference (centre): SJ3810948133

Issued: 15/03/11 11:30:34



DEE VALLEY WATER MAINS ——— PRIVATE WATER MAINS - - - - -

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PLEASE NOTE - THE INFORMATION GIVEN HERE ON THE ROUTES AND LOCATIONS OF MAINS IS INDICATIVE ONLY AND NO WARRANTY IS GIVEN OR IMPLIED
MORE PRECISE INFORMATION CAN BE GIVEN BY PRIOR ARRANGEMENT ALTHOUGH THE DEPTH OF ANY APPARATUS MAY NOT BE ASCERTAINABLE

DO NOT SCALE FROM THIS PRINT

Title:

Date: 29/03/2011

Scale: 1:1250

Dee Valley Water plc
Packsaddle
Wrexham Road
Rhostyllen
Wrexham LL14 4EH





The position and depths of underground and overhead apparatus as indicated on this plan are approximate and are intended for guidance only. The depths may have changed if the land surface levels have altered. You are also informed that the plan may not show, or may inaccurately show, individual property services and services to street lighting installations. The onus of locating the apparatus precisely before commencing any excavations or other works in the immediate vicinity therefore rests entirely upon the person undertaking or responsible for those works. Before any such works are undertaken the precise location of the apparatus and cables should therefore be ascertained by suitable means. In the event of an emergency or for further assistance please contact 0845 272 7979 (ScottishPower area) or 0845 272 2424 (SP Manweb area).

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**SP ENERGY NETWORKS**
On behalf of SP Manweb plc

SP Manweb plc
Registered Office: c/o PowerSystems
3 Prenton Way, Prenton, CH43 3ET
Registered in England and Wales No 2366937

OVERHEAD LINE

UNDERGROUND CABLES
In Use: ———
Out of Use: - - - - -
Assumed route: <----->

VOLTAGE COLOUR KEY
EHV: 132kV BLUE
33kV GREEN
HV: RED
LV: BROWN

Where cables have been laid SINCE 1 OCTOBER 1988, the following depths in mm apply (to the tops of cables or ducts) UNLESS OTHERWISE SHOWN, but see comments. (TO TOP OF CABLE, ADD 75mm FOR BOTTOM OF TRENCH)

	EHV	HV	LV
IN FOOTPATHS :	775	600	450
ACROSS ROADS :	775	700	600
ALONG ROADS :	775	700	600
AGRICULTURAL :	910	910	910

Your attention is drawn to the Health and Safety Executive Booklet HSG47, available from HSE.

DATE: 06/04/2011

SCALE: 1:5000

MAP REFERENCE: 338109 348015

0 25 50 100 150 200 Metres

Search Results

Thank you for your enquiry: LS-110315-TV-769-POU

Subject always to our standard terms and conditions, this enquiry result is valid for 28 days only from the date of enquiry and is based on the confirmed information you entered. If the location of the work changes then a further enquiry must be made. Should the work not be undertaken within 28 days of the enquiry then a further enquiry must be made.

ENQUIRER DETAILS

Name: Miss Paula Loasby

Company: WorleyParsons Komex

Email: paula.loasby@worleyparsons.com

Tel: 0117 925 1304

ENQUIRY DETAILS

Your reference: 50065-29

Your location: LL13 0UW

Confirmed location: OS grid reference (338083 348073)

Estimated start date: 1st April 2011

Planned works: Yes

Emergency: No

Type of work: Development Projects -

Commercial/Industrial

Distance covered: 250 metres

IN THE ZONE OF INTEREST

Operator: **National Grid Gas (National Transmission System)**

Further information will be required to confirm the exact location and nature of the proposed works.

IN AN EMERGENCY CONTACT: GAS 0800 111 999 ELECTRICITY 0800 40 40 90

The following list outlines what we need from you:

- Site contact name and number
- Location plan
- Detailed plan (minimum scale 1:2500)
- Cross sectional drawings (if available)
- Work Specification

Please either email the requested additional information and Linesearch reference to plantprotection@uk.ngrid.com or print this page and post to the following address(es):

National Grid Gas (National Transmission System)

Plant Protection

Block 1: Floor 2

Brick Kiln Street

Hinckley

Leicestershire

LE10 0NA

NOT IN THE ZONE OF INTEREST

BOC Limited (A Member of the Linde Group)	Ineos Enterprises Limited
BP Exploration Purbeck Southampton Pipeline	Mainline Pipelines Limited
BPA	Manchester Jetline Limited
Centrica Energy	Marchwood Power Ltd (Gas Pipeline)
ConocoPhillips (UK) Ltd	NPower CHP Pipelines
ConocoPhillips Ltd Humber Refinery	Oikos Storage Limited
Coryton Energy Co Ltd (Gas Pipeline)	Premier Transmission Ltd (SNIP)
E-on UK Plc (Gas Pipelines Only)	SABIC UK Petrochemicals
Esso Petroleum Company Limited	Scottish Power Generation
FibreSpeed Limited	Shell UK Ltd
Geo Networks Limited	Star Energy
Government Pipelines & Storage System	Total UK (Finaline, Colnbrook & Colwick Pipelines)
INEOS Manufacturing (Scotland and TSEP)	Wingas Storage UK Ltd

Thank you for your enquiry, you must now contact the affected operator(s) listed above 'IN THE ZONE OF INTEREST'

Please note

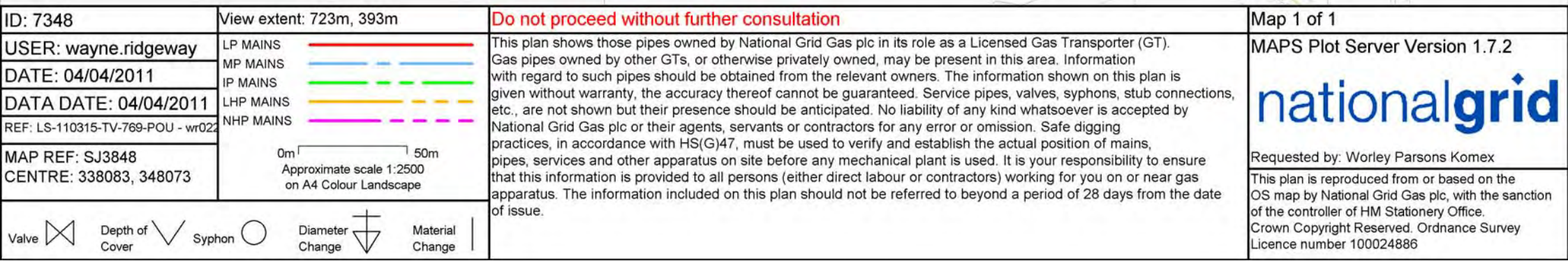
The Linesearch.org system only contains information on National Grid's Transmission assets. All other National Grid or other local high pressure (above 7 bar) gas pipelines and lower pressure gas mains are not included.

For all other energy network operators' information and contact details see <http://2010.energynetworks.org/>

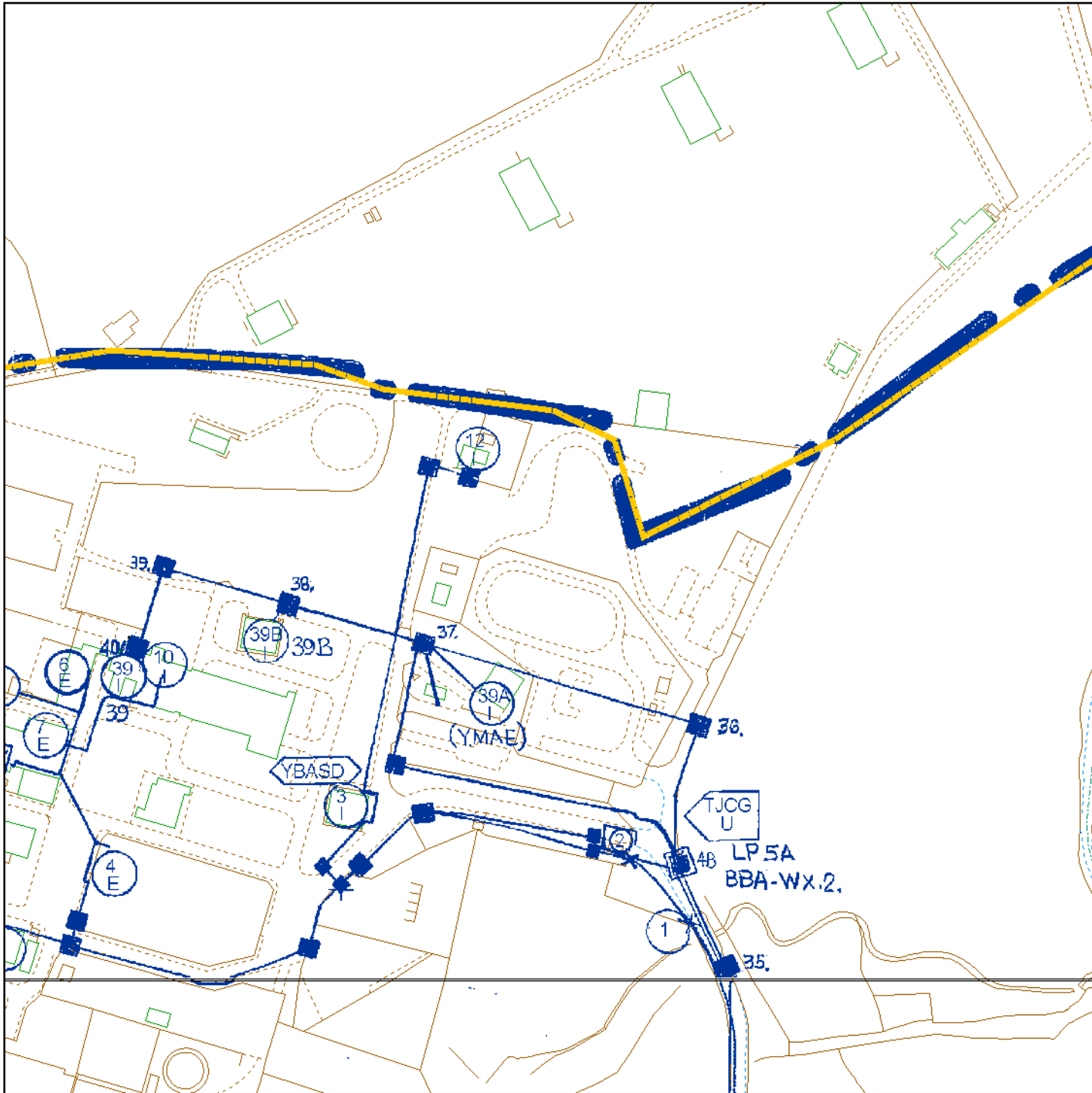
Please quote the Linesearch enquiry reference number in *all* correspondence

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Maps by email Plant Information Reply



IMPORTANT WARNING

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E-mail: dbyd@openreach.co.uk
Website: www.dialbeforeyoudig.com

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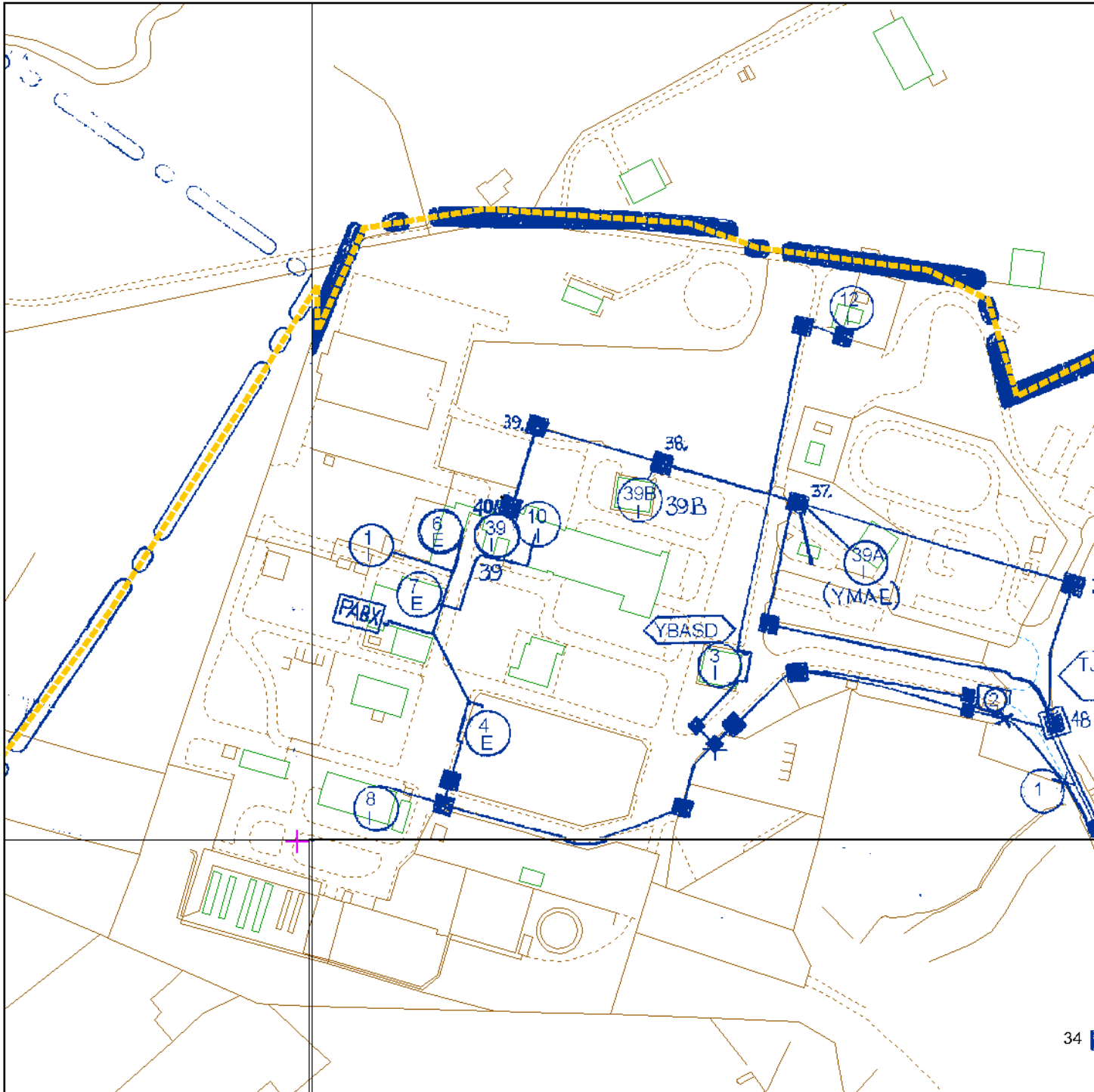
openreach
a BT Group business

BT ref: WIH11360V

Map reference (centre): SJ3828048198

Issued: 15/03/11 11:46:49

Maps by email Plant Information Reply



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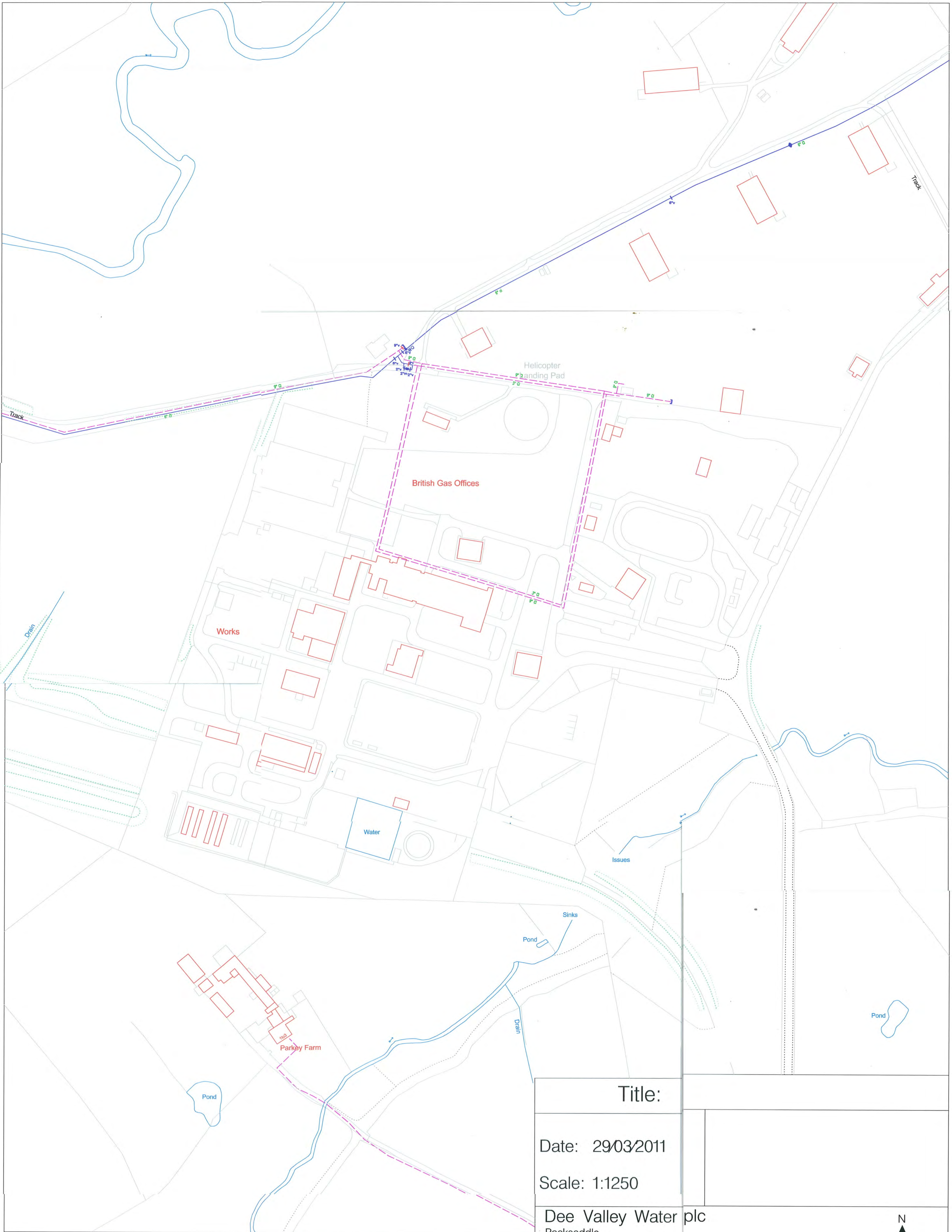
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openreach
a BT Group business

BT ref: GMY11200R

Map reference (centre): SJ3810948133

Issued: 15/03/11 11:30:34



DEE VALLEY WATER MAINS ——— PRIVATE WATER MAINS - - - - -

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MORE PRECISE INFORMATION CAN BE GIVEN BY PRIOR ARRANGEMENT ALTHOUGH THE DEPTH OF ANY APPARATUS MAY NOT BE ASCERTAINABLE

DO NOT SCALE FROM THIS PRINT

Title:

Date: 29/03/2011

Scale: 1:1250

Dee Valley Water plc
Packsaddle
Wrexham Road
Rhostyllen
Wrexham LL14 4EH





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**SP ENERGY NETWORKS**
On behalf of SP Manweb plc

SP Manweb plc
Registered Office: c/o PowerSystems
3 Prenton Way, Prenton, CH43 3ET
Registered in England and Wales No 2366937

OVERHEAD LINE

UNDERGROUND CABLES
In Use -----
Out of Use - - - - -
Assumed route <----->
VOLTAGE COLOUR KEY
EHV ----- 132kV ----- BLUE
----- 33kV ----- GREEN
HV ----- RED
LV ----- BROWN

Where cables have been laid SINCE 1 OCTOBER 1988, the following depths in mm apply (to the tops of cables or ducts) UNLESS OTHERWISE SHOWN, but see comments. (TO TOP OF CABLE, ADD 75mm FOR BOTTOM OF TRENCH)

	EHV	HV	LV
IN FOOTPATHS :	775	600	450
ACROSS ROADS :	775	700	600
ALONG ROADS :	775	700	600
AGRICULTURAL :	910	910	910

Your attention is drawn to the Health and Safety Executive Booklet HSG47, available from HSE.

DATE 06/04/2011

SCALE 1:5000

MAP REFERENCE 338109 348015

0 25 50 100 150 200 Metres

Search Results

Thank you for your enquiry: LS-110315-TV-769-POU

Subject always to our standard terms and conditions, this enquiry result is valid for 28 days only from the date of enquiry and is based on the confirmed information you entered. If the location of the work changes then a further enquiry must be made. Should the work not be undertaken within 28 days of the enquiry then a further enquiry must be made.

ENQUIRER DETAILS

Name: Miss Paula Loasby

Company: WorleyParsons Komex

Email: paula.loasby@worleyparsons.com

Tel: 0117 925 1304

ENQUIRY DETAILS

Your reference: 50065-29

Your location: LL13 0UW

Confirmed location: OS grid reference (338083 348073)

Estimated start date: 1st April 2011

Planned works: Yes

Emergency: No

Type of work: Development Projects -

Commercial/Industrial

Distance covered: 250 metres

IN THE ZONE OF INTEREST

Operator: **National Grid Gas (National Transmission System)**

Further information will be required to confirm the exact location and nature of the proposed works.

IN AN EMERGENCY CONTACT: GAS 0800 111 999 ELECTRICITY 0800 40 40 90

The following list outlines what we need from you:

- Site contact name and number
- Location plan
- Detailed plan (minimum scale 1:2500)
- Cross sectional drawings (if available)
- Work Specification

Please either email the requested additional information and Linesearch reference to plantprotection@uk.ngrid.com or print this page and post to the following address(es):

National Grid Gas (National Transmission System)

Plant Protection

Block 1: Floor 2

Brick Kiln Street

Hinckley

Leicestershire

LE10 0NA

NOT IN THE ZONE OF INTEREST

BOC Limited (A Member of the Linde Group)	Ineos Enterprises Limited
BP Exploration Purbeck Southampton Pipeline	Mainline Pipelines Limited
BPA	Manchester Jetline Limited
Centrica Energy	Marchwood Power Ltd (Gas Pipeline)
ConocoPhillips (UK) Ltd	NPower CHP Pipelines
ConocoPhillips Ltd Humber Refinery	Oikos Storage Limited
Coryton Energy Co Ltd (Gas Pipeline)	Premier Transmission Ltd (SNIP)
E-on UK Plc (Gas Pipelines Only)	SABIC UK Petrochemicals
Esso Petroleum Company Limited	Scottish Power Generation
FibreSpeed Limited	Shell UK Ltd
Geo Networks Limited	Star Energy
Government Pipelines & Storage System	Total UK (Finaline, Colnbrook & Colwick Pipelines)
INEOS Manufacturing (Scotland and TSEP)	Wingas Storage UK Ltd

Thank you for your enquiry, you must now contact the affected operator(s) listed above 'IN THE ZONE OF INTEREST'

Please note

The Linesearch.org system only contains information on National Grid's Transmission assets. All other National Grid or other local high pressure (above 7 bar) gas pipelines and lower pressure gas mains are not included.

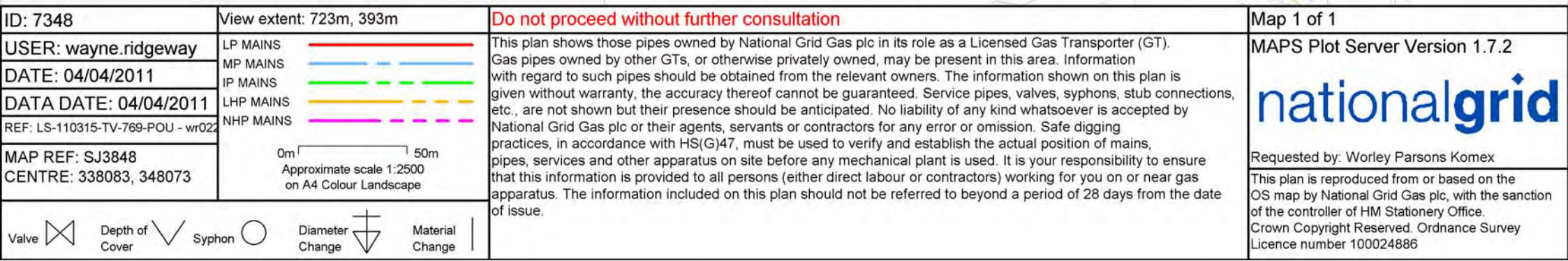
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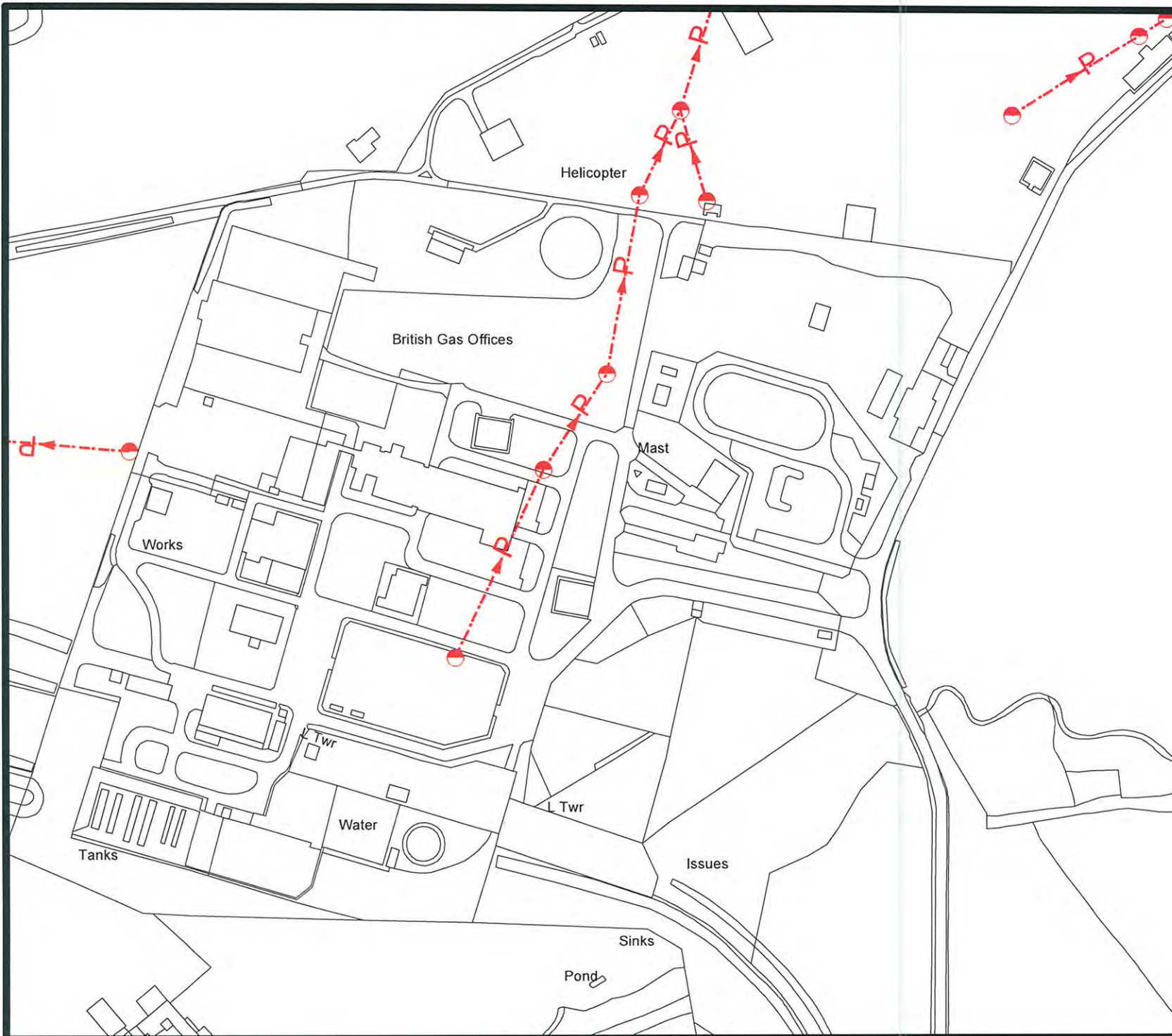
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Dŵr Cymru
Welsh Water

365758



LEGEND

Waste network:

- | | | | |
|--|-------------------------|--|---|
| | Foul chamber | | Outfall |
| | Surface water chamber | | Lamp hole |
| | Combined chamber | | Storm Overflow |
| | Combined sewer overflow | | Rising main |
| | Special purpose chamber | | Gravity sewer |
| | Treatment works | | Private sewer |
| | Pumping station | | Private sewer subject to Sect. 104 adoption agreement |

N.B. Sewer symbol colour indicates the type:

- | | |
|--------|--|
| RED | Combined |
| GREEN | Surface water |
| BROWN | Foul |
| Purple | Former S21 sewers (for industrial purposes only) |

Notes:

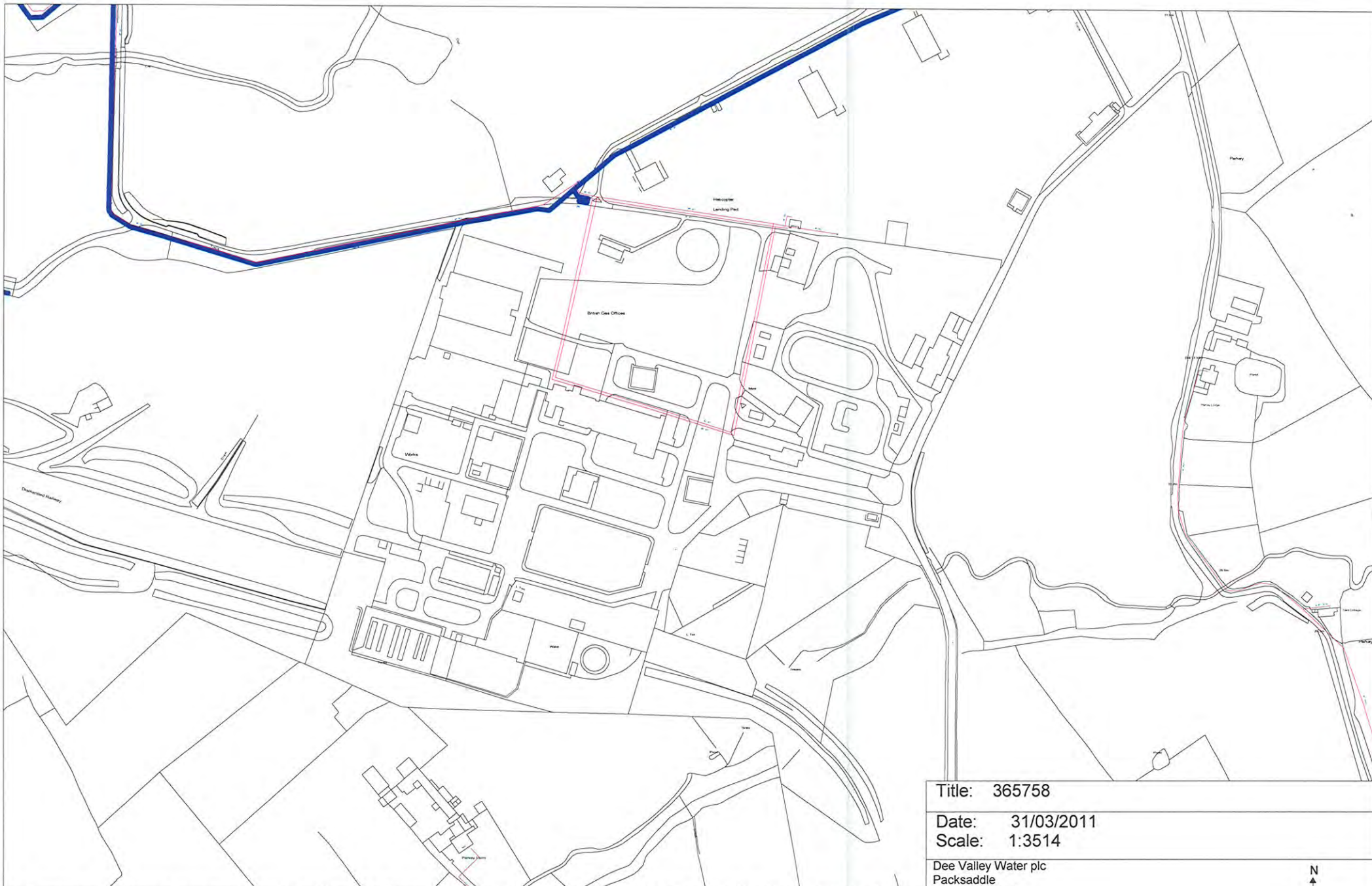
Dŵr Cymru Cyl gives this information as to the position of its underground apparatus by way of general guidance only on the strict understanding that it is based on the best information available and no warranty as to its correctness is relied upon in the event of excavations or other works made in the vicinity of the Company's apparatus and any onus of locating the apparatus before carrying out any excavations rests entirely on you. It must be understood that the furnishing of the information is entirely without prejudice to the provisions of the New Roads and Streetworks Act 1991 and of the Company's right to be compensated for any damage to its apparatus.

Service pipes are not generally shown but their presence should be anticipated.

**EXACT LOCATIONS OF ALL APPARATUS
TO BE DETERMINED ON SITE.**

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Map Ref: 337869 348224
Map scale: 1:2,500
Printed by: MC
Printed on: 31/3/11



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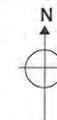
**PLEASE NOTE - The information given here on the routes and locations of mains is indicative only and no warranty is given or implied
More precise information can be given by prior arrangement although the depth of any apparatus may not be ascertainable**

Title: 365758

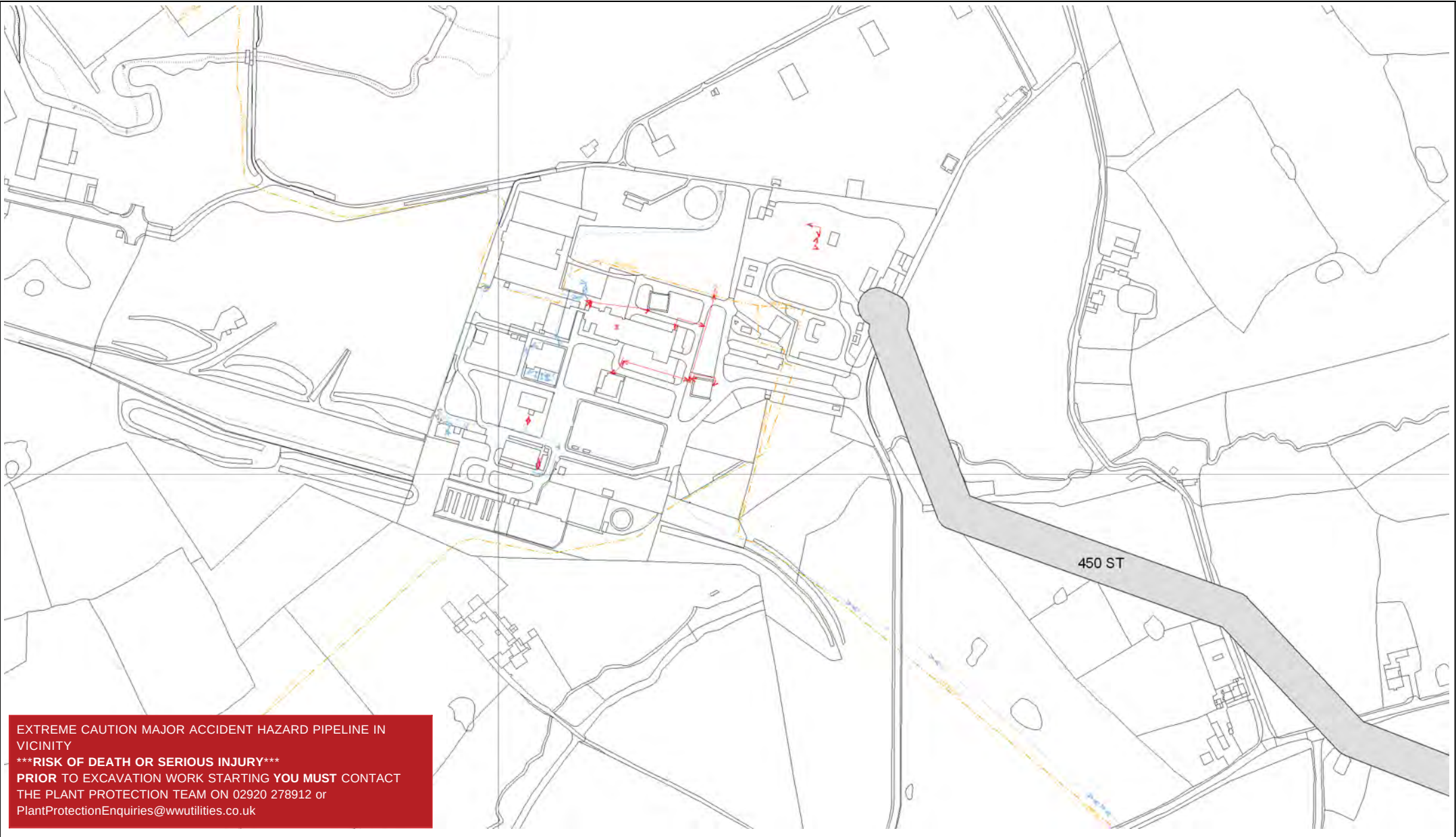
Date: 31/03/2011

Scale: 1:3514

Dee Valley Water plc
Packsaddle
Wrexham Road
Rhostyllen
Wrexham LL14 4EH
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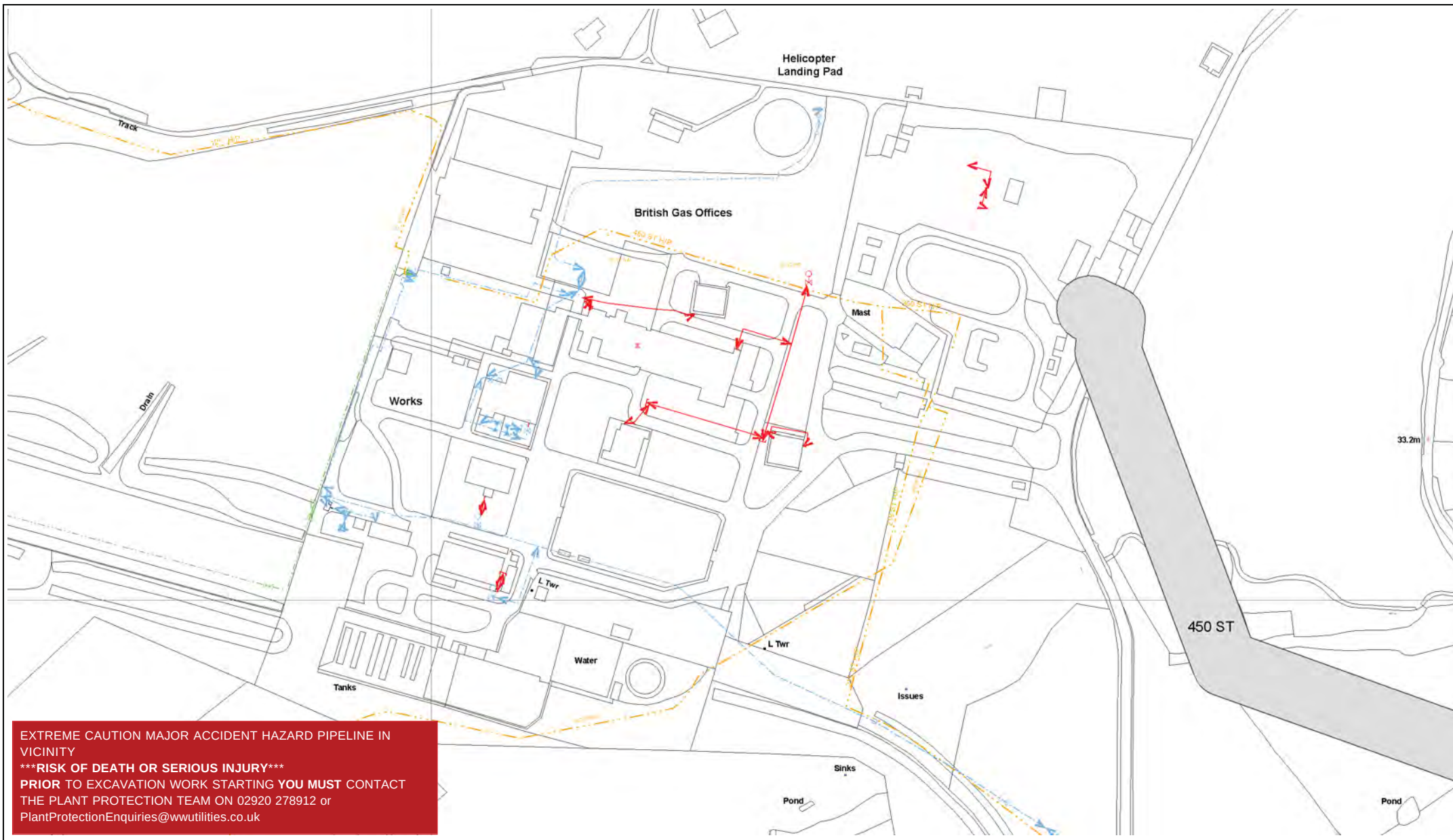


DO NOT SCALE FROM THIS PRINT



EXTREME CAUTION MAJOR ACCIDENT HAZARD PIPELINE IN VICINITY
RISK OF DEATH OR SERIOUS INJURY
PRIOR TO EXCAVATION WORK STARTING YOU MUST CONTACT
THE PLANT PROTECTION TEAM ON 02920 278912 or
PlantProtectionEnquiries@wwutilities.co.uk

Scale	1:4695	Low Pressure Medium Pressure Intermediate Pressure High Pressure Design Pipes Abandoned N			Title	Maelor Wide	 WALES & WEST UTILITIES Wales & West Utilities Ltd., Wales & West House, Spooner Close, Celtic Springs, Coedkernew, Newport, NP10 8FZ.
User ID	wwutilitiesWorleyParscpahcvq				The plan shows those pipes owned by Wales & West Utilities (WWU) in its role as a Licensed Gas Transporter (GT). The information shown on this plan is derived from historic information and may have involved re-scaling plans, and the accuracy of it cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. may not be shown but their presence should be anticipated. No warranties are therefore given in respect of it. WWU its employees and contractors do not accept any liability for any inaccuracy or incompleteness in it.		
Date	15/03/2011						
Grid Ref:	Easting 338210	Some examples of Plant Items:	Valve Depth of Cover Syphon Diameter Change Material Change	You must use safe digging practices, in accordance with HS(G)47, to establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you or near gas apparatus. The information shown on this plan should not be used beyond 28 days from the date of issue of this plan as it is subject to updating. The plan also provides indications of gas pipes owned by other GTs, or otherwise privately owned, which may be present in this area. This information is not information of WWU and WWU is unable to verify this information or to confirm whether it is accurate or complete. It is supplied voluntarily to assist the user in determining whether to make contact with other GTs or others. The user must obtain such information from the other GT or person concerned. WWU, its employees and contractors do not accept any liability for this information or any inaccuracy or incompleteness in it.			
	Northing 348052						
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Scale	1:2711	Low Pressure Medium Pressure Intermediate Pressure High Pressure Design Pipes Abandoned N				Title	Maelor Works	WALES&WEST UTILITIES Wales & West Utilities Ltd., Wales & West House, Spooner Close, Celtic Springs, Coedkernew, Newport, NP10 8FZ. Reproduced by permission of Ordnance Survey on behalf of HMSO. Crown copyright and database right 2009. All rights reserved. Ordnance Survey Licence number 0100044308.
User ID	wwutilities\WorleyParscpahcvq	The plan shows those pipes owned by Wales & West Utilities (WU) in its role as a Licensed Gas Transporter (GT). The information shown on this plan is derived from historic information and may have involved re-scaling plans, and the accuracy of it cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. may not be shown but their presence should be anticipated. No warranties are therefore given in respect of it. WU its employees and contractors do not accept any liability for any inaccuracy or incompleteness in it.						
Date	15/03/2011							
Grid Ref:	Easting 338160	Some examples of Plant Items: Valve Depth of Cover Syphon Diameter Change Material Change						
	Northing 348094							
Printed via WWU UtilityView								



LEGEND



Notes:

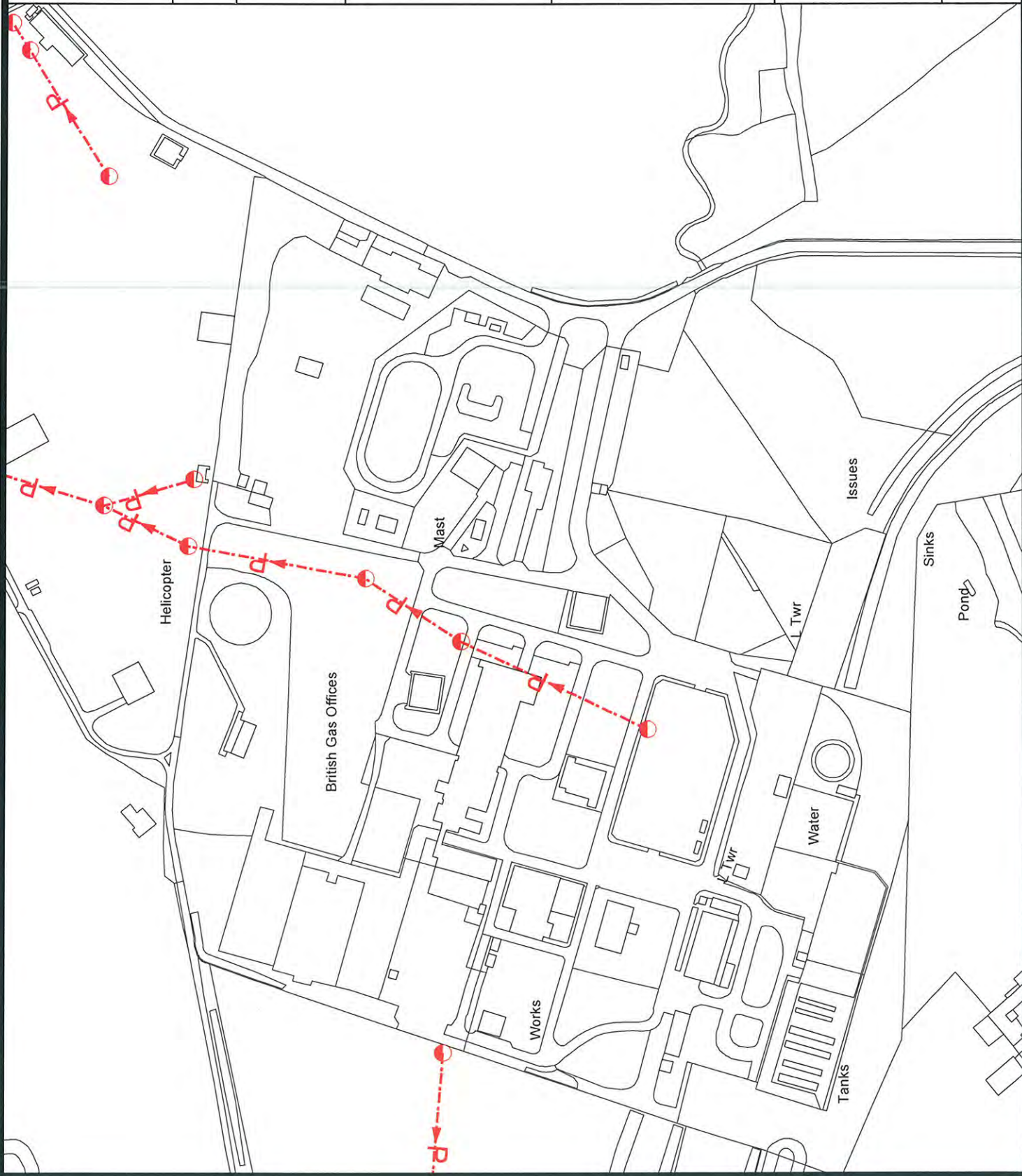
Dŵr Cymru Cŵl gives this information as to the position of its underground apparatus by way of general guidance only on the strict understanding that it is based on the best information available to it at the time of its compilation. It does not warrant the accuracy of the information and it is the responsibility of the user to verify the information by other means before carrying out any excavation work. It is not to be used for any purpose other than that for which it was intended. Dŵr Cymru Cŵl is not liable for any damage to its apparatus.

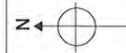
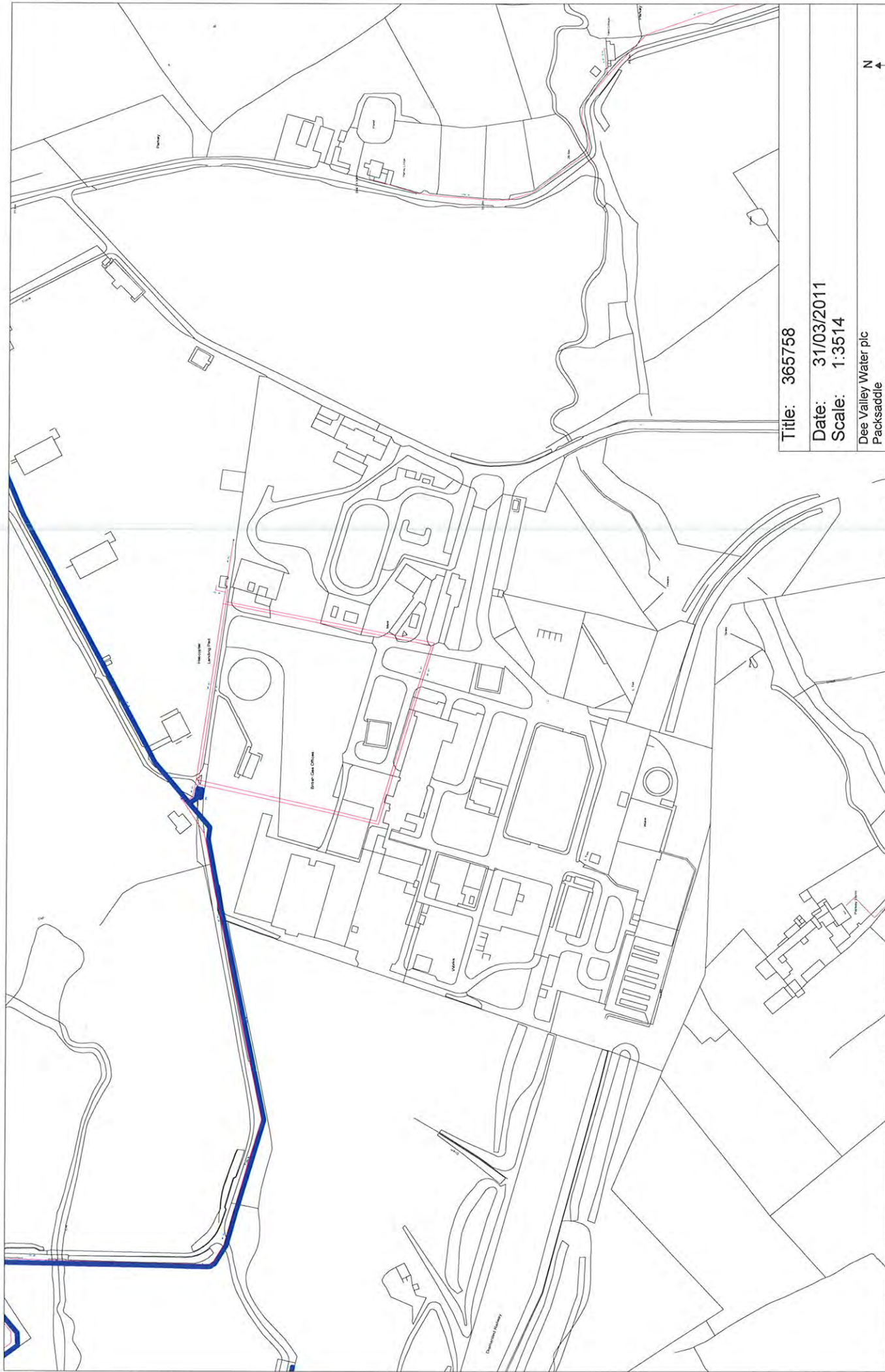
Service pipes are not generally shown but their presence should be anticipated.

EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE.

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Map Ref: 337869 348224
Map scale: 1:2,500
Printed by: MC
Printed on: 31/3/11





Title: 365758

Date: 31/03/2011

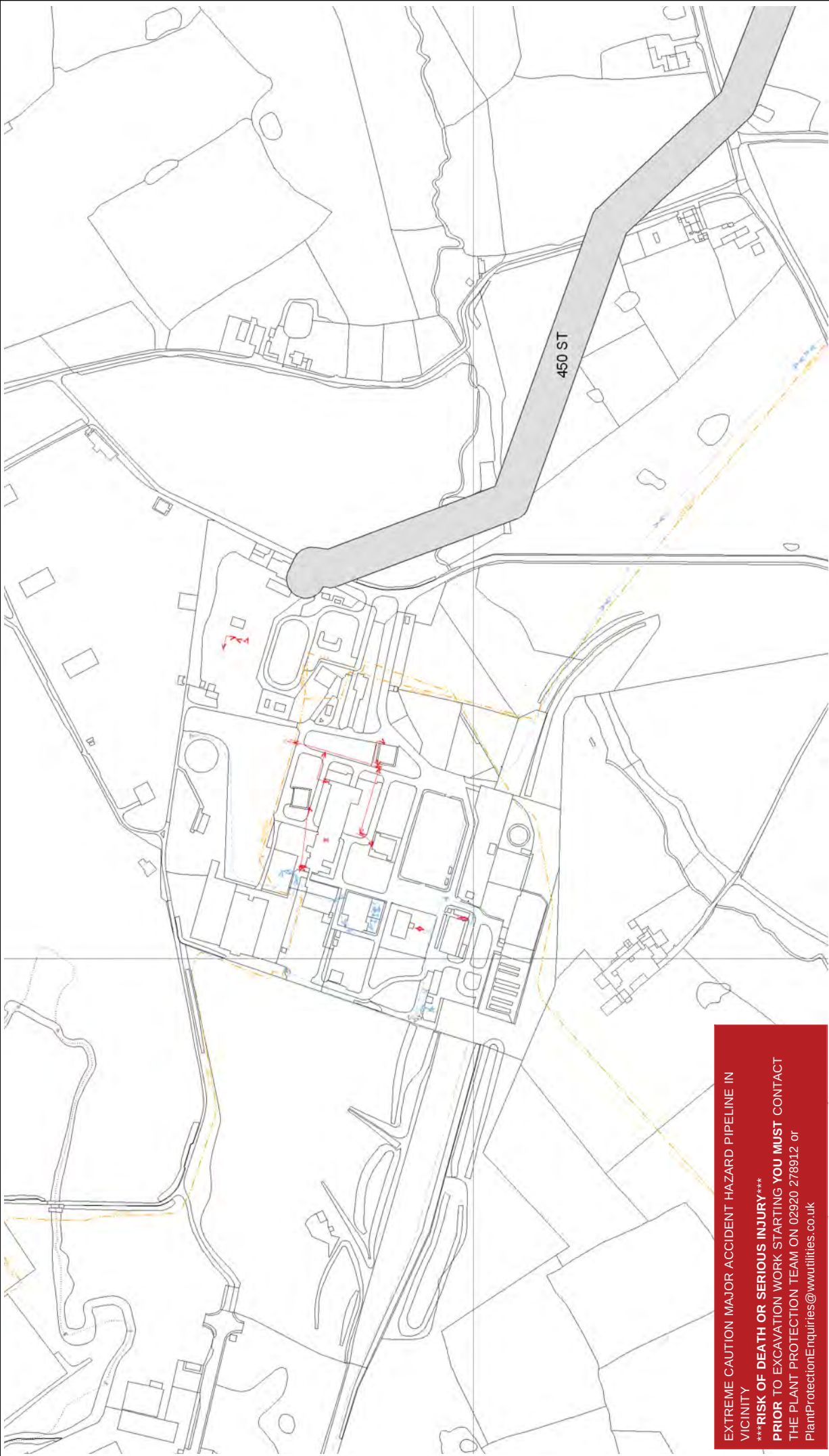
Scale: 1:3514

Dee Valley Water plc
Packsaddle
Wrexham Road
Rhoshyllen
Wrexham LL14 4EH
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Based upon the Ordnance Survey map by Dee Valley Water plc by permission of Ordnance Survey and on behalf of the Controller of Her Majesty's Stationary Office

PLEASE NOTE - The information given here on the routes and locations of mains is indicative only and no warranty is given or implied
More precise information can be given by prior arrangement although the depth of any apparatus may not be ascertainable

DO NOT SCALE FROM THIS PRINT



EXTREME CAUTION MAJOR ACCIDENT HAZARD PIPELINE IN VICINITY
*****RISK OF DEATH OR SERIOUS INJURY*****
PRIOR TO EXCAVATION WORK STARTING YOU MUST CONTACT
THE PLANT PROTECTION TEAM ON 02920 278912 or
PlantProtectionEnquiries@wvuutilities.co.uk

Scale	1:4695	Low Pressure Medium Pressure Intermediate Pressure High Pressure Design Pipes Abandoned		N	Maelor Wide	
User ID	wwutilitiesWorleyParsaphovq					
Date	15/03/2011					
Grid Ref:	Easting 338210 Northing 348052					
Printed via WVU UtilityView						

The plan shows those pipes owned by Wales & West Utilities (WVU) in its role as a Licensed Gas Transporter (GT). The information shown on this plan is derived from historic information and may have involved re-scaling plans, and the accuracy of it cannot be guaranteed. Service pipes, valves, and other features shown on this plan are for information only and do not constitute a warranty. No warranties are therefore given in respect of it. WVU, its employees and contractors do not accept any liability for any inaccuracy or incompleteness in it.

You must use safe digging practices, in accordance with HSG47, to establish the actual position of mains, pipes, services and other apparatus on site before you start any excavation work. The information shown on this plan should not be used beyond 28 days from the date of issue of this plan as it is subject to updating.

This plan also provides indications of gas pipes owned by other GTs, or otherwise privately owned, which may be present in the area. This information is not information of WVU and WVU is unable to verify this information or to confirm whether it is accurate or complete. It is supplied voluntarily to assist the user in determining whether to make contact with other GTs or others. The user must obtain such information from the other GT or person concerned. WVU, its employees and contractors do not accept any liability for this information or any inaccuracy or incompleteness in it.

Valve

Depth of Cover

Syphon

Diameter Change

Material Change

Low Pressure

Medium Pressure

Intermediate Pressure

High Pressure

Design Pipes

Abandoned

Valve

Depth of Cover

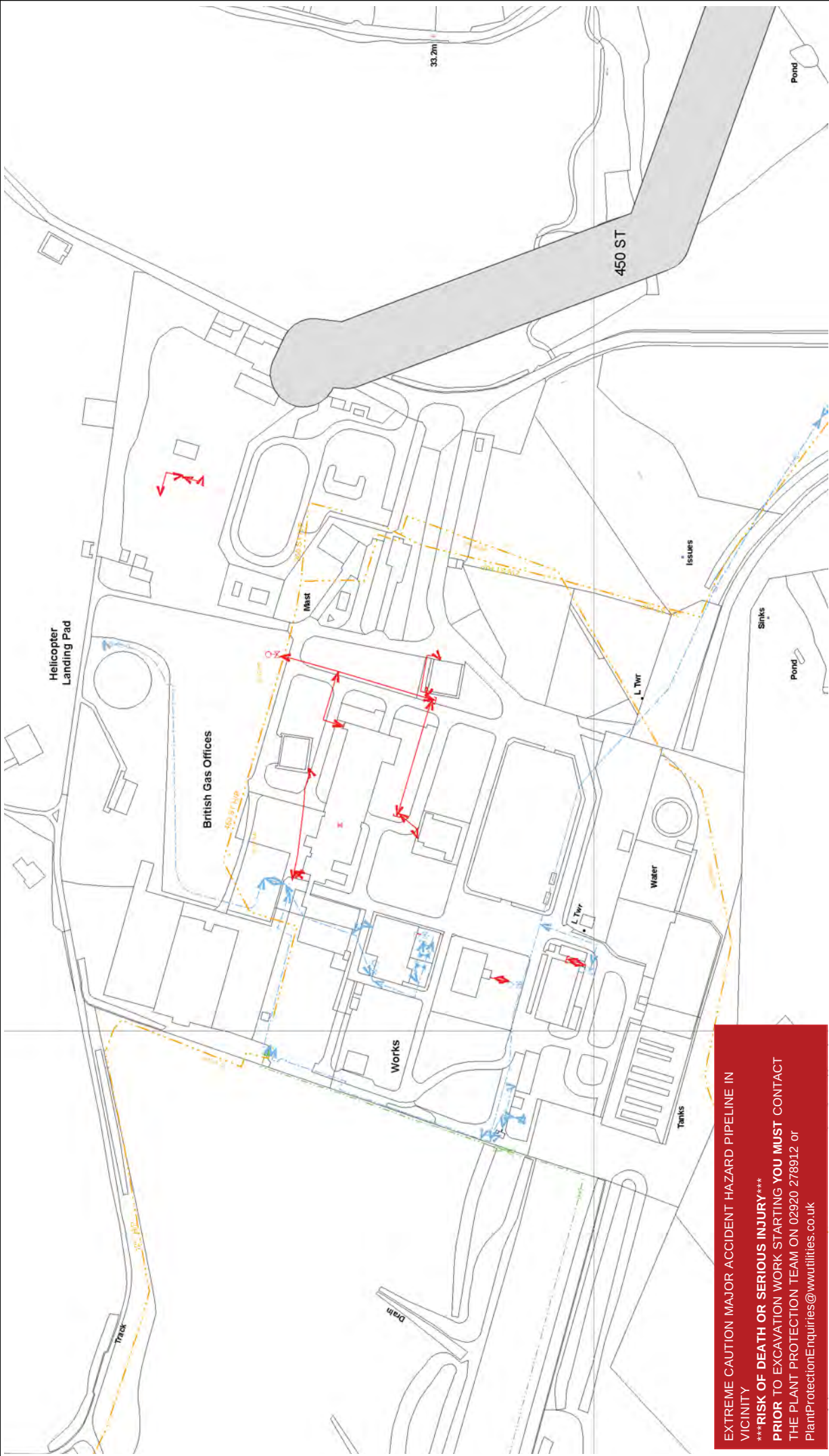
Syphon

Diameter Change

Material Change

Some examples of Plant Items:

N



Scale		1:2711	Title		Maelor Works			
User ID	wwutilties\WorleyParsaphovq		This plan shows those pipes owned by Wales & West Utilities (WWU) in its role as a Licensed Gas Transporter (GT). The information shown on this plan is derived from historic information and may have involved re-scaling plans, and the accuracy of it cannot be guaranteed. Service pipes, valves, syphons, sub connectors, etc. may not be shown but their presence should be anticipated. No warranties are therefore given in respect of it. WWU its employees and contractors do not accept any liability for any inaccuracy or incompleteness in it. You must use safe digging practices, in accordance with HSG47, to establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you or near gas apparatus. The information shown on this plan should not be used beyond 28 days from the date of issue of this plan as it is subject to updating. This plan also provides indications of gas pipes owned by other GTs, or otherwise privately owned, which may be present in this area. This information is not information of WWU and WWU is unable to verify this information or to confirm whether it is accurate or complete. It is supplied voluntarily to assist the user in determining whether to make contact with other GTs or others. The user must obtain such information from the other GT or person concerned. WWU, its employees and contractors do not accept any liability for this information or any inaccuracy or incompleteness in it.					
Date	15/03/2011							
Grid Ref:	Easting 338160 Northing 348094							
Printed via WWU UtilityView								

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Low Pressure
Medium Pressure
Intermediate Pressure
High Pressure

Design Pipes
Abandoned

Valve

Syphon

Diameter Change

Material Change

Depth of Cover

Some examples of Plant Items:

Valve

Syphon

Diameter Change

Material Change

Depth of Cover



Wales & West Utilities Ltd., Wales & West House,
Spooner Close, Celtic Springs, Coedkernew,
Newport, NP23 8PZ.

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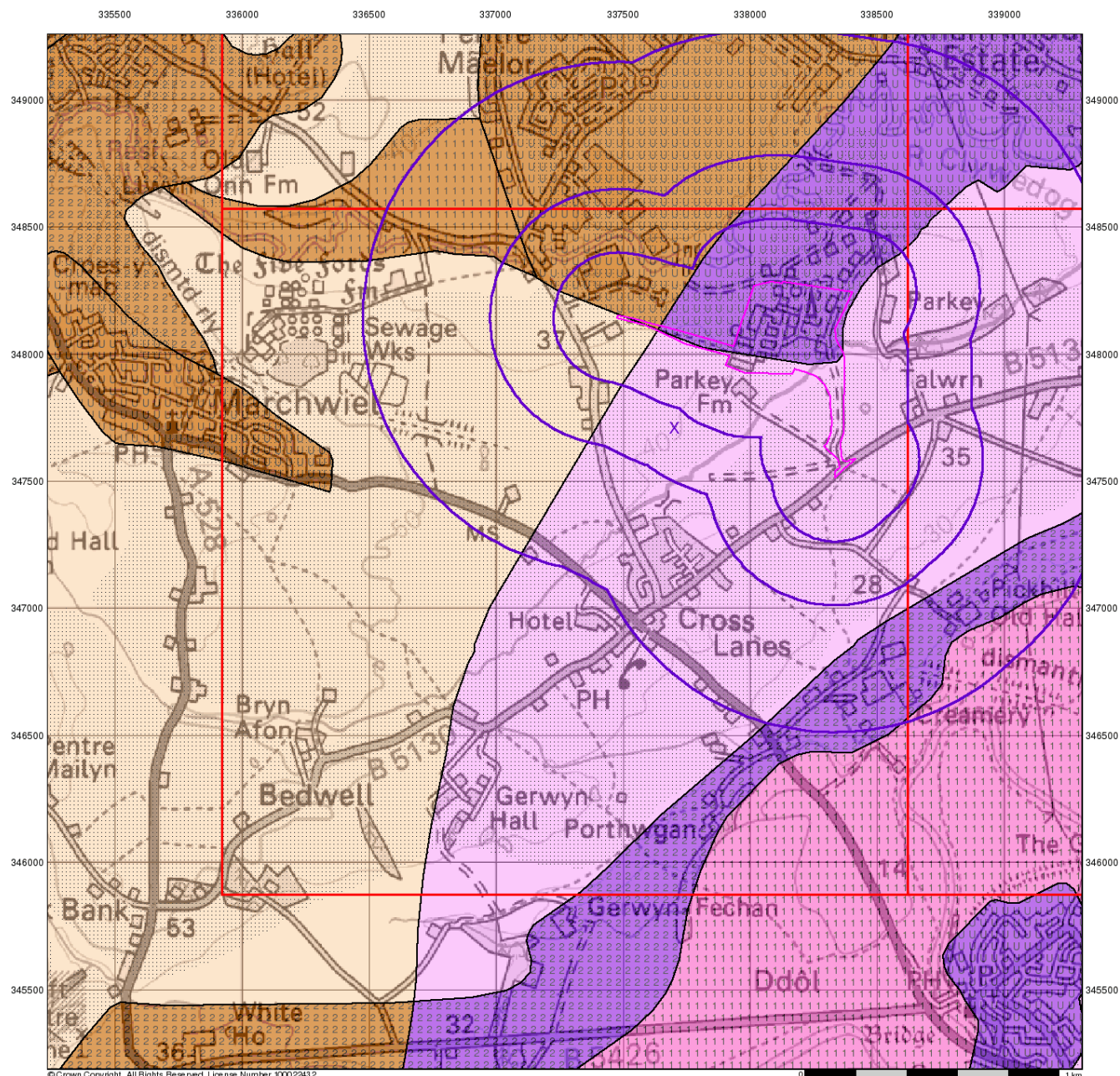
WorleyParsons

resources & energy

EcoNomics

**NATIONAL GRID PROPERTY HOLDINGS LTD
ENVIRONMENTAL ASSESSMENT SITE INVESTIGATION REPORT
MAELOR WORKS, WREXHAM**

Appendix II Relevant Environmental and Historical Information



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0 1 km



Groundwater Vulnerability

General

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

Agency and Hydrological

Geological Classes

Major Aquifer (Highly Permeable)

Minor Aquifer (Variably Permeable)

Non Aquifer (Negligibly Permeable)

Water or Sea

Drift Deposit

Soil Classes

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

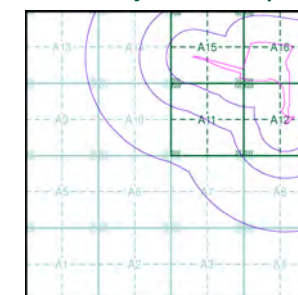
Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

Site Sensitivity Context Map - Slice A



Order Details

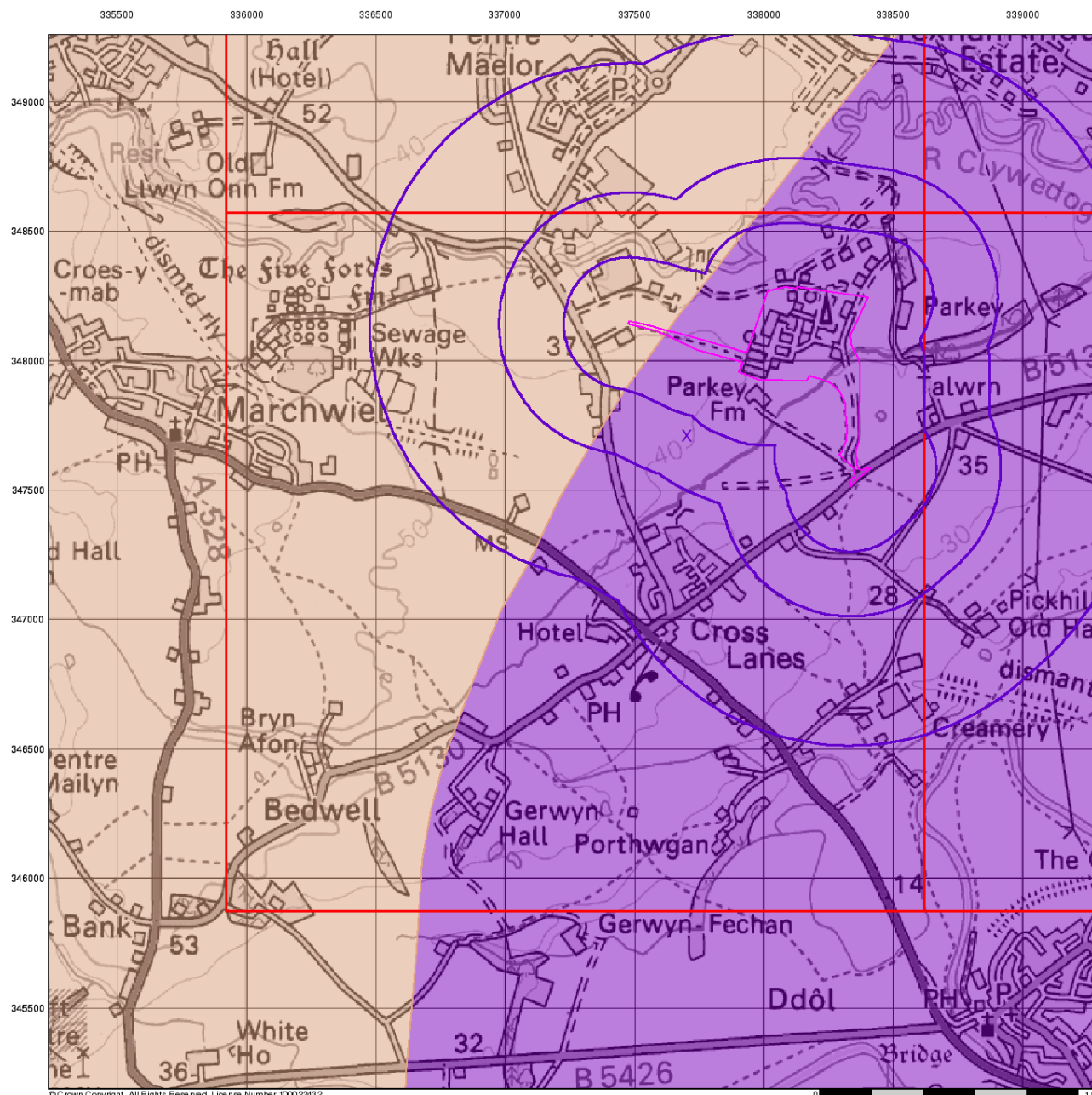
Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiel, WREXHAM, Clwyd, LL13 0UW



Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



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Bedrock Aquifer Designation

General

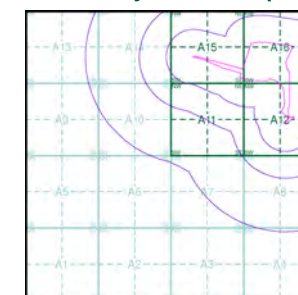
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



Order Details

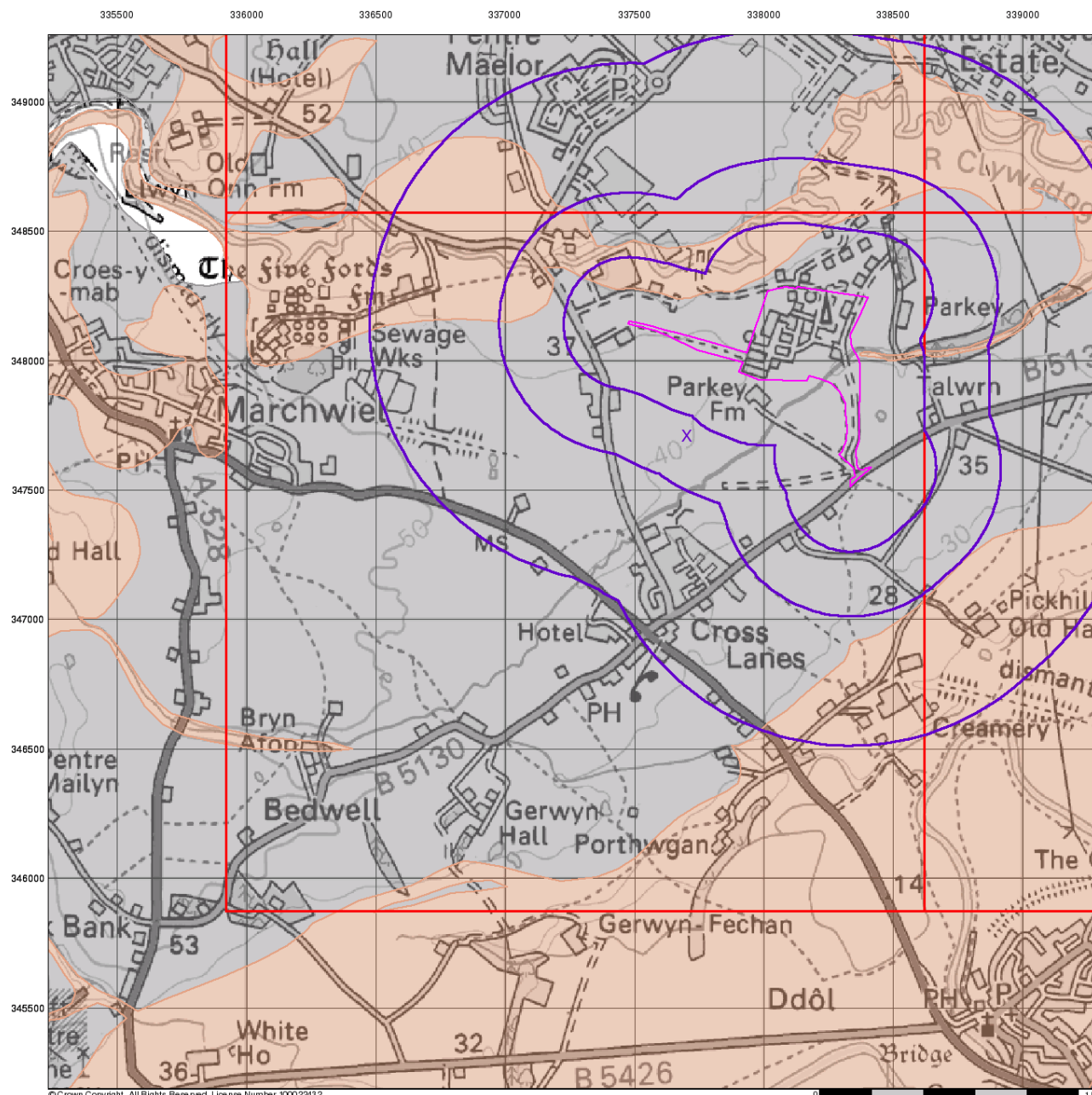
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 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

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0 1 km



Superficial Aquifer Designation

General

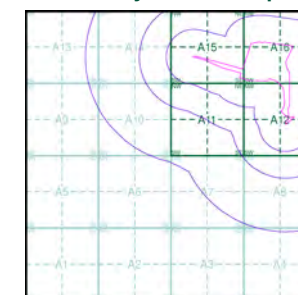
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



Order Details

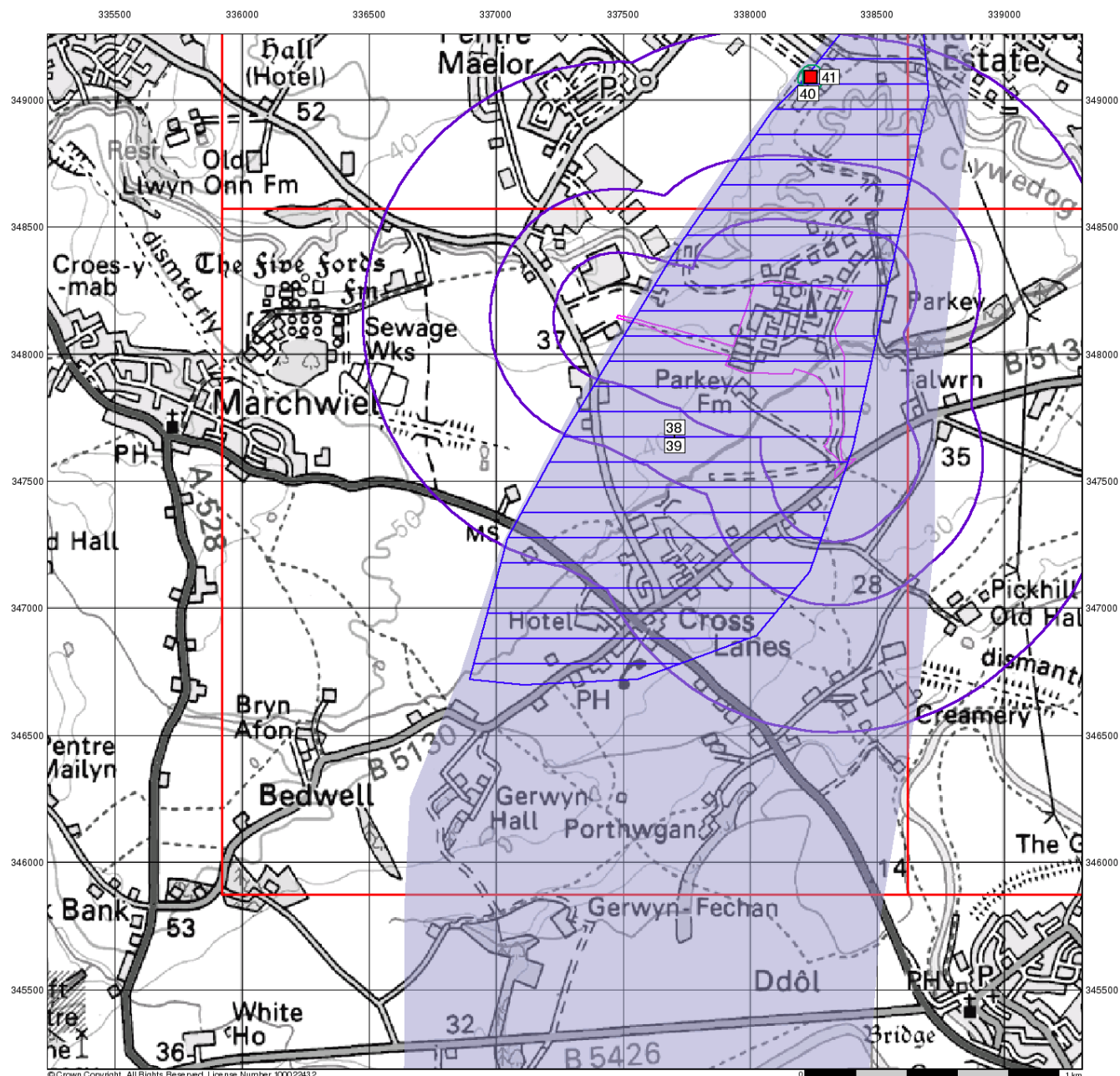
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 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

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Source Protection Zones

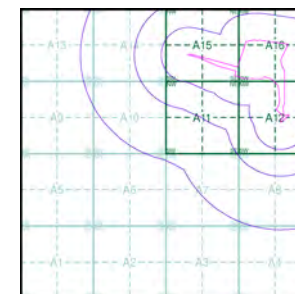
General

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

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



Order Details

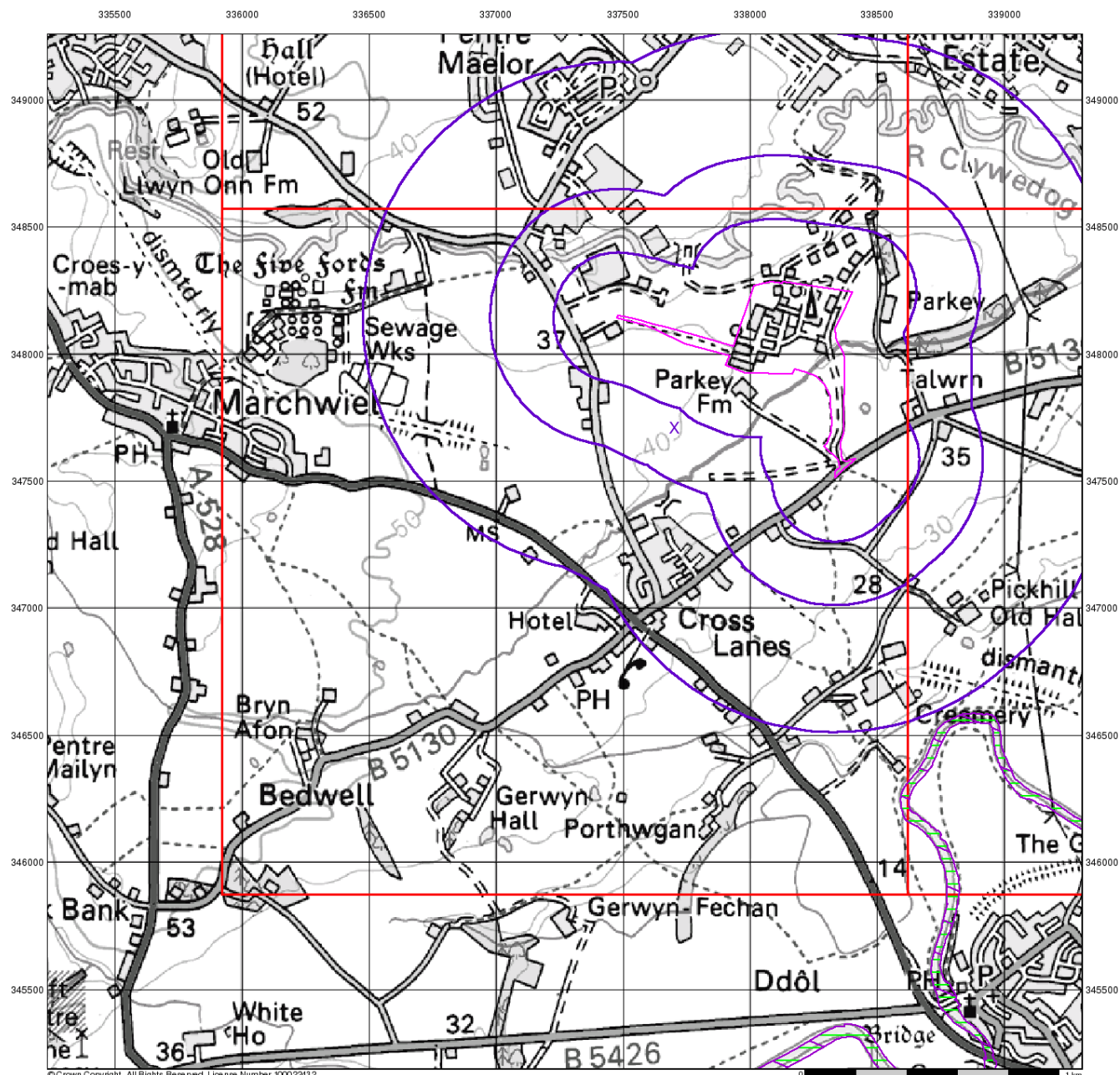
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 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

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Sensitive Land Uses

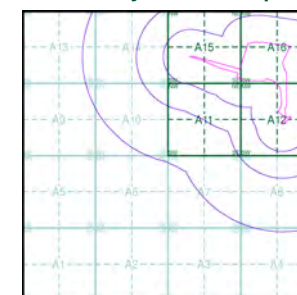
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

35238207_1_1

Customer Reference:

305001-00001 50065-29 ARS

National Grid Reference:

337700, 347710

Slice:

A

Site Area (Ha):

17.46

Search Buffer (m):

1000

Site Details:

Wales & West Utilities Ltd, Maelor Works
Marchwiel
WREXHAM
Clwyd
LL13 0UW

Client Details:

Ms C Coldrey
Worley Parsons Ltd
3-8 Redcliffe Parade West
Bristol
BS1 6SP

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	14
Hazardous Substances	15
Geological	16
Industrial Land Use	-
Sensitive Land Use	-
Data Currency	18
Data Suppliers	22
Useful Contacts	23

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 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 the attached 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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Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		2	3	11
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 5				1
Local Authority Integrated Pollution Prevention And Control	pg 5			1	
Local Authority Pollution Prevention and Controls	pg 5	1	1	1	
Local Authority Pollution Prevention and Control Enforcements	pg 5			1	
Nearest Surface Water Feature	pg 5	Yes			
Pollution Incidents to Controlled Waters	pg 6		5	7	8
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances	pg 9	2			
River Quality	pg 9		1		
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points	pg 10				2
Substantiated Pollution Incident Register	pg 11		1	2	
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability	pg 12	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 12	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 12	Yes	n/a	n/a	n/a
Source Protection Zones	pg 12	2			2
Extreme Flooding from Rivers or Sea without Defences	pg 13	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 13	Yes	Yes	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
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 14			1	
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 14			1	
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 14			1	

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 15	2			
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 15	1			
Planning Hazardous Substance Consents	pg 15	1			
Planning Hazardous Substance Enforcements					
Geological					
BGS Recorded Mineral Sites					
BGS 1:625,000 Solid Geology	pg 16	Yes	n/a	n/a	n/a
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 16	Yes	n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 16	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 17	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 17	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries (50m)				n/a	n/a
Fuel Station Entries					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
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					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: Tetra Pak Property Type: Undefined Or Other Location: Maelor Ind Estate Wrexham Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0077201 Permit Version: 1 Effective Date: 24th October 1973 Issued Date: 24th October 1973 Revocation Date: 23rd February 1995 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A15NE (N)	220	1	337720 348320
2	Discharge Consents Operator: Tetra Pack Wrexham Ltd, Fao D G Jones Property Type: Undefined Or Other Location: Wrexham Tetra Pak Wrexham Ltd. Bedw, Tetra Pak Wrexham Ltd. Bedwell R, Bedwell Road Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0146401 Permit Version: 1 Effective Date: 23rd December 1985 Issued Date: 23rd December 1985 Revocation Date: 21st August 1995 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A15NW (NW)	246	1	337300 348320
3	Discharge Consents Operator: J K Industries Property Type: Civil Engineering Location: Firestone Site Wrexham Ind Estate, Wrexham Ind Estate Wrexham Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0034001 Permit Version: 1 Effective Date: 20th May 1966 Issued Date: 20th May 1966 Revocation Date: 2nd February 1994 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A15NE (N)	277	1	337790 348430
4	Discharge Consents Operator: Tetra Pack Wrexham Ltd, Fao D G Jones Property Type: Undefined Or Other Location: Wrexham Ind Estate Bedwell Road Mae, Bedwell Road Maelor Estate Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0083701 Permit Version: 1 Effective Date: 1st June 1978 Issued Date: 1st June 1978 Revocation Date: 21st August 1995 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A15NW (N)	280	1	337470 348430

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	Discharge Consents Operator: Welsh Development Agency Property Type: Undefined Or Other Location: Wrexham Ind. Estate Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0093101 Permit Version: 1 Effective Date: 19th May 1982 Issued Date: 19th May 1982 Revocation Date: 21st June 1996 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A14NE (NW)	374	1	337200 348400
6	Discharge Consents Operator: Forthminster West Midlands Ltd Property Type: Undefined Or Other Location: Wrexham -Development At Cross Lane, -Development At Cross Lane March, Marchwiell Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0091401 Permit Version: 1 Effective Date: 17th June 1981 Issued Date: 17th June 1981 Revocation Date: 2nd February 1994 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Bedwell Brook (Trib.Of Clywedo) Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A11SE (S)	594	1	337650 347420
6	Discharge Consents Operator: Forthminster North Wales Ltd Property Type: Undefined Or Other Location: Marchwiell Cross Lanes Bedwell Rd.Ho, Cross Lanes Bedwell Rd.Housing D, Bedwell Rd.Housing Devlpt. Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0085201 Permit Version: 1 Effective Date: 7th February 1979 Issued Date: 7th February 1979 Revocation Date: 2nd February 1994 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Bedwell Brook Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A11SE (S)	630	1	337610 347400
7	Discharge Consents Operator: Wrexham Borough Council Property Type: Sewerage Network - Sewers - Water Company Location: Five Fords Sso Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0005701 Permit Version: 1 Effective Date: 25th November 1968 Issued Date: 25th November 1968 Revocation Date: 5th March 1986 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A14NW (NW)	630	1	336900 348400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Five Fords Sso Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: CM0005702 Permit Version: 1 Effective Date: 25th November 1968 Issued Date: 25th November 1968 Revocation Date: 17th November 2003 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A14NW (NW)	630	1	336900 348400
8	Discharge Consents Operator: Jones G.E. & Co. Property Type: Undefined Or Other Location: Five Fords Farm Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0162701 Permit Version: 1 Effective Date: 27th October 1988 Issued Date: 27th October 1988 Revocation Date: 23rd December 1992 Discharge Type: Unspecified Discharge: Onto Land Environment: Receiving Water: To Land Status: Consent expired Positional Accuracy: Located by supplier to within 100m	A14NW (NW)	792	1	336700 348300
9	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Sesswick Stw Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0110101 Permit Version: 3 Effective Date: 14th November 1989 Issued Date: 14th November 1989 Revocation Date: 24th January 1995 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Bedwell Brook Status: Consent expired Positional Accuracy: Located by supplier to within 10m	A11SW (SW)	799	1	337480 347280
9	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Sesswick Stw Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0110101 Permit Version: 2 Effective Date: 30th January 1985 Issued Date: 30th January 1985 Revocation Date: 13th November 1989 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Bedwell Brook Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	A11SW (SW)	799	1	337480 347280

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Sesswick Stw Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0110101 Permit Version: 1 Effective Date: 19th August 1982 Issued Date: 19th August 1982 Revocation Date: 29th January 1985 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Bedwell Brook Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	A11SW (SW)	799	1	337480 347280
10	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Abenbury Stw Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: CM0110201 Permit Version: 2 Effective Date: 30th January 1985 Issued Date: 30th January 1985 Revocation Date: 19th April 2005 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Cylwedog Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A14NW (NW)	919	1	336600 348420
10	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Abenbury Stw Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0110201 Permit Version: 1 Effective Date: 19th August 1982 Issued Date: 19th August 1982 Revocation Date: 29th January 1985 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Not Specified Environment: Receiving Water: Cylwedog Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	A14NW (NW)	919	1	336600 348420
10	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Abenbury Wwtw, Cefn Road, Abenbury, Wrexham, LI13 0pa Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0110201 Permit Version: 3 Effective Date: 20th April 2005 Issued Date: 20th April 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Cylwedog Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13NE (NW)	959	1	336554 348403

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	Integrated Pollution Prevention And Control Name: The First Milk Cheese Company Ltd Location: Maelor Creamery, Pickhill Lane, Cross Lanes, Wrexham, Clwyd, LL13 0UE Authority: Environment Agency, Welsh Region Permit Reference: UP3031LW Original Permit Ref: Up3031lw Effective Date: 10th January 2008 Status: Effective Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 6.8 A(1) (D) (I) Activity Description: Animal Vegetable & Food; Treating Etc Animal Raw Materials (Not Milk) For Food >75T/D Primary Activity: Y Activity Code: 5.3 A(1) (C) (I) Activity Description: Other Waste Disposal; Non-Hazardous Waste >50T/D By Biological Treatment Primary Activity: N	A8SE (SE)	875	1	338612 346684
12	Local Authority Integrated Pollution Prevention And Control Name: Animal Waste Services Ltd Location: Tyddyn Daniel, Bedwell Road, Marchwiell, Wrexham, LL13 0ts Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/IPPC/07/AWS Dated: Not Supplied Process Type: Waste Management Description: Incinerator Status: Permit Issued Positional Accuracy: Manually positioned to the address or location	A11NW (W)	362	2	337371 347795
13	Local Authority Pollution Prevention and Controls Name: Wales & West Utilities Location: Maelor Office, Marchwiell, Wrexham, LL13 0uw Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: Wcbc/Dcl/01/00 Dated: 20th April 1998 Process Type: Local Authority Air Pollution Control Description: PG1/15 Odourising natural gas & liquified petroleum gas Status: Authorised Positional Accuracy: Manually positioned to the address or location	A16SW (NE)	0	2	338109 348133
14	Local Authority Pollution Prevention and Controls Name: Tetra Pak (Wrexham) Limited Location: Bedwell Road, Cross Lanes, WREXHAM, Clwyd, LL13 0UT Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC-PG6-17-TP(V3) Dated: 13th January 1994 Process Type: Local Authority Air Pollution Control Description: PG6/17 Printing of flexible packaging Status: Authorised Positional Accuracy: Manually positioned to the address or location	A15NW (NW)	169	2	337400 348300
15	Local Authority Pollution Prevention and Controls Name: Animal Waste Services Ltd Location: Tyddyn Daniel, Marchwiell, WREXHAM, Clwyd, LL13 0TS Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/IPPC/07/AWS Dated: 3rd October 1996 Process Type: Local Authority Air Pollution Control Description: PG5/3 Animal carcase incineration processes under 1 tonne an hour Status: Application exempt from APC Positional Accuracy: Automatically positioned to the address	A11NW (W)	361	2	337372 347796
16	Local Authority Pollution Prevention and Control Enforcements Location: Tyddyn Daniel, Bedwell Road, Marchwiell, Wrexham, LL13 0ts Type: Air Pollution Control Enforcement Notice Reference: WCBC/IPPC/07/AWS Date Issued: 26th March 2007 Enforcement Date: Not Supplied Details: Not Supplied Positional Accuracy: Manually positioned to the address or location	A11NW (W)	362	2	337371 347795
	Nearest Surface Water Feature	A16SE (NE)	0	-	338345 348017

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Not Supplied Incident Date: 14th May 1996 Incident Reference: 28418 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	A11NE (NE)	147	1	337900 347800
18	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Parkey Lodge Farm, Pickhill, WREXHAM Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Pond; Natural Occurrence Incident Date: 22nd August 1997 Incident Reference: 33287 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	A16SE (NE)	153	1	338550 348200
19	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bedwell Road Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 26th February 1996 Incident Reference: 27898 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	A15SW (NW)	181	1	337300 348100
20	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Fairfield Meat Factory Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Not Supplied Incident Date: 4th April 1996 Incident Reference: 27804 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	A12NW (E)	225	1	338000 347700
21	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Tetra, Pac Factory Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 6th June 1996 Incident Reference: 28661 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	A15NW (NW)	233	1	337300 348300
21	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewerage Location: Tetrapak Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Mechanical Failure Incident Date: 28th August 1995 Incident Reference: 25516 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	A15NW (NW)	264	1	337300 348345

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewerage Location: Tetrapak Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Mechanical Failure Incident Date: 27th August 1995 Incident Reference: 25515 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	A15NW (NW)	268	1	337300 348350
22	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Grounds Of Tetra Pak, WREXHAM Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blockage; Afon Clywedog Incident Date: 25th June 1998 Incident Reference: 36160 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	A14NE (NW)	273	1	337250 348300
23	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bedwell Road Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Poor Management Incident Date: 21st April 1997 Incident Reference: 31934 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A11NW (W)	340	1	337300 347850
24	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Upstream Of, Teif Terrace Authority: Environment Agency, Welsh Region Pollutant: Sewage - Septic Tank Effluent Note: Blocked Sewer Incident Date: 17th June 1996 Incident Reference: 28685 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (NW)	373	1	337250 348445
24	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Up Stream Of, Tetrapack Authority: Environment Agency, Welsh Region Pollutant: Sewage - Septic Tank Effluent Note: Blocked Sewer Incident Date: 17th June 1996 Incident Reference: 28685 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (NW)	377	1	337250 348450
25	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Marchwiell At, Side Of Layby, WREXHAM Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Fire water / Foam Note: Accidental Spillage/Leakage Incident Date: 20th September 1996 Incident Reference: 29996 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	A14SE (W)	497	1	337000 348000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	Pollution Incidents to Controlled Waters Property Type: Private Sewage (Non-PLC): Other Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Sewage - Septic Tank Effluent Note: Inadequate Design/Capacity Incident Date: 14th August 1991 Incident Reference: 3123 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A11SE (S)	592	1	337700 347400
27	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Surface Water Outfall Location: Bridge Road, Industrial Estate Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Fire water / Foam Note: Not Supplied Incident Date: 7th November 1995 Incident Reference: 26679 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	A11SW (SW)	687	1	337500 347400
28	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Rear Of, Glan Yr Afon Cottage Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Afon Clywedog Incident Date: 19th March 1998 Incident Reference: 35143 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	A14NW (NW)	818	1	336700 348400
29	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dairy Crest Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Organic Note: Mechanical Failure Incident Date: 1st May 1991 Incident Reference: 2927 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Bypass Of Treatment Facilities Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	890	1	338550 346650
29	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Coal Solids Note: Mechanical Failure Incident Date: 24th April 1991 Incident Reference: 2674 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Bypass Of Treatment Facilities Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	895	1	338550 346645
30	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dairy Crest, Pick Hill, MARCHWIEL Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Accidental Spillage/Leakage Incident Date: 13th October 1991 Incident Reference: 2080 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Burst Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	928	1	338500 346600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	Pollution Incidents to Controlled Waters Property Type: Process Location: Dairy Crest Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Blocked Sewer Incident Date: 27th June 1992 Incident Reference: 4374 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	951	1	338600 346600
32	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Adjacent To Cross Lanes Pub Authority: Environment Agency, Welsh Region Pollutant: Sewage Fungus Note: Bedwell Brook; Effluent Quality Incident Date: 24th September 1997 Incident Reference: 33760 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Inadequate Design/Capacity Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	975	1	337350 347150
33	Registered Radioactive Substances Name: National Grid Transco Ltd Location: North East Wales District Office, Marchwiel, WREXHAM, Clwyd, LL13 0UW Authority: Environment Agency, Welsh Region Permit Reference: AY8590 Dated: 15th July 1997 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Initial variation to an authorisation under RSA Status: Authorisation either revoked or cancelledCancelled Positional Accuracy: Automatically positioned to the address	A16SW (NE)	0	1	338109 348133
33	Registered Radioactive Substances Name: National Grid Transco Ltd Location: North East Wales District Office, Marchwiel, WREXHAM, Clwyd, LL13 0UW Authority: Environment Agency, Welsh Region Permit Reference: AW9498 Dated: 13th March 1997 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA Status: Authorisation superseded by a substantial or non substantial variationSuperseded Positional Accuracy: Automatically positioned to the address	A16SW (NE)	0	1	338109 348133
	River Quality Name: Clywedog GQA Grade: River Quality B Reach: Conf.Redwither Bk. - O/F Five Fords Stw Estimated Distance (km): 4.8 Flow Rate: Flow less than 1.25 cumecs Flow Type: River Year: 2000	A15NE (N)	61	1	337666 348269

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	River Quality Chemistry Sampling Points Name: Clywedog Reach: Confluence Redwither Brook To Overflow Five Fords Sewage Treatment Works Estimated Distance: 4.80 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied	A14NW (NW)	825	1	336710 348450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	River Quality Chemistry Sampling Points Name: Clywedog Reach: Outfall 5 Fords Sewage Treatment Works To Confluence Gwenfro Kings Mill Estimated Distance: 2.20 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied	A14NW (NW)	825	1	336710 348450
35	Substantiated Pollution Incident Register Authority: Environment Agency Wales, North Area Incident Date: 28th July 2004 Incident Reference: 254208 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: Pollutant Not Identified: Not Identified	A15NW (N)	240	1	337560 348380
36	Substantiated Pollution Incident Register Authority: Environment Agency Wales, North Area Incident Date: 20th May 2004 Incident Reference: 238220 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: Pollutant Not Identified: Not Identified	A15NW (N)	307	1	337410 348450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	Substantiated Pollution Incident Register Authority: Environment Agency Wales, North Area Incident Date: 10th December 2010 Incident Reference: 843517 Water Impact: Category 2 - Significant Incident Air Impact: Category 3 - Minor Incident Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Agricultural Materials And Wastes: Other Agricultural Material Or Waste	A14NE (NW)	393	1	337152 348369
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	A11NW (NW)	0	1	337476 347848
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	A11NE (SE)	0	1	337703 347713
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	A15SE (N)	0	1	337819 348023
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	A15SE (N)	0	1	337638 348094
	Drift Deposits Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	A11NE (SE)	0	1	337703 347713
	Bedrock Aquifer Designations Aquifer Desination: Secondary Aquifer - A	A11NW (NW)	0	3	337452 347867
	Bedrock Aquifer Designations Aquifer Desination: Principal Aquifer	A11NE (SE)	0	3	337703 347713
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A11NE (SE)	0	3	337703 347713
38	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	A11NE (SE)	0	1	337703 347713
39	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A11NE (SE)	0	1	337703 347713
40	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	(N)	759	1	338230 349035

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Groundwater Source	(N)	815	1	338240 349090
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	A11NE (S)	0	1	337740 347565
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	A11NE (S)	0	1	337745 347565
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	A15NW (N)	110	1	337500 348260
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	Historical Landfill Sites Licence Holder: Mr Bryan Griffiths Location: School Farm, Wrexham, Cross Lanes Name: Cross Lanes Landfill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHL14769 First Input Date: 31st December 1980 Last Input Date: 1st October 1981 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0064 BGS Ref: Not Supplied Other Ref: WMBC L/31	A7NE (SE)	486	1	337937 347209
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	8	337703 347713
43	Registered Landfill Sites Licence Holder: B Griffiths Licence Reference: L31 Site Location: School Farm, Cross Lane, Marchwiel, Wrexham, Clwyd Licence Easting: 337900 Licence Northing: 347100 Operator Location: As Site Address Authority: Environment Agency Wales, North Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st December 1980 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Hardcore, Concrete, Builders Rubble Soil, Clay	A11SE (S)	350	1	337823 347338
44	Registered Waste Treatment or Disposal Sites Licence Holder: E Clutton & Sons Licence Reference: L54A Site Location: Maelor Abattoir Tyddyn Daniel, Bedwell Road, Marchwiel, Wrexham, Clwyd Operator Location: As Site Address Authority: Environment Agency Wales, North Area Site Category: Incineration Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Site now IPC authorisedAuthorised Dated: 1st July 1990 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Small Pets, Farm Animals & Offal	A11NW (NW)	291	1	337450 347850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	Control of Major Accident Hazards Sites (COMAH) Name: British Gas Location: Meallor Works, Wrexham Industrial Estate, WREXHAM, Clwyd, LL13 0UW Reference: Not Supplied Type: Upper Tier Status: Record Ceased To Be Supplied Under COMAH Regulations Positional Accuracy: Automatically positioned to the address	A16SW (NE)	0	4	338109 348133
45	Control of Major Accident Hazards Sites (COMAH) Name: Flogas Uk Ltd Location: Maelor Works, Marchwiel, Wrexham, Clwyd, LL13 0UW Reference: Not Supplied Type: Upper Tier Status: Active Positional Accuracy: Automatically positioned to the address	A16SW (NE)	0	4	338109 348133
46	Notification of Installations Handling Hazardous Substances (NIHHS) Name: British Gas (Wales) PLC Location: Maelor Gas Works, Wrexham Industrial Estate, WREXHAM, Clwyd, LL13 0UW Status: Record Ceased To Be Supplied Under NIHHS Regulations (1982) Positional Accuracy: Automatically positioned to the address	A16SW (NE)	0	4	338109 348128
47	Planning Hazardous Substance Consents Name: British Gas Plc Location: Maelor Gas Works, Marchwiel Authority: Wrexham County Borough Council, Planning Department Application Ref: 6/0002/0934 Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 51.4 Application date: 30th November 1992 Decision: Deemed Consent Granted Positional Accuracy: Manually positioned to the address or location	A16SW (NE)	0	5	338043 348106

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian and Triassic sandstones, undifferentiated, including Bunter and Keuper	A11NE (SE)	0	3	337703 347713
	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.	A11NE (SE)	0	6	337703 347713
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards No Hazard				
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	3	337750 348000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (SE)	0	3	337703 347713
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	50	3	337750 348275
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A16SE (E)	56	3	338425 348000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	117	3	338125 348400
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	144	3	338150 348425
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	209	3	337375 347875
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	232	3	338250 348500
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A16SE (E)	233	3	338600 348025
	Potential for Ground Dissolution Stability Hazards No Hazard				
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (SE)	0	3	337703 347713
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	3	337800 348075
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A12NW (E)	0	3	338250 347800
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (SE)	0	3	337703 347713
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	50	3	337750 348275
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16SE (E)	56	3	338425 348000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	117	3	338125 348400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	144	3	338150 348425
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A16NW (NE)	232	3	338250 348500
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16SE (E)	233	3	338600 348025
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (SE)	0	3	337703 347713
	Radon Potential - Radon Affected Areas Affected Area: The property is in an intermediate probability radon area, as between 1 and 3% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	3	337550 347850
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A11NE (SE)	0	3	337703 347713
	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	A11NW (NW)	0	3	337550 347850
	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	A11NE (SE)	0	3	337703 347713

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Wrexham County Borough Council - Public Protection Department	May 2011	Annual Rolling Update
Discharge Consents Environment Agency - Welsh Region	April 2011	Quarterly
Enforcement and Prohibition Notices Environment Agency - Welsh Region	May 2011	Quarterly
Integrated Pollution Controls Environment Agency - Welsh Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - Welsh Region	April 2011	Quarterly
Local Authority Integrated Pollution Prevention And Control Wrexham County Borough Council - Environmental Health Department	November 2010	Annual Rolling Update
Local Authority Pollution Prevention and Controls Wrexham County Borough Council - Environmental Health Department	November 2010	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Wrexham County Borough Council - Environmental Health Department	November 2010	Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	March 2011	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region	May 2011	Monthly
Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region	May 2011	Monthly
Registered Radioactive Substances Environment Agency - Welsh Region	April 2011	Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	January 2011	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	January 2011	Annually
Substantiated Pollution Incident Register Environment Agency Wales - North Area	April 2011	Quarterly
Water Abstractions Environment Agency - Welsh Region	January 2011	Quarterly
Water Industry Act Referrals Environment Agency - Welsh Region	January 2011	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	January 2011	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2010	Annually
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2010	Annually
Source Protection Zones Environment Agency - Head Office	April 2011	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	April 2011	Quarterly

Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	April 2011	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	April 2011	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	April 2011	Quarterly
Flood Defences Environment Agency - Head Office	April 2011	Quarterly
Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency Wales - North Area	April 2011	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency Wales - North Area	January 2011	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency Wales - North Area	January 2011	Quarterly
Local Authority Landfill Coverage Wrexham County Borough Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites Wrexham County Borough Council	June 2003	Not Applicable
Registered Landfill Sites Environment Agency Wales - North Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency Wales - North Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency Wales - North Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	May 2010	Bi-Annually
Explosive Sites Health and Safety Executive	January 2011	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Wrexham County Borough Council - Planning Department	December 2010	Annual Rolling Update
Planning Hazardous Substance Consents Wrexham County Borough Council - Planning Department	December 2010	Annual Rolling Update

Geological	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2011	Bi-Annually
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	January 2006	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	February 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	May 2007	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	May 2007	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	February 2011	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2011	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Outstanding Natural Beauty Countryside Council for Wales	November 2010	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	August 2008	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Wrexham County Borough Council	December 2010	Bi-Annually
Marine Nature Reserves Countryside Council for Wales	November 2010	Bi-Annually
National Nature Reserves Countryside Council for Wales	November 2010	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	March 2003	Not Applicable
Nitrate Vulnerable Zones The National Assembly for Wales - GI Services (Department of Planning & Countryside)	October 2005	Annually
Ramsar Sites Countryside Council for Wales	May 2011	Bi-Annually
Sites of Special Scientific Interest Countryside Council for Wales	November 2010	Bi-Annually
Special Areas of Conservation Countryside Council for Wales	November 2010	Bi-Annually
Special Protection Areas Countryside Council for Wales	November 2010	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Health Protection Agency	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	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
3	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
4	Health and Safety Executive HSE Infoline, Caerphilly Business Park, Caerphilly, CF83 3GG	Telephone: 08701 545500 Fax: 02920 859260 Email: hseinformationservices@natbrit.com Website: www.hse.gov.uk
5	Wrexham County Borough Council - Planning Department Guildhall, Wrexham, LL11 1AY	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
6	The Coal Authority - Mining Report Service 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
7	Countryside Council for Wales Plas Penrhose, Fford Penrhos, Bangor, Gwynedd, LL57 2LQ	Telephone: 01248 385500 Fax: 01248 355782
8	Wrexham County Borough Council Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
-	Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@hpa.org.uk Website: www.hpa.org.uk
-	Landmark Information Group Limited The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

General

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

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
- 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

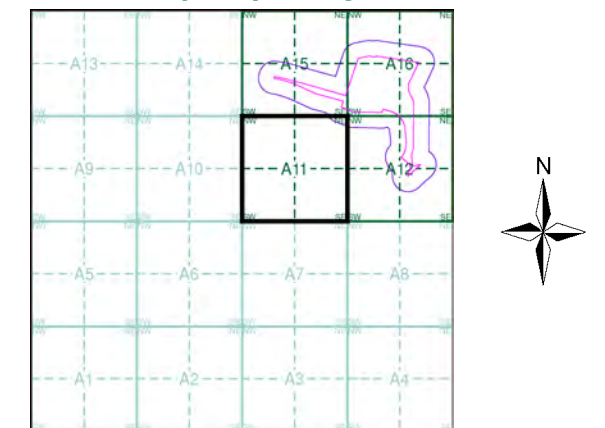
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A11

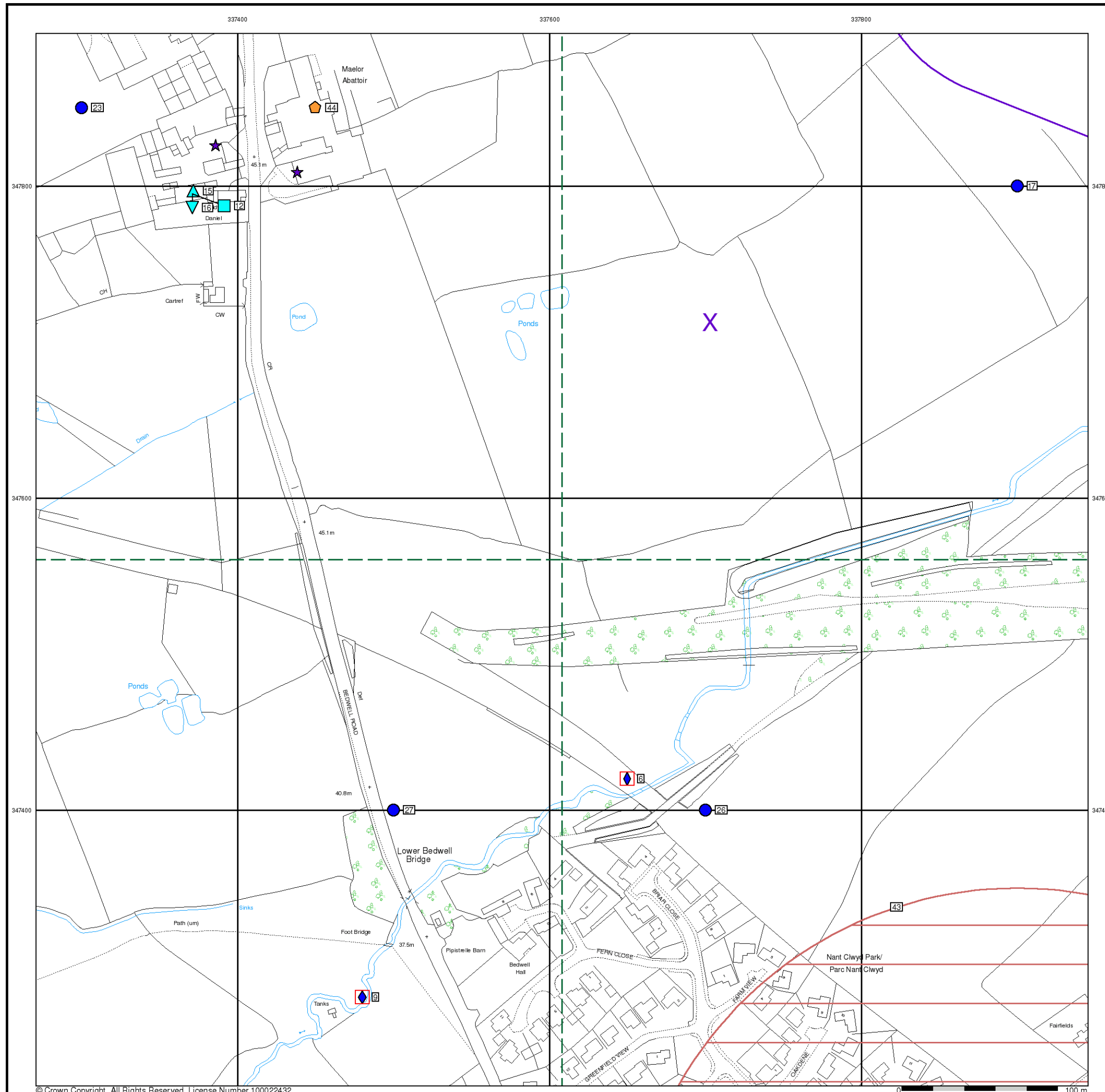


Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Plot Buffer (m): 100

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



General

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

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
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- 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
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- River Quality Sampling Point
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- Water Abstraction
- Water Industry Act Referral

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- Licensed Waste Management Facility (Location)
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- Local Authority Recorded Landfill Site
- 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

Hazardous Substances

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

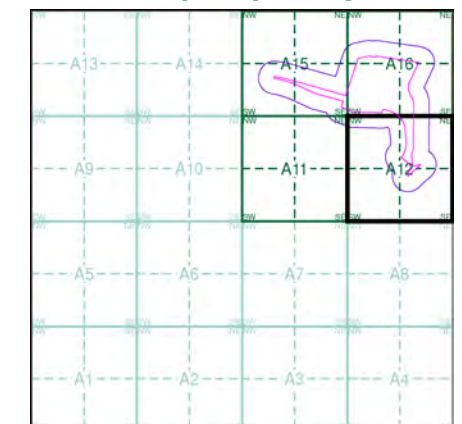
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Segment A12

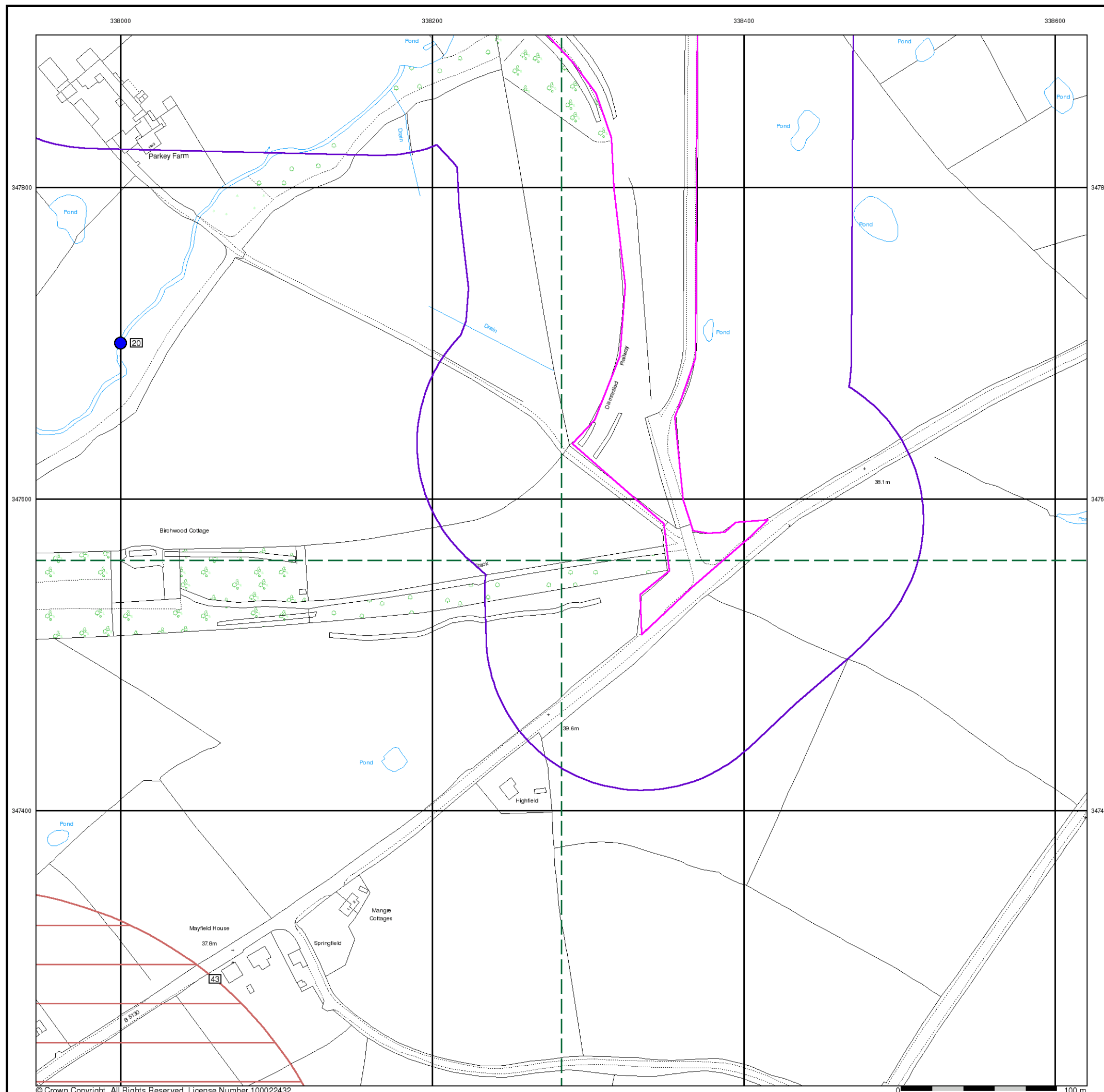


Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Plot Buffer (m): 100

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiel, WREXHAM, Clwyd, LL13 0UW



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of 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
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- Water Industry Act Referral

Waste

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- Local Authority Recorded Landfill Site
- 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

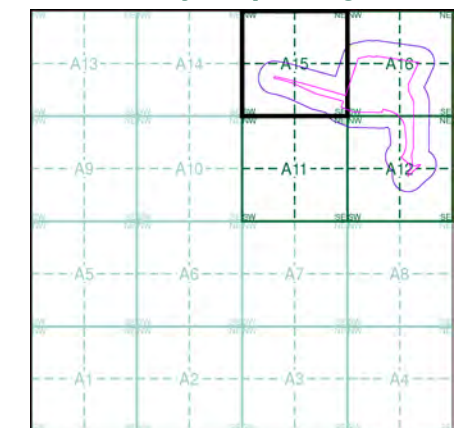
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A15

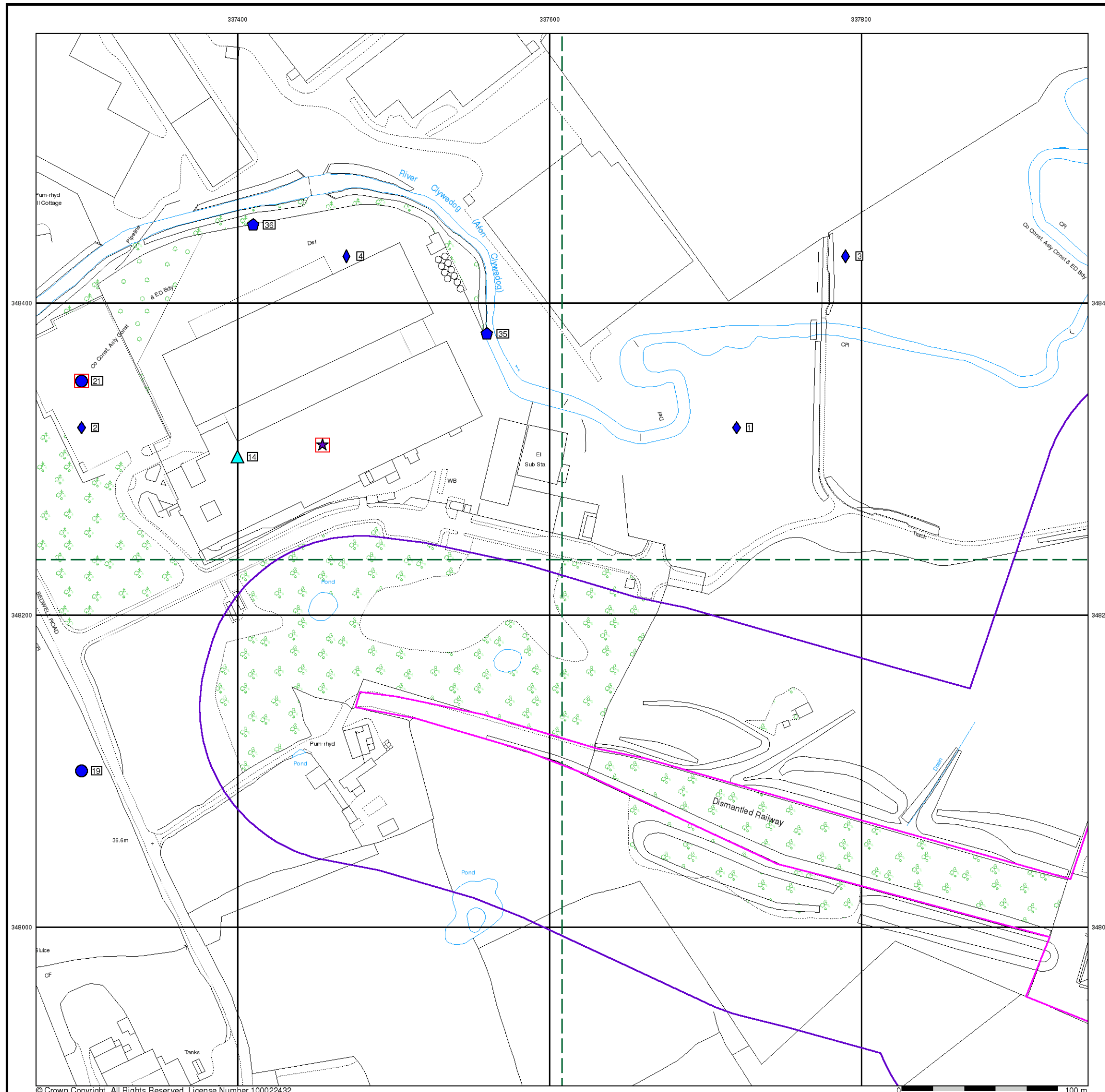


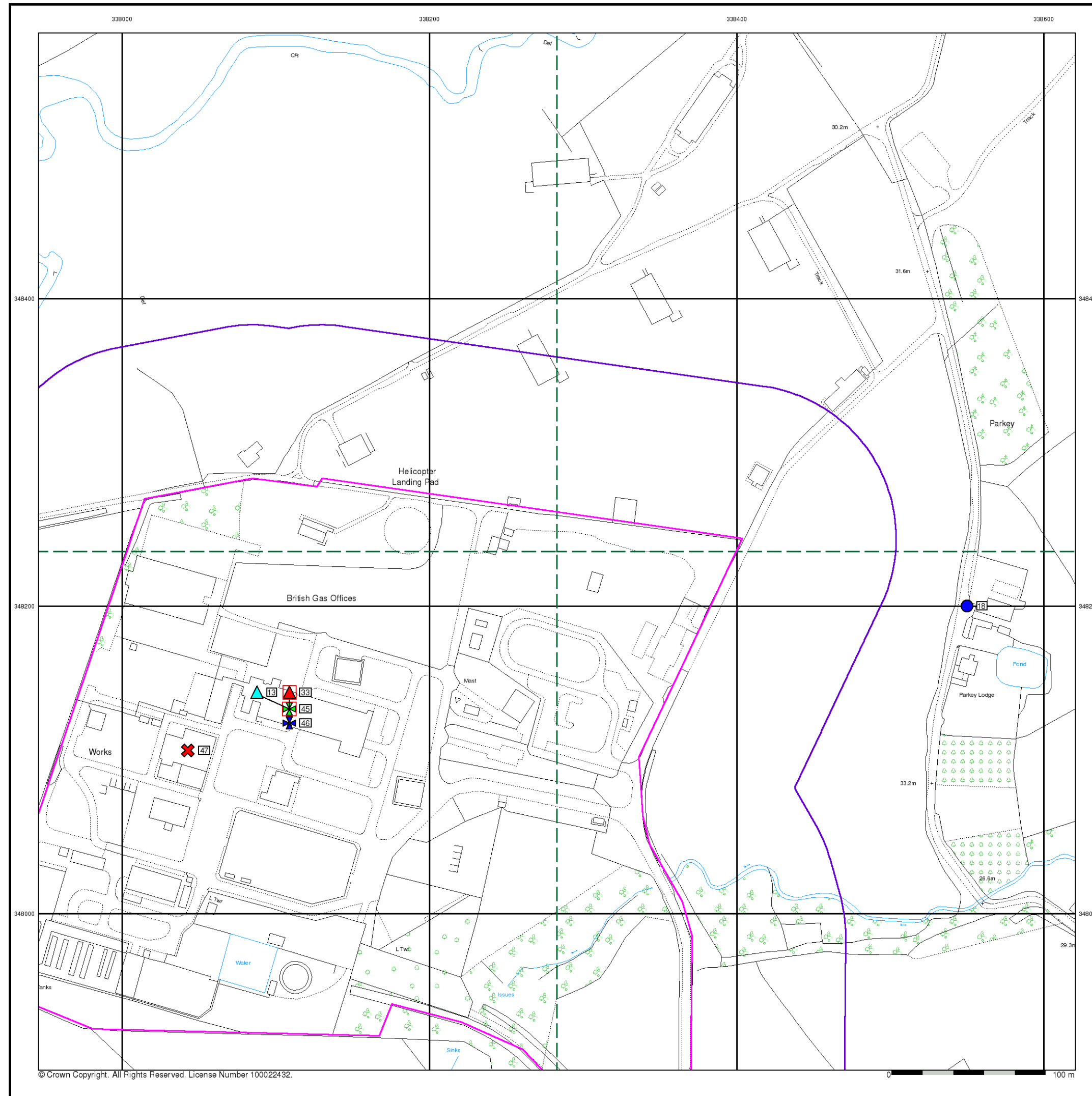
Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Plot Buffer (m): 100

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiel,
 WREXHAM, Clwyd, LL13 0UW





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- ### General

 - Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location
 - Pylon
 - Overhead Transmission Line
- ### Agency and Hydrological

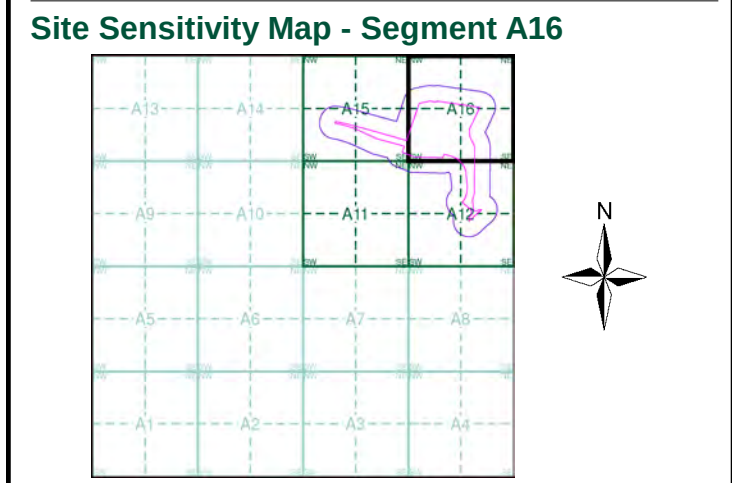
 - Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - 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
 - 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
 - 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
- ### Hazardous Substances

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

 - BGS Recorded Mineral Site
- ### Industrial Land Use

 - Contemporary Trade Directory Entry
 - Fuel Station Entry



Order Details

Order Number:	35238207_1_1
Customer Ref:	305001-00001 50065-29 ARS
National Grid Reference:	337700, 347710
Slice:	A
Site Area (Ha):	17.46
Plot Buffer (m):	100

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk

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

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
- Registered Landfill Site
- Prosecution Relating to Authorised Processes
- 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

Hazardous Substances

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

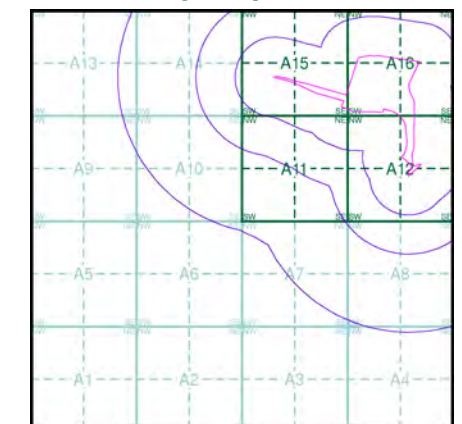
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Slice A

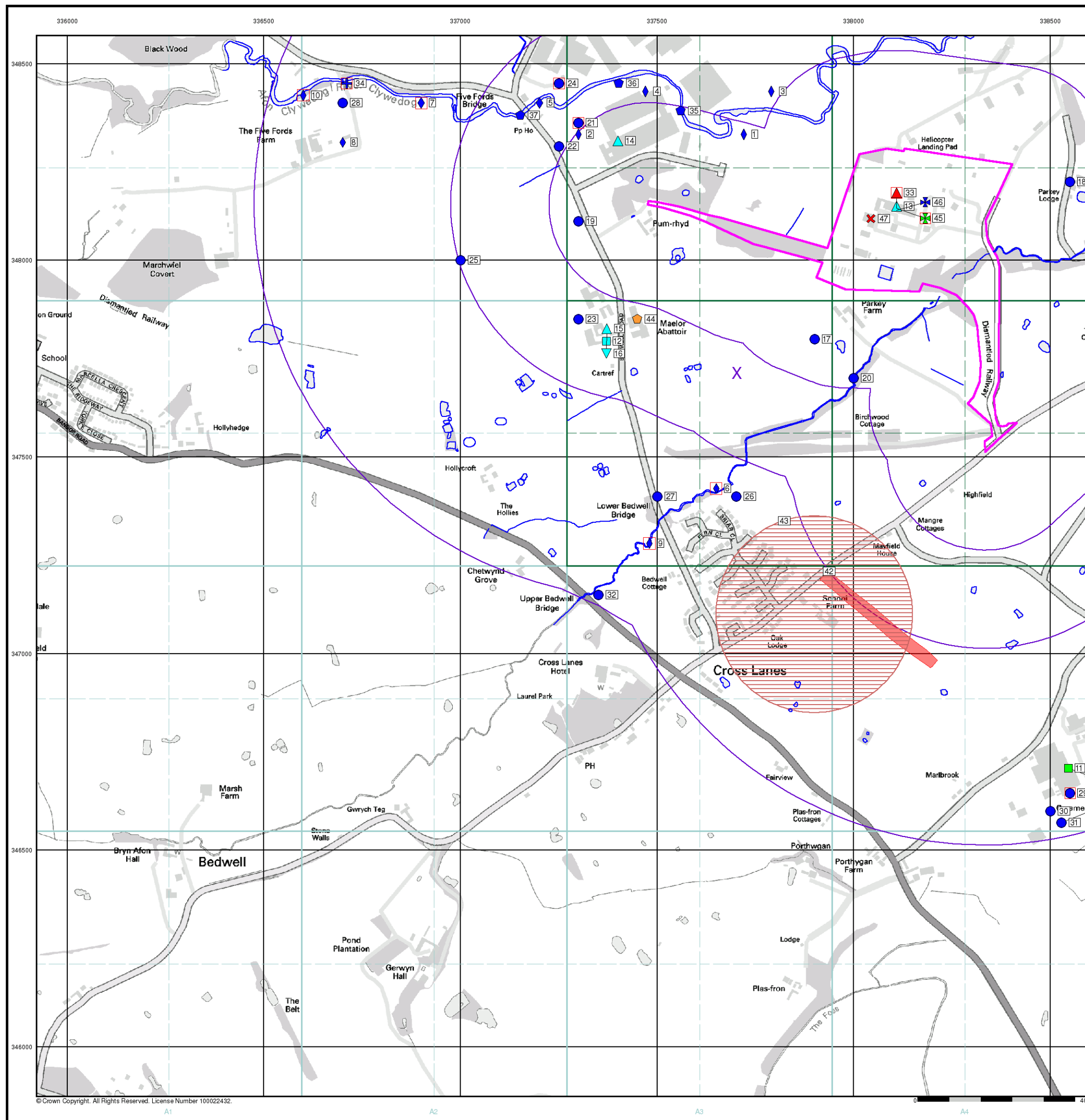


Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



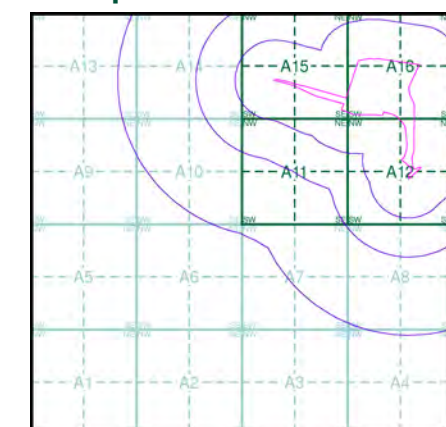
General

-  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: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



General

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

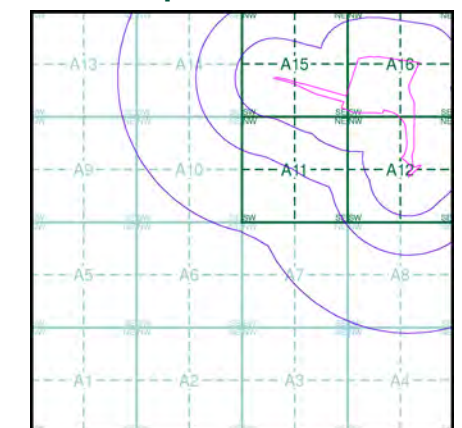
Agency and Hydrological (Boreholes)

-  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

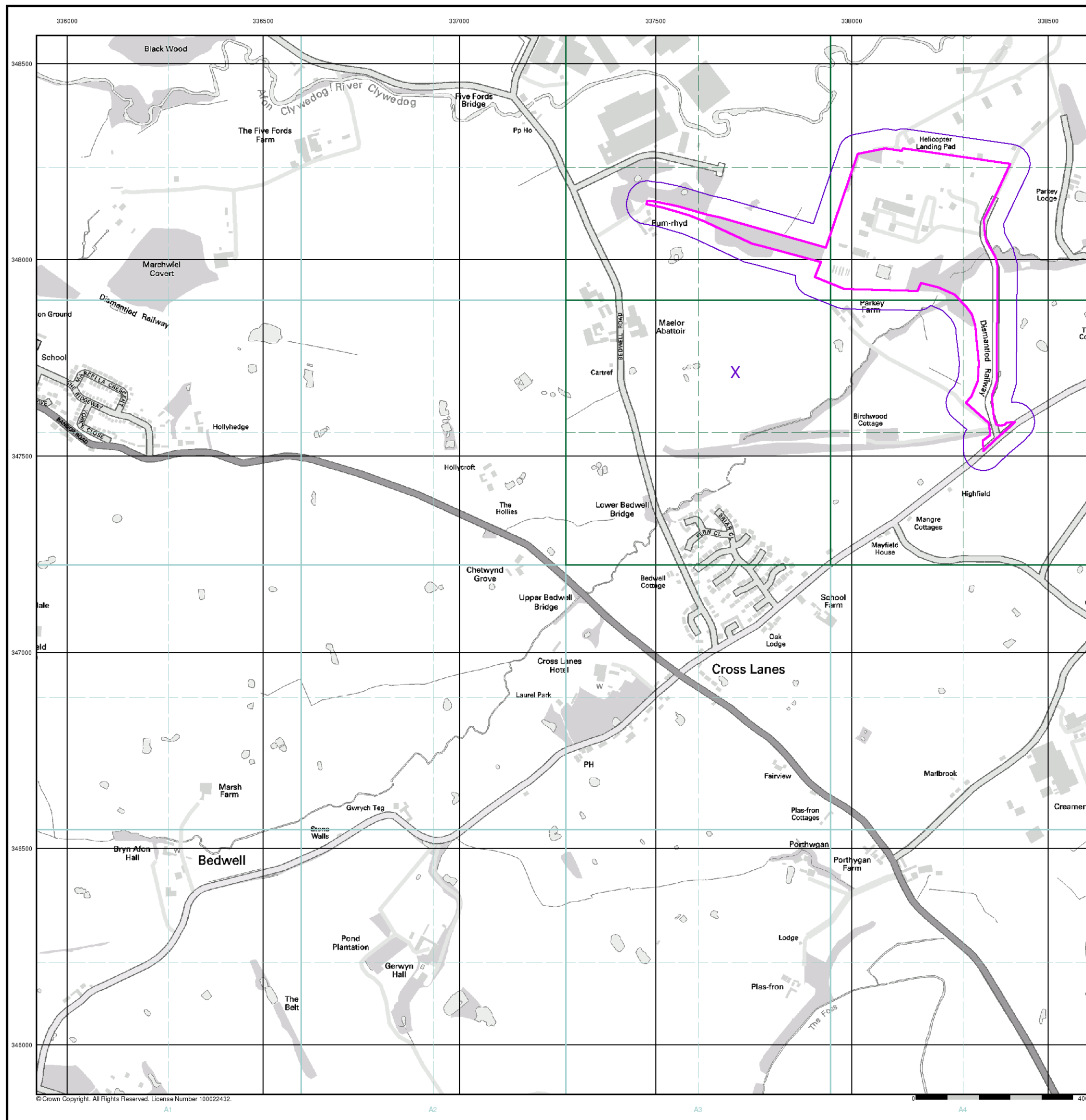


Order Details

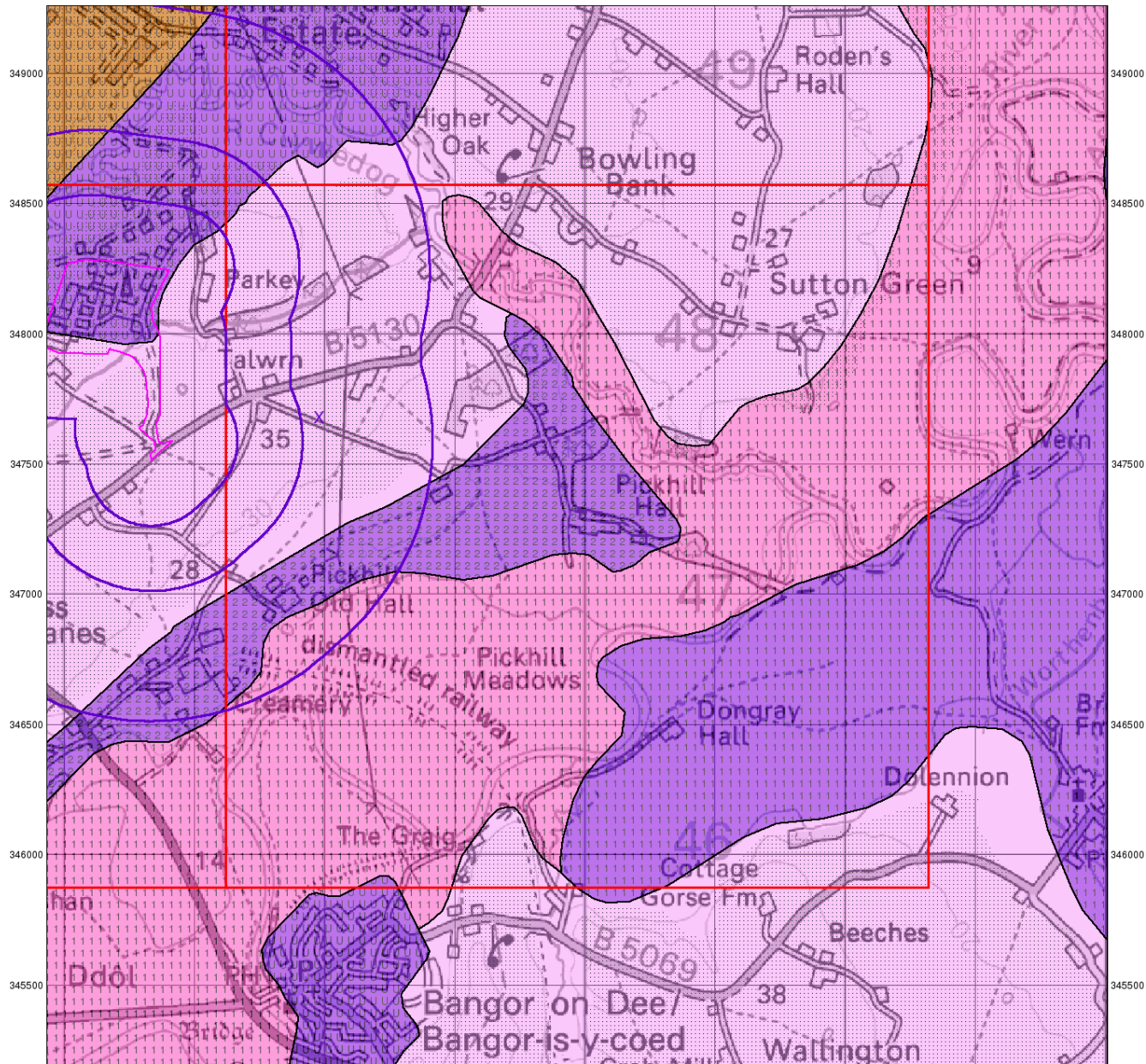
Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337700, 347710
 Slice: A
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

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338000 338500 339000 339500 340000 340500 341000 341500 342000



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0 1 km



Groundwater Vulnerability

General

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

Agency and Hydrological

Geological Classes

Major Aquifer (Highly Permeable)

Minor Aquifer (Variably Permeable)

Non Aquifer (Negligibly Permeable)

Water or Sea

Drift Deposit

Soil Classes

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

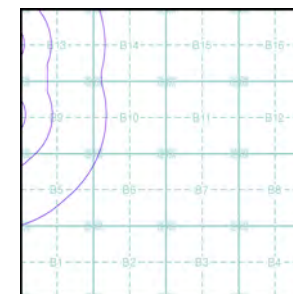
Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

Site Sensitivity Context Map - Slice B



Order Details

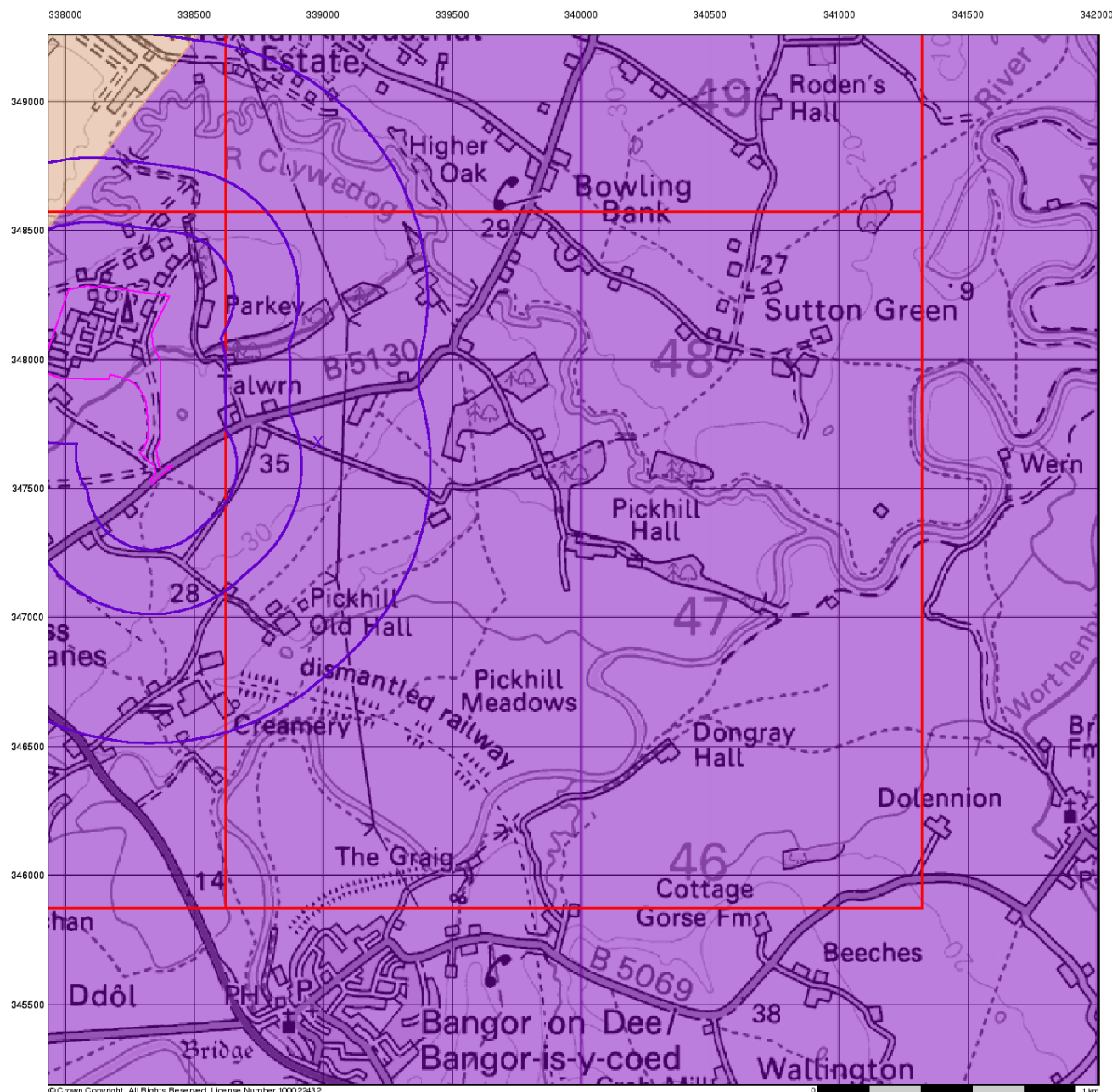
Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338980, 347680
 Slice: B
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



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Bedrock Aquifer Designation

General

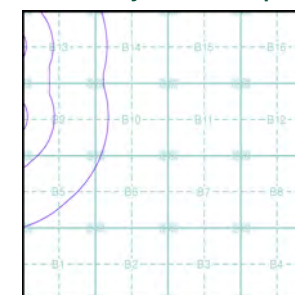
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice B



Order Details

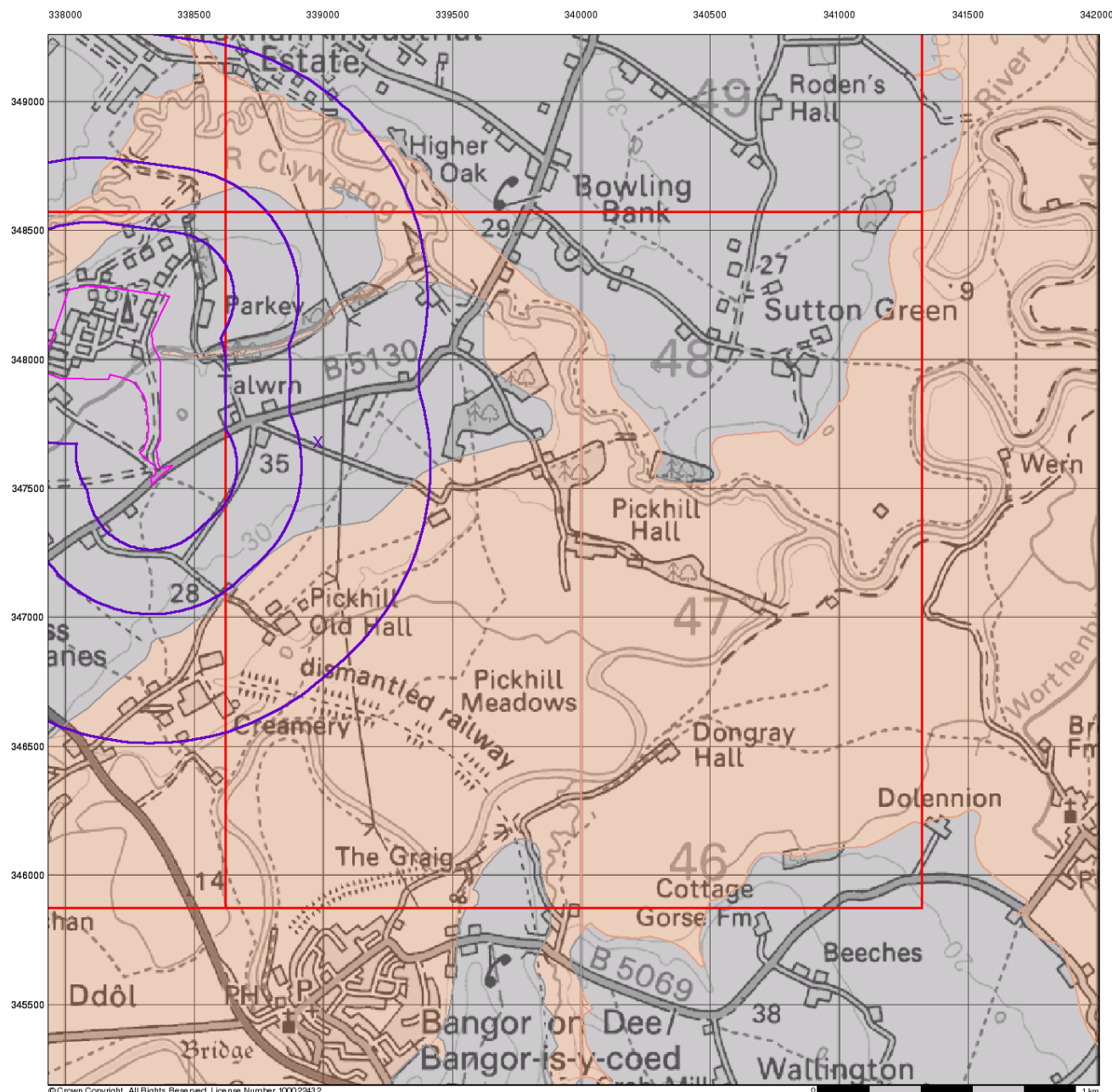
Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338980, 347680
 Slice: B
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

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0 1 km



Superficial Aquifer Designation

General

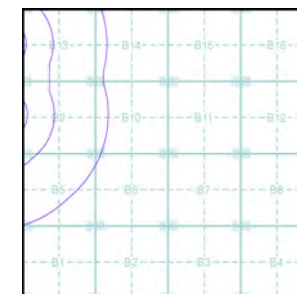
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice B



Order Details

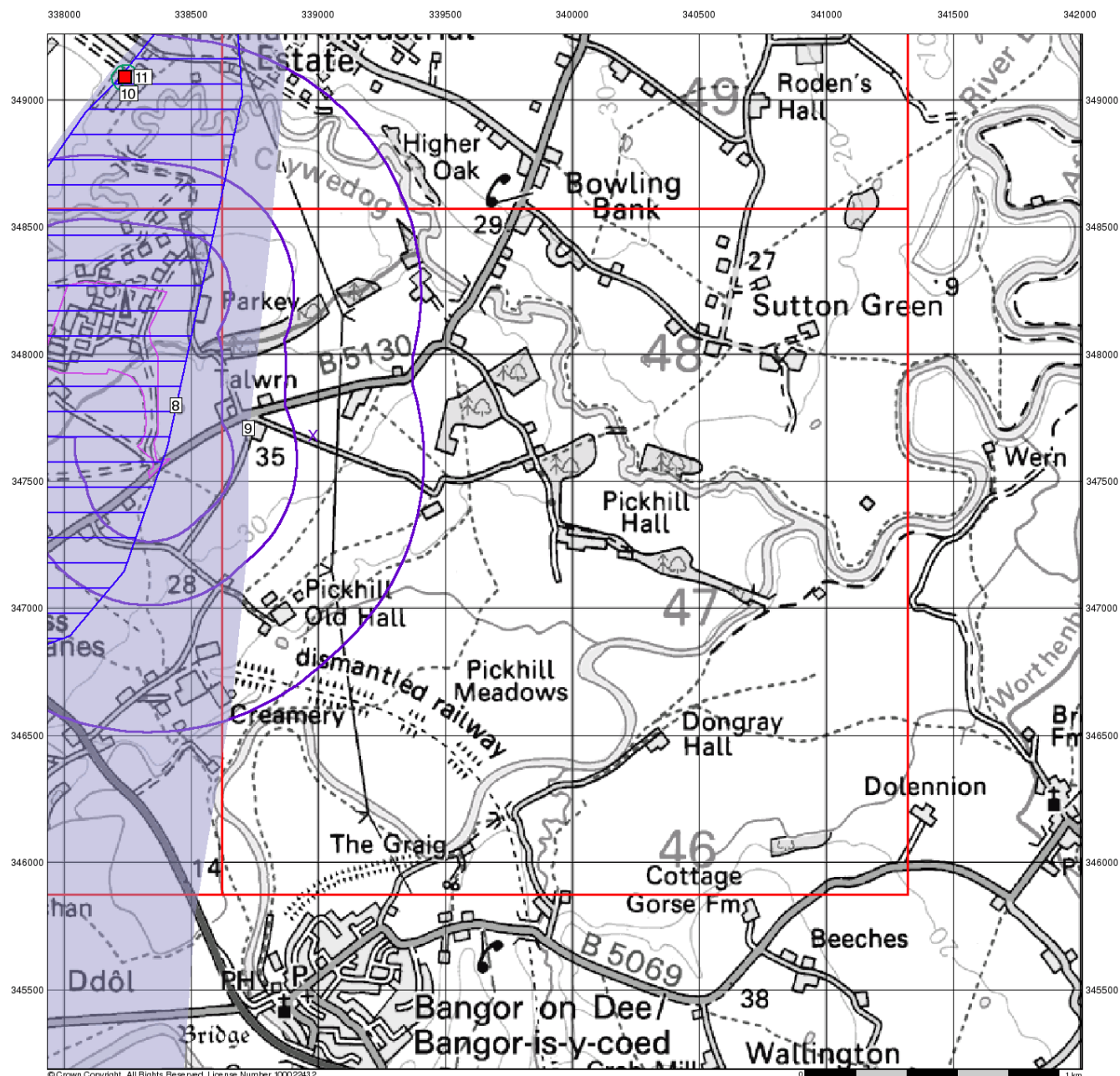
Order Number: 35238207.1.1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338980, 347680
 Slice: B
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

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Source Protection Zones

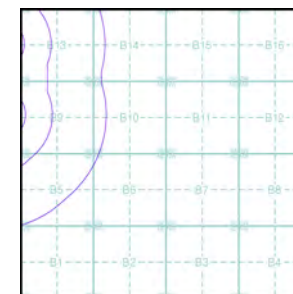
General

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

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice B



Order Details

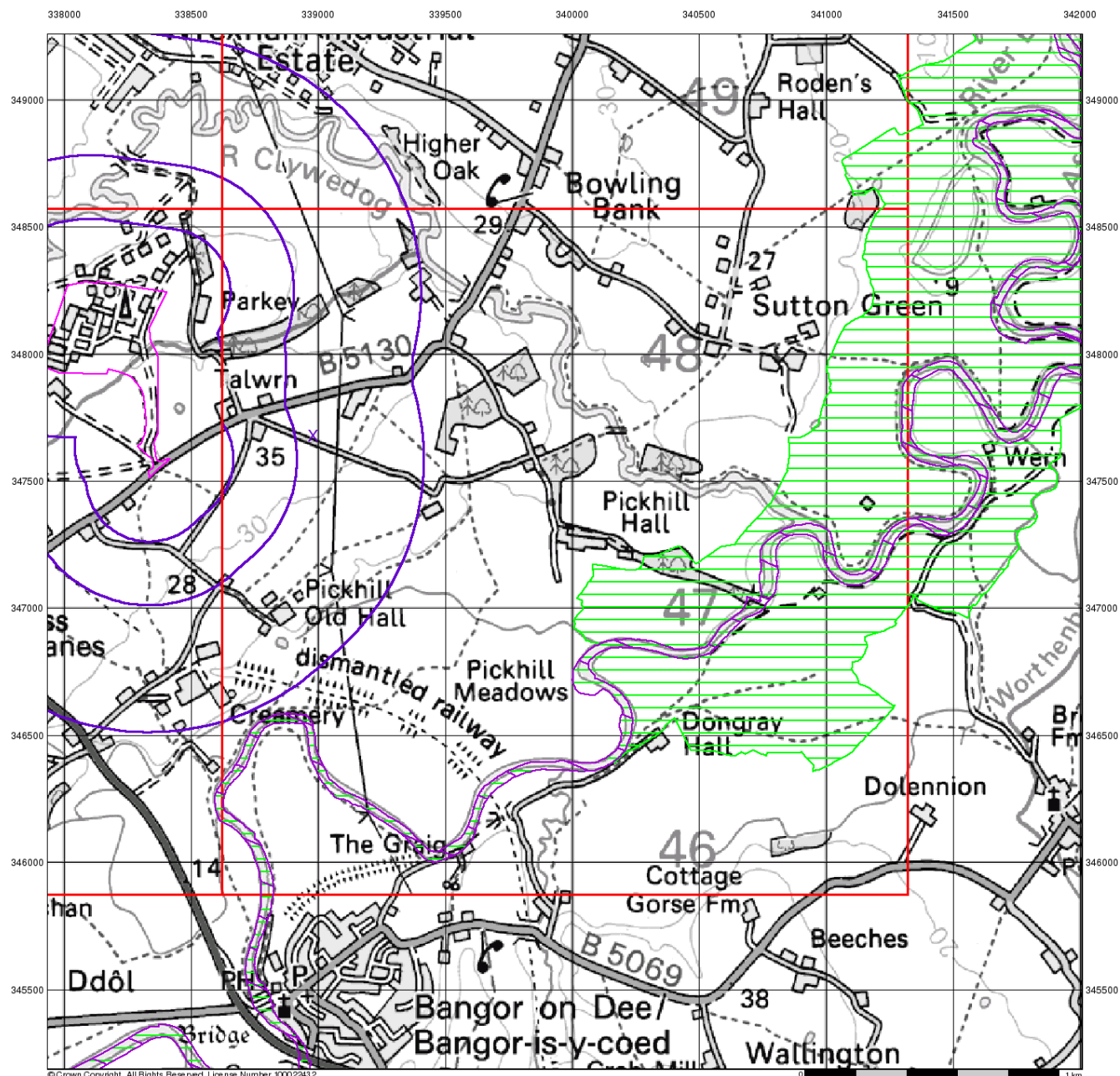
Order Number: 35238207.1.1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338980, 347680
 Slice: B
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



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Sensitive Land Uses

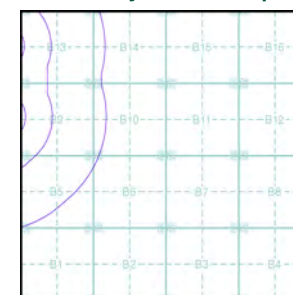
General

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

Sensitive Land Uses

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

Site Sensitivity Context Map - Slice B



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338980, 347680
 Slice: B
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



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 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

35238207_1_1

Customer Reference:

305001-00001 50065-29 ARS

National Grid Reference:

338980, 347680

Slice:

B

Site Area (Ha):

17.46

Search Buffer (m):

1000

Site Details:

Wales & West Utilities Ltd, Maelor Works
Marchwiel
WREXHAM
Clwyd
LL13 0UW

Client Details:

Ms C Coldrey
Worley Parsons Ltd
3-8 Redcliffe Parade West
Bristol
BS1 6SP

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	5
Hazardous Substances	-
Geological	6
Industrial Land Use	-
Sensitive Land Use	-
Data Currency	7
Data Suppliers	12
Useful Contacts	13

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 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 the attached 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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Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			1	2
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature			Yes		
Pollution Incidents to Controlled Waters	pg 1				4
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality	pg 2				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 2				(*5)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 3	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Source Protection Zones	pg 4	2			2
Extreme Flooding from Rivers or Sea without Defences	pg 4	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 4	Yes		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
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
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					
Geological					
BGS Recorded Mineral Sites					
BGS 1:625,000 Solid Geology	pg 6	Yes	n/a	n/a	n/a
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 6	Yes	n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 6		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 6	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 6	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 6	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries (50m)				n/a	n/a
Fuel Station Entries					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
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					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: Dr M S & Mrs M G Khalifa Property Type: Domestic Property (Single) Location: Talwrn House & Outbuildings, Pickhill, Wrexham, LI13 0ul Authority: Environment Agency, Welsh Region Catchment Area: Not Supplied Reference: Cg0396401 Permit Version: 1 Effective Date: 28th November 2001 Issued Date: 28th November 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Land/Soakaway Environment: Receiving Water: Trib Of Bedwell Brook Via Land 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	B9NW (NW)	430	1	338800 347840
2	Discharge Consents Operator: Mr & Ms Henry Oliver & Sarah Ormrod Property Type: Domestic Property (Single) Location: Pickhill Old Hall Marchweil Wrexha, Marchweil Wrexham Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: CG0328901 Permit Version: 1 Effective Date: 30th April 1992 Issued Date: 30th April 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Land/Soakaway Environment: Receiving Water: Into Land Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	B5NW (S)	785	1	338870 346940
3	Discharge Consents Operator: The First Milk Cheese Company Limited Property Type: Preparation Of Milk & Milk Products Location: The First Milk Cheese Factory Ltd, Pickhill Lane, Cross Lanes, Wrexham, Clwyd, LI130ue Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Eprap3429xk Permit Version: 1 Effective Date: 3rd August 2010 Issued Date: 3rd August 2010 Revocation Date: Not Supplied Discharge Type: Sewage And Trade Combined - Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: River Dee Status: New issued under EPR 2010 Positional Accuracy: Located by supplier to within 10m	B5SW (S)	932	1	338703 346957
	Nearest Surface Water Feature	B9NW (W)	186	-	338630 347580
4	Pollution Incidents to Controlled Waters Property Type: Waste Handling Facilities Location: Creamery Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Mechanical Failure Incident Date: 22nd January 1992 Incident Reference: 3401 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	B5SW (S)	826	1	338750 346800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	Pollution Incidents to Controlled Waters Property Type: Warehouses Location: Pickhill Old, Hall Farndown Stream Of, Dairy Crest Authority: Environment Agency, Welsh Region Pollutant: Agricultural: Carcasses Note: Not Supplied Incident Date: 23rd May 1992 Incident Reference: 4059 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	B5NW (S)	835	1	338900 346900
6	Pollution Incidents to Controlled Waters Property Type: Waste Handling Facilities Location: Maelor Creamery Authority: Environment Agency, Welsh Region Pollutant: Agricultural: Carcasses Note: Poor Operational Practise Incident Date: 12th September 1991 Incident Reference: 1976 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Bypass Of Treatment Facilities Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B5NE (S)	858	1	338990 346950
7	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Down Stream Of Dairy Crest, Sw Drain Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Poor Operational Practise Incident Date: 27th June 1992 Incident Reference: 4580 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B5SW (S)	880	1	338850 346800
	River Quality Name: Clywedog GQA Grade: River Quality B Reach: Conf.Deer - Conf.Red'R Bk. Estimated Distance (km): 4 Flow Rate: Flow less than 2.5 cumecs Flow Type: River Year: 2000	B14SW (NE)	717	1	339483 348211
	Water Abstractions Operator: Dairy Crest Dairies Licence Number: 24/67/7/0199 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: River Daily Rate (m3): 8092 Yearly Rate (m3): 1136500 Details: River Dee Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B5SW (S)	1025	1	338800 346600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0182 Permit Version: 100 Location: River Dee At Twll, Bangor Authority: Environment Agency, Welsh Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Dee At Bangor Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 6th October 1975 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B1NW (S)	1191	1	338630 346360
	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0005 Permit Version: 100 Location: River Dee At Twll, Bangor Authority: Environment Agency, Welsh Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Dee At Twll; Bangor Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th January 1974 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B1NW (S)	1196	1	338630 346355
	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0221 Permit Version: 1 Location: River Dee At Twll, Bangor Authority: Environment Agency, Welsh Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th July 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B1NW (S)	1206	1	338650 346350
	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0220 Permit Version: 1 Location: River Dee At Twll, Bangor Authority: Environment Agency, Welsh Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Dee At Sesswick Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th July 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B1NW (S)	1206	1	338650 346350
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	B9NE (E)	0	1	338981 347681

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	(NW)	0	1	338365 347997
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	(NW)	0	1	338000 348592
	Drift Deposits Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	B9NE (E)	0	1	338981 347681
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(NW)	0	2	337929 348500
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	B9NE (E)	0	2	338981 347681
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	B9NE (E)	0	2	338981 347681
8	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	(W)	0	1	338441 347799
9	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	B9NW (W)	0	1	338728 347709
10	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	(NW)	759	1	338255 349037
11	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Groundwater Source	(NW)	815	1	338240 349090
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	B13SW (N)	0	1	338865 348045
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	B13SW (N)	0	1	338865 348045
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	5	338981 347681

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian and Triassic sandstones, undifferentiated, including Bunter and Keuper	B9NE (E)	0	2	338981 347681
	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.	B13SE (N)	0	3	338981 348000
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards No Hazard				
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	338981 347681
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B13SW (NW)	233	2	338625 348025
	Potential for Ground Dissolution Stability Hazards No Hazard				
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	338981 347681
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	338981 347681
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B13SW (NW)	233	2	338625 348025
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	338981 347681
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	338981 347681
	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	B9NE (E)	0	2	338981 347681

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Cheshire West and Chester Council - Environmental Health Department Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Wrexham County Borough Council - Public Protection Department	April 2009 August 2008 May 2011	Annually Not Applicable Annual Rolling Update
Discharge Consents Environment Agency - Welsh Region	April 2011	Quarterly
Enforcement and Prohibition Notices Environment Agency - North West Region Environment Agency - Welsh Region	May 2011 May 2011	Quarterly Quarterly
Integrated Pollution Controls Environment Agency - North West Region Environment Agency - Welsh Region	October 2008 October 2008	Not Applicable Not Applicable
Integrated Pollution Prevention And Control Environment Agency - North West Region Environment Agency - Welsh Region	April 2011 April 2011	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Cheshire West and Chester Council - Environmental Health Department Wrexham County Borough Council - Environmental Health Department	December 2008 February 2011 November 2010	Not Applicable Annually Annual Rolling Update
Local Authority Pollution Prevention and Controls Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Cheshire West and Chester Council - Environmental Health Department Wrexham County Borough Council - Environmental Health Department	December 2008 February 2011 November 2010	Not Applicable Annually Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Cheshire West and Chester Council - Environmental Health Department Wrexham County Borough Council - Environmental Health Department	December 2008 June 2011 November 2010	Not Applicable Annually Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	March 2011	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - North West Region Environment Agency - Welsh Region	May 2011 May 2011	Monthly Monthly
Prosecutions Relating to Controlled Waters Environment Agency - North West Region Environment Agency - Welsh Region	May 2011 May 2011	Monthly Monthly
Registered Radioactive Substances Environment Agency - North West Region Environment Agency - Welsh Region	April 2011 April 2011	Quarterly Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	January 2011	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	January 2011	Annually
Substantiated Pollution Incident Register Environment Agency - North West Region - South Area Environment Agency Wales - North Area	April 2011 April 2011	Quarterly Quarterly

Agency & Hydrological	Version	Update Cycle
Water Abstractions Environment Agency - Welsh Region	January 2011	Quarterly
Water Industry Act Referrals Environment Agency - North West Region Environment Agency - Welsh Region	January 2011 January 2011	Quarterly Quarterly
Groundwater Vulnerability Environment Agency - Head Office	January 2011	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2010	Annually
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2010	Annually
Source Protection Zones Environment Agency - Head Office	April 2011	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	April 2011	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	April 2011	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	April 2011	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	April 2011	Quarterly
Flood Defences Environment Agency - Head Office	April 2011	Quarterly

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - North West Region - South Area Environment Agency Wales - North Area	April 2011 April 2011	Quarterly Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North West Region Environment Agency - Welsh Region	October 2008 October 2008	Not Applicable Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North West Region - South Area Environment Agency Wales - North Area	January 2011 January 2011	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North West Region - South Area Environment Agency Wales - North Area	January 2011 January 2011	Quarterly Quarterly
Local Authority Landfill Coverage Cheshire County Council (now part of Cheshire East Council) - Environmental Planning Department Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Wrexham County Borough Council	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Cheshire County Council (now part of Cheshire East Council) - Environmental Planning Department Wrexham County Borough Council Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department	February 2005 June 2003 May 2000	Not Applicable Not Applicable Not Applicable
Registered Landfill Sites Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003	Not Applicable Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	May 2010	Bi-Annually
Explosive Sites Health and Safety Executive	January 2011	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Wrexham County Borough Council - Planning Department Cheshire West and Chester Council - Planning Department Cheshire County Council (now part of Cheshire East Council) - Planning Department Chester City Council (now part of Cheshire West and Chester Council)	December 2010 February 2011 July 2008 October 2008	Annual Rolling Update Annually Annual Rolling Update Not Applicable
Planning Hazardous Substance Consents Wrexham County Borough Council - Planning Department Cheshire West and Chester Council - Planning Department Cheshire County Council (now part of Cheshire East Council) - Planning Department Chester City Council (now part of Cheshire West and Chester Council)	December 2010 February 2011 July 2008 October 2008	Annual Rolling Update Annually Annual Rolling Update Not Applicable

Geological	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2011	Bi-Annually
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	January 2006	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	February 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	May 2007	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	May 2007	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	February 2011	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2011	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt Chester City Council (now part of Cheshire West and Chester Council)	May 2011	As notified
Areas of Unadopted Green Belt Chester City Council (now part of Cheshire West and Chester Council)	May 2011	As notified
Areas of Outstanding Natural Beauty Natural England Countryside Council for Wales	April 2011 November 2010	Bi-Annually Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside) Natural England	August 2008 October 2010	Annually Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Wrexham County Borough Council Natural England	December 2010 March 2011	Bi-Annually Bi-Annually
Marine Nature Reserves Countryside Council for Wales	November 2010	Bi-Annually
National Nature Reserves Countryside Council for Wales	November 2010	Bi-Annually
National Parks Natural England	August 2010	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	March 2003	Not Applicable
Nitrate Vulnerable Zones The National Assembly for Wales - GI Services (Department of Planning & Countryside)	October 2005	Annually
Ramsar Sites Countryside Council for Wales	May 2011	Bi-Annually
Sites of Special Scientific Interest Countryside Council for Wales	November 2010	Bi-Annually
Special Areas of Conservation Countryside Council for Wales	November 2010	Bi-Annually
Special Protection Areas Countryside Council for Wales	November 2010	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Health Protection Agency	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	The Coal Authority - Mining Report Service 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
4	Countryside Council for Wales Plas Penrhose, Fford Penrhos, Bangor, Gwynedd, LL57 2LQ	Telephone: 01248 385500 Fax: 01248 355782
5	Wrexham County Borough Council Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
-	Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@hpa.org.uk Website: www.hpa.org.uk
-	Landmark Information Group Limited The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Types 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

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
- 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

Hazardous Substances

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

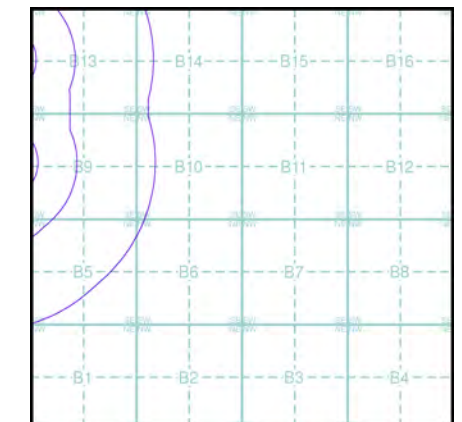
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Slice B

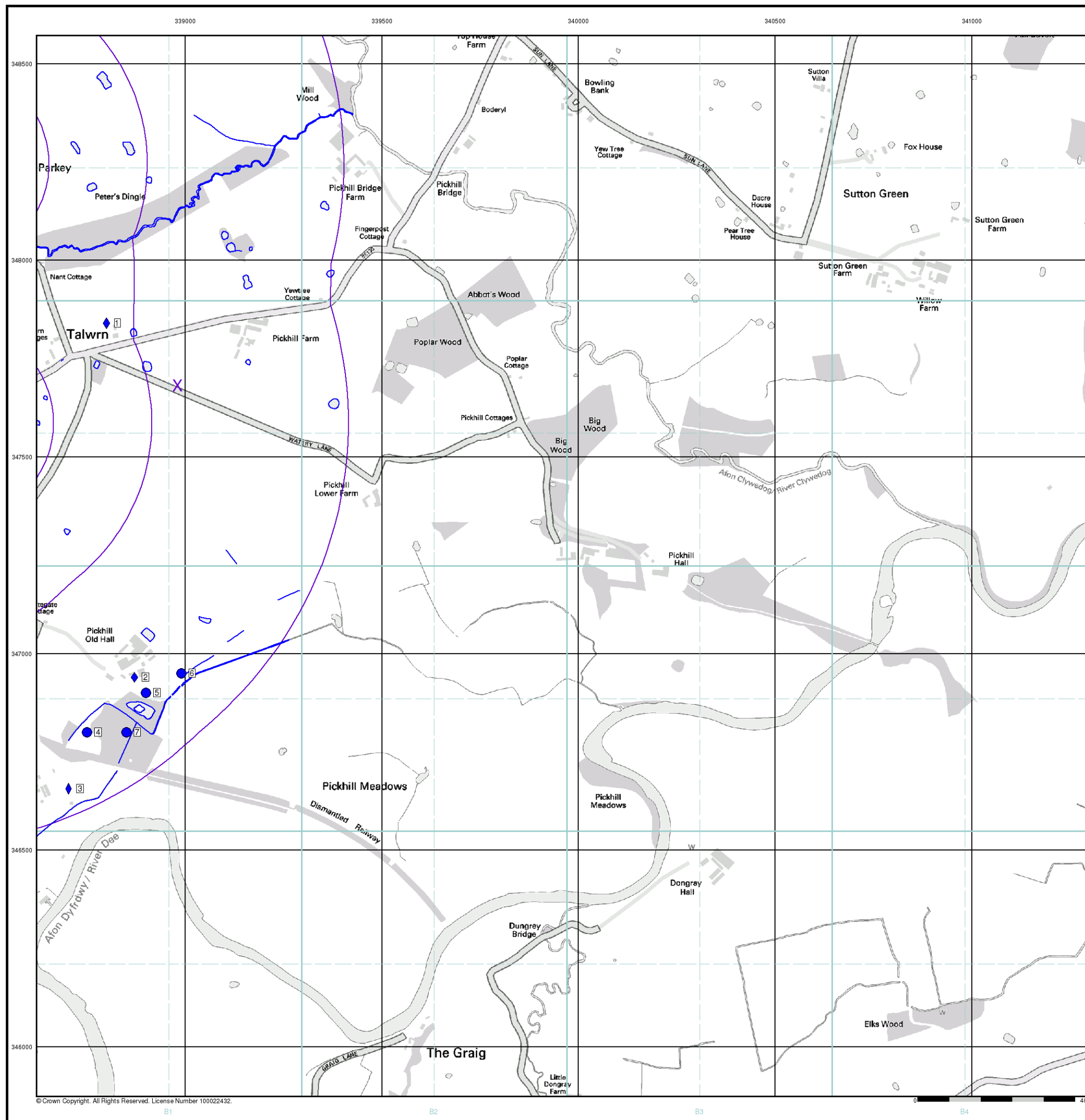


Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338980, 347680
 Slice: B
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiel, WREXHAM, Clwyd, LL13 0UW



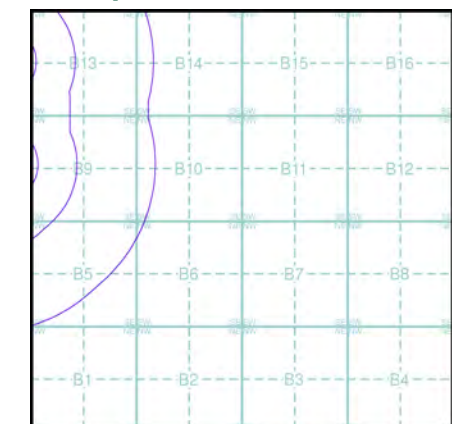
General

-  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 B



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338980, 347680
 Slice: B
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell,
 WREXHAM, Clwyd, LL13 0UW



General

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

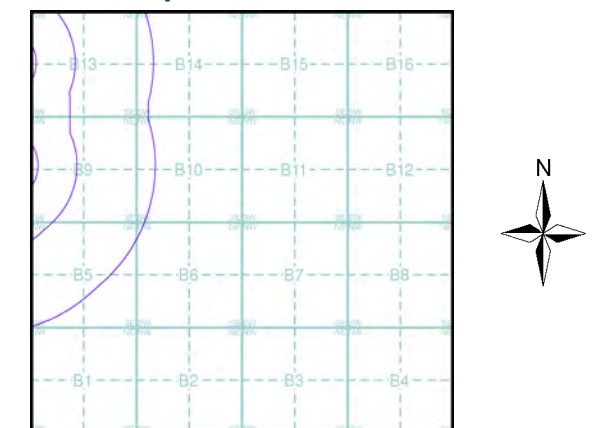
Agency and Hydrological (Boreholes)

-  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 B

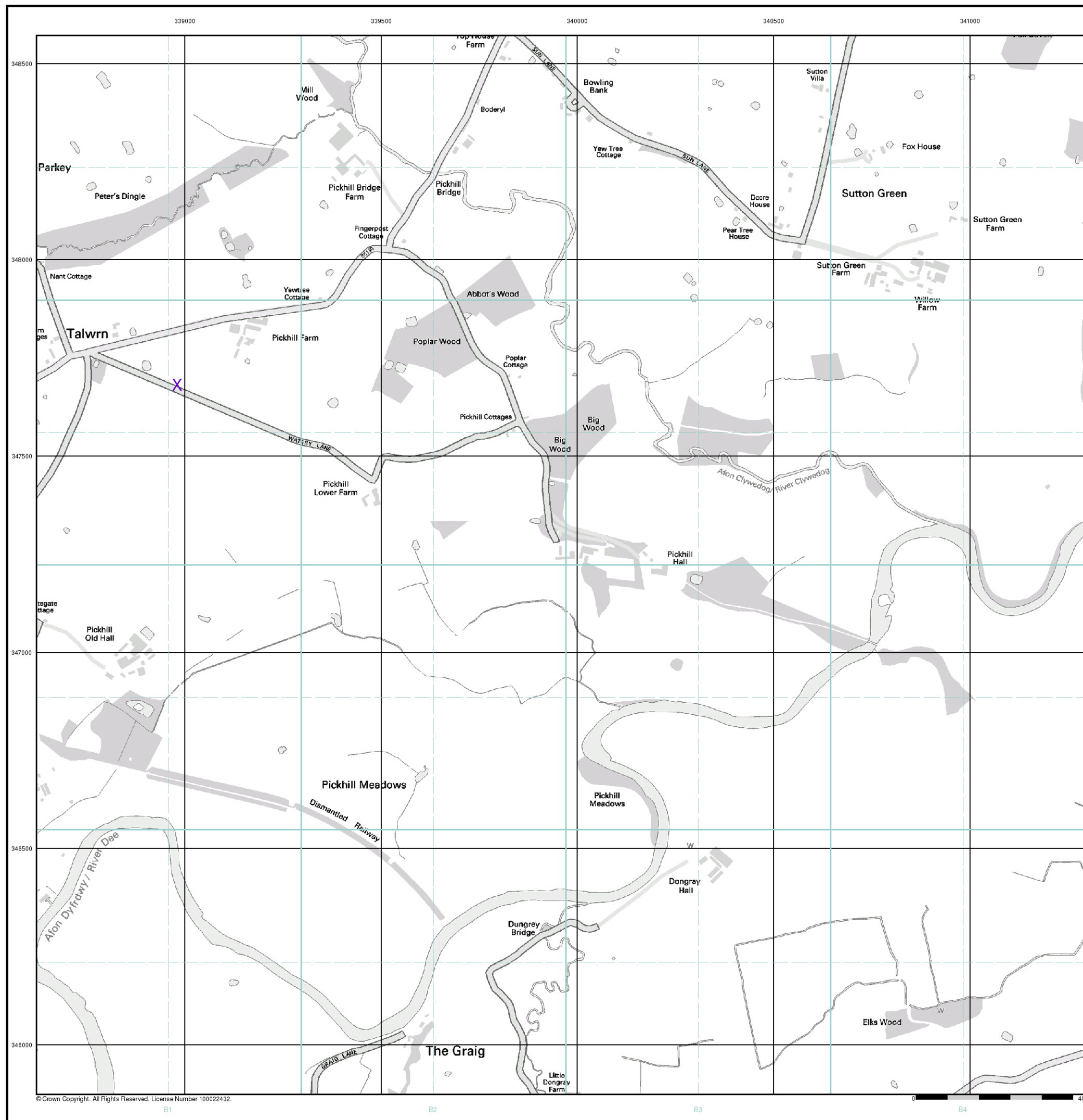


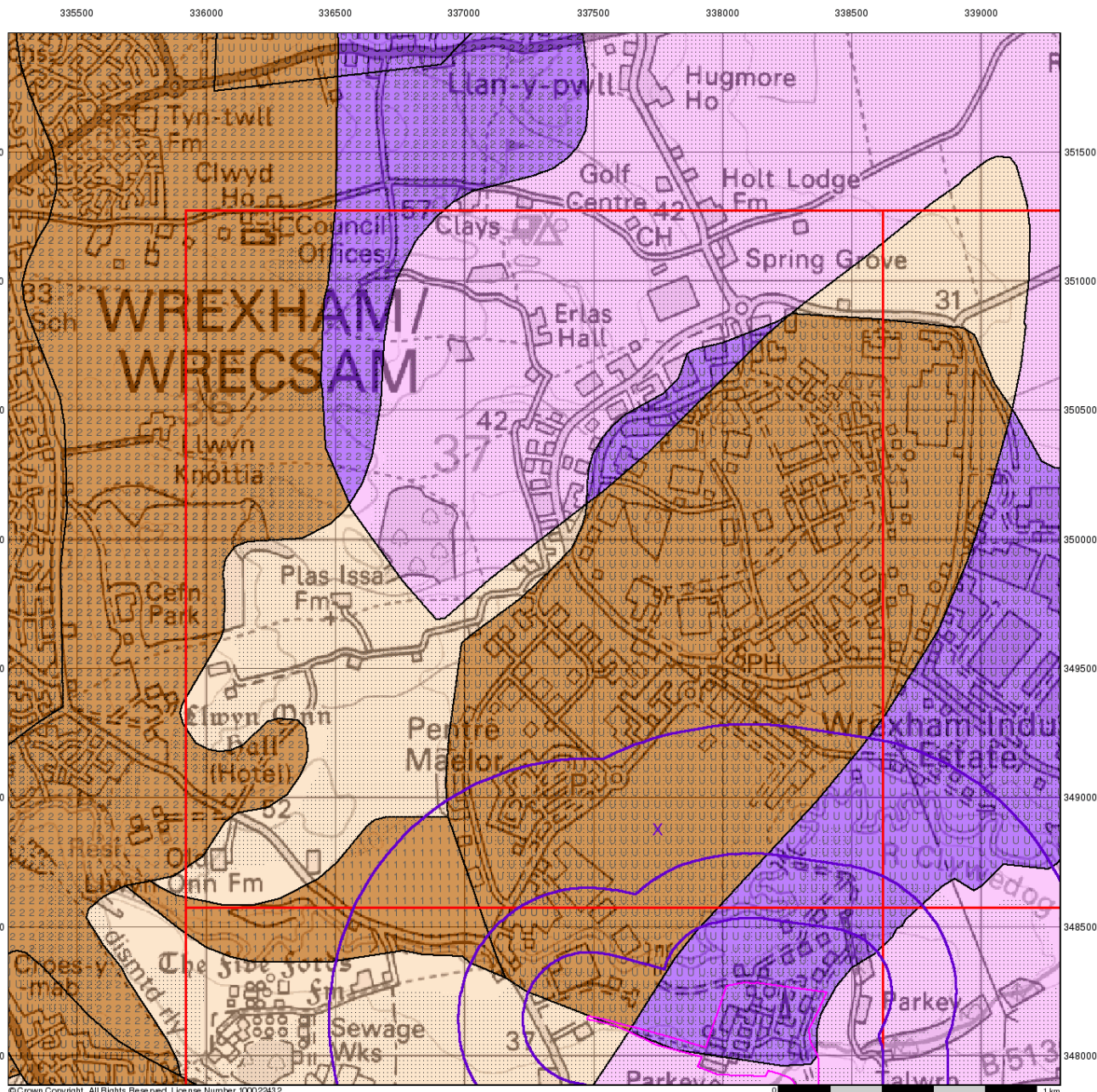
Order Details

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 National Grid Reference: 338980, 347680
 Slice: B
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW





Groundwater Vulnerability

General

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

Agency and Hydrological

Geological Classes

Major Aquifer (Highly Permeable)

Minor Aquifer (Variably Permeable)

Non Aquifer (Negligibly Permeable)

Water or Sea

Drift Deposit

Soil Classes

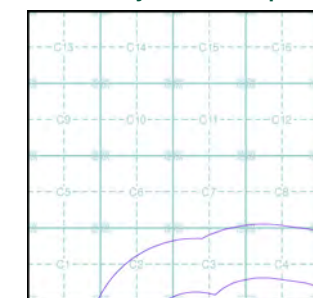
High (H) 1, 2, 3, U
Intermediate (I) 1, 2
Low

High (H) 1, 2, 3, U
Intermediate (I) 1, 2
Low

High (H) 1, 2, 3, U
Intermediate (I) 1, 2
Low

High (H) 1, 2, 3, U
Intermediate (I) 1, 2
Low

Site Sensitivity Context Map - Slice C



Order Details

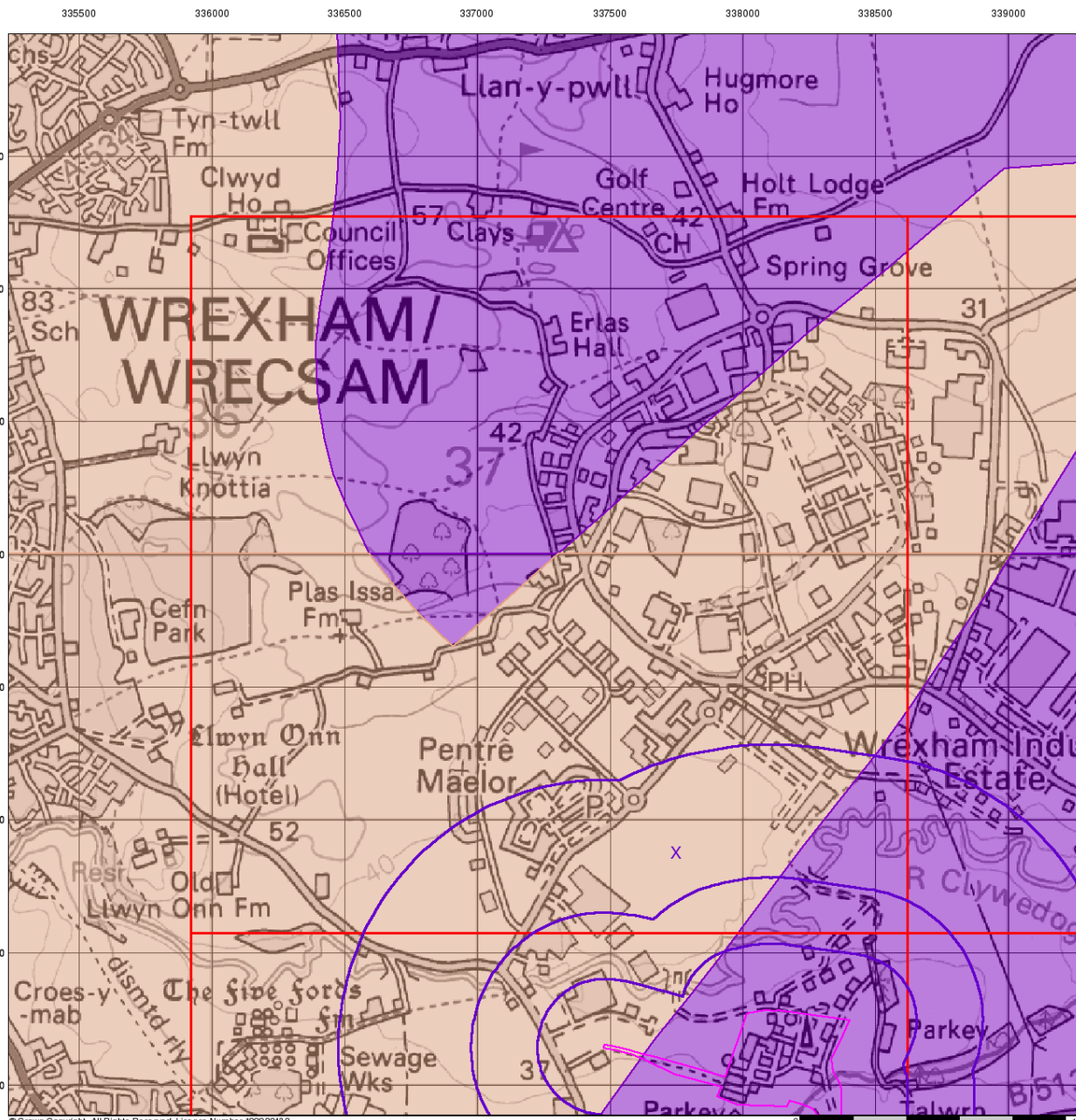
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Customer Ref: 305001-00001 50065-29 ARS
National Grid Reference: 337750, 348880
Slice: C
Site Area (Ha): 17.46
Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Bedrock Aquifer Designation

General

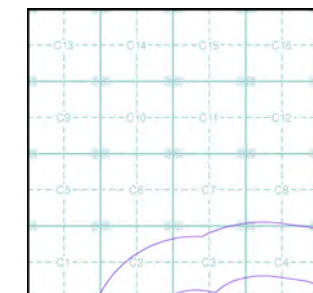
- ◇ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- 8 Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice C



Order Details

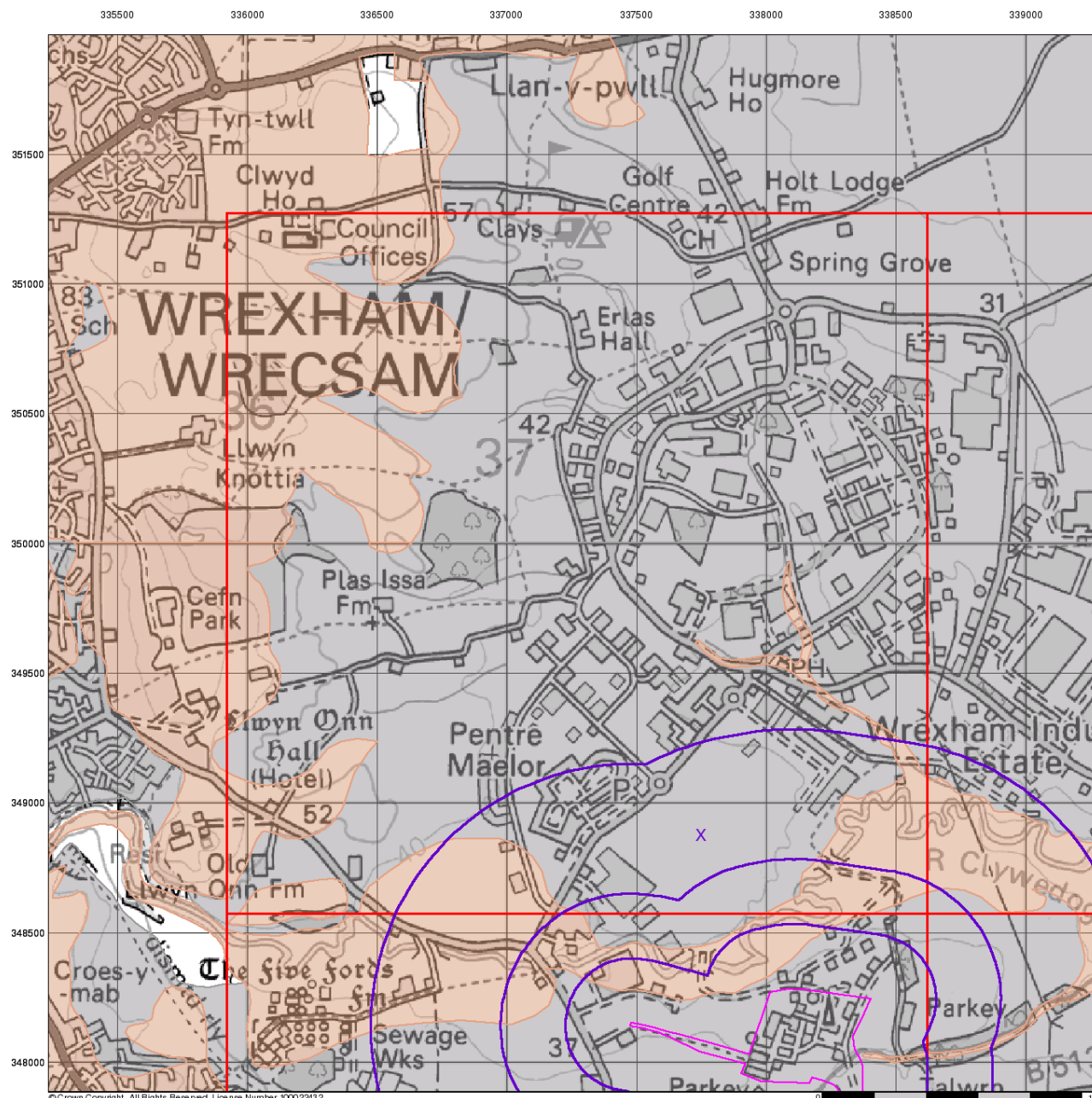
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 National Grid Reference: 337750, 348880
 Slice: C
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



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Superficial Aquifer Designation

General

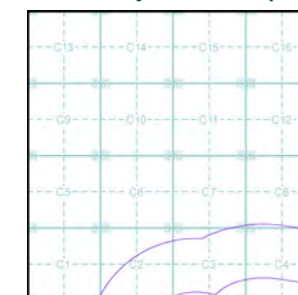
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice C



Order Details

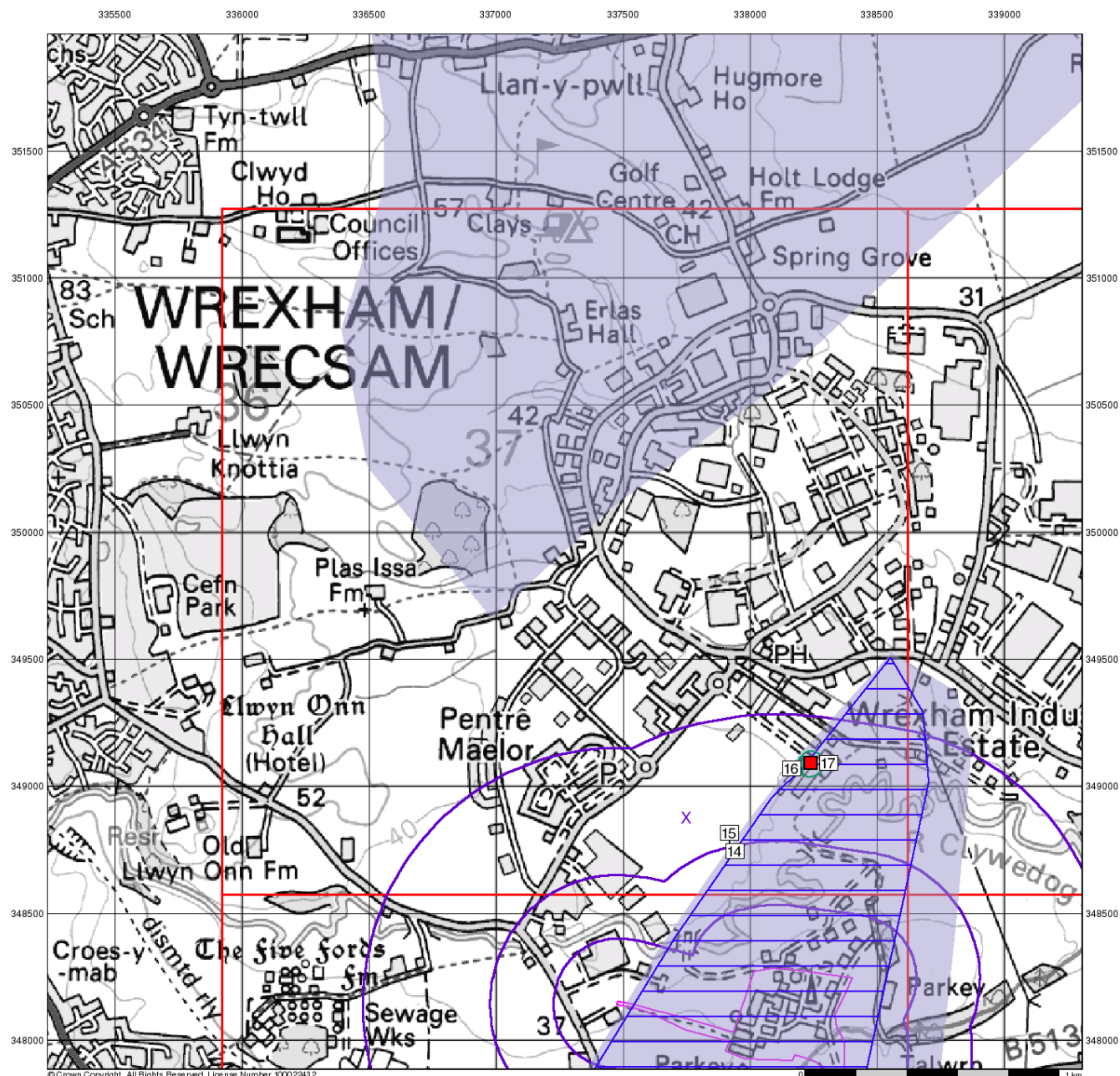
Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337750, 348880
 Slice: C
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



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Source Protection Zones

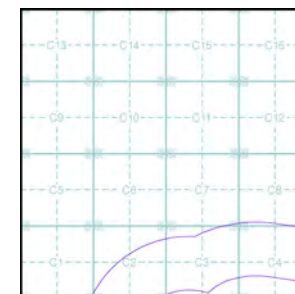
General

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

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice C



Order Details

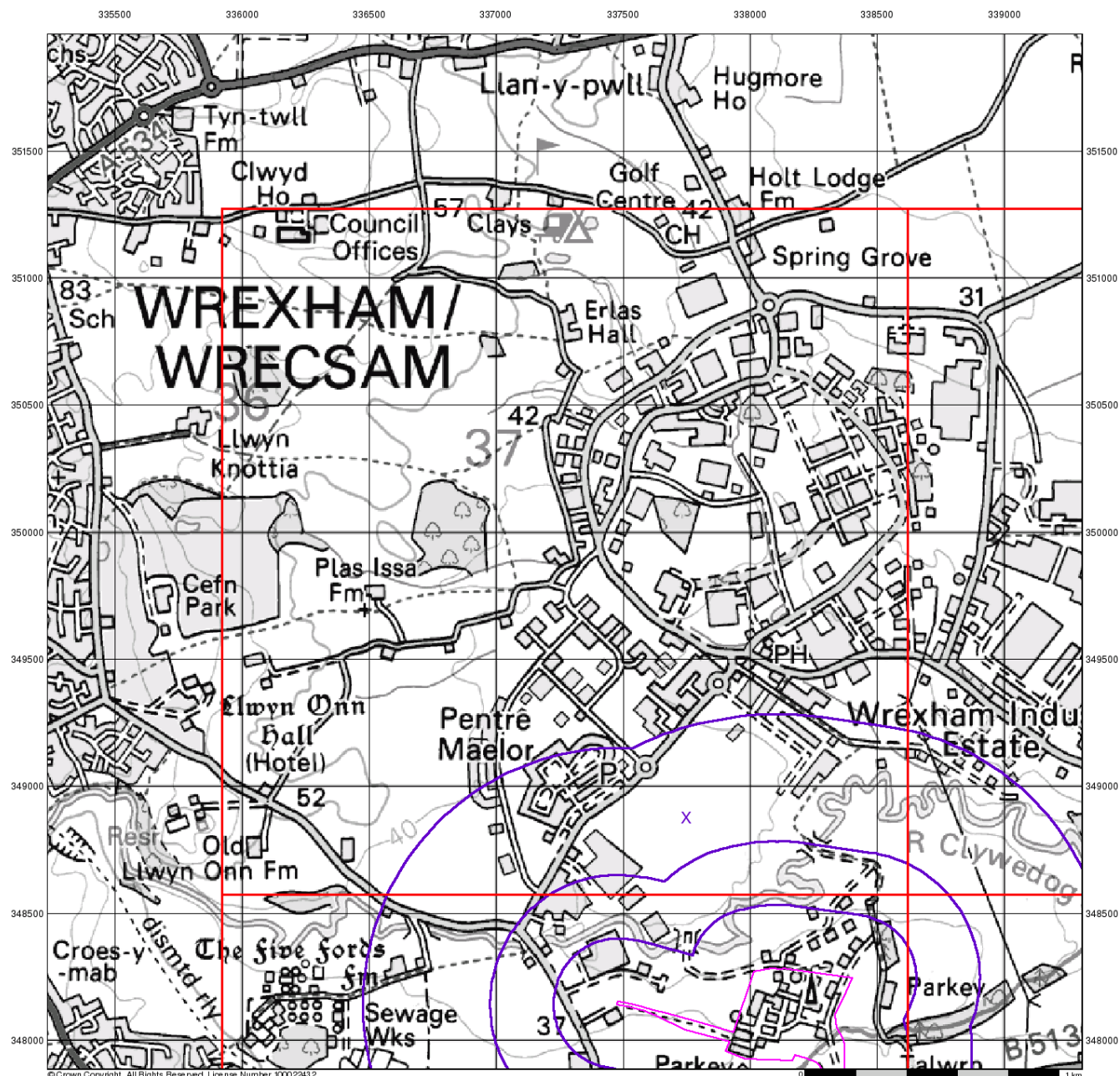
Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337750, 348880
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Sensitive Land Uses

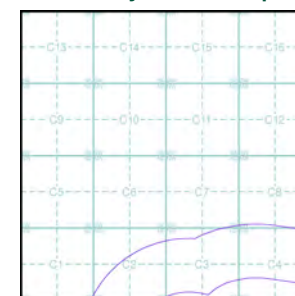
General

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

Sensitive Land Uses

- 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

Site Sensitivity Context Map - Slice C



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337750, 348880
 Slice: C
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

35238207_1_1

Customer Reference:

305001-00001 50065-29 ARS

National Grid Reference:

337750, 348880

Slice:

C

Site Area (Ha):

17.46

Search Buffer (m):

1000

Site Details:

Wales & West Utilities Ltd, Maelor Works
Marchwiel
WREXHAM
Clwyd
LL13 0UW

Client Details:

Ms C Coldrey
Worley Parsons Ltd
3-8 Redcliffe Parade West
Bristol
BS1 6SP

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	6
Hazardous Substances	-
Geological	7
Industrial Land Use	-
Sensitive Land Use	-
Data Currency	8
Data Suppliers	12
Useful Contacts	13

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 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 the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Radon Potential dataset Copyright Notice

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Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			1	2
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 1				1
Local Authority Integrated Pollution Prevention And Control	pg 2				1
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2		Yes		
Pollution Incidents to Controlled Waters	pg 2				4
Prosecutions Relating to Authorised Processes	pg 2				1
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality	pg 3		1		
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 3				6
Water Industry Act Referrals					
Groundwater Vulnerability	pg 4	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Source Protection Zones	pg 5	2			2
Extreme Flooding from Rivers or Sea without Defences	pg 5	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 5	Yes	Yes	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
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
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					
Geological					
BGS Recorded Mineral Sites					
BGS 1:625,000 Solid Geology	pg 7	Yes	n/a	n/a	n/a
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 7	Yes	n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 7	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 7	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 7	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 7	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries (50m)				n/a	n/a
Fuel Station Entries					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
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					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: J K Industries Property Type: Civil Engineering Location: Firestone Site Wrexham Industrial E, Wrexham Industrial Estate Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0033901 Permit Version: 1 Effective Date: 20th May 1966 Issued Date: 20th May 1966 Revocation Date: 2nd February 1994 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: Consent expired Positional Accuracy: Located by supplier to within 10m	C4SW (SE)	338	1	338110 348620
2	Discharge Consents Operator: J K Industries Property Type: Rubber Tyre & Inner Tube Manufacture Location: Firestone Site Wrexham Ind Estate Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: CM0033801 Permit Version: 1 Effective Date: 20th May 1966 Issued Date: 20th May 1966 Revocation Date: 2nd February 1994 Discharge Type: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: Clywedog Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	C4SW (E)	540	1	338260 348810
3	Discharge Consents Operator: Alan'S Skip Hire Wales Limited Property Type: Household Waste Amenity Sites Location: Wrexham Recycling Centere Rewither, Wrexham Recycling Centre, Redwither Road, Wrexham Industrail Estate, Wrexham, LL13 9rd Authority: Environment Agency, Welsh Region Catchment Area: Not Supplied Reference: Cg0402201 Permit Version: 1 Effective Date: 31st October 2002 Issued Date: 31st October 2002 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Freshwater Stream/River Environment: Receiving Water: The Redwither Brook 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	C4NE (NE)	987	1	338474 349230
4	Integrated Pollution Prevention And Control Name: Hydro Aluminium Deeside Ltd Location: Wrexham Aluminium Processing, Bridge Road, Wrexham Industrial Estate, Wrexham, LL13 9SQ Authority: Environment Agency, Welsh Region Permit Reference: Bk3638if Original Permit Ref: Bk3638if Effective Date: 15th March 2002 Status: Superseded By Variation Application Type: Application App. Sub Type: New Positional Accuracy: Manually positioned to the address or location Activity Code: 2.2 A(1) (B) (II) Activity Description: Non-Ferrous Metals; Melting With Capacity Greater Or Equal To 5T Primary Activity: Y Activity Code: 2.2 A(1) (B) (I) Activity Description: Non-Ferrous Metals; Melting With Capacity Greater Than 4T/D Lead/Cadmium Or 20T/D Others Primary Activity: N	C3NE (N)	989	1	337730 349216

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	Local Authority Integrated Pollution Prevention And Control Name: Lloyds Animal Feeds (Western) Ltd Location: Bridge Road North, Wrexham Industrial Estate, Wrexham, LL13 9ps Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG6/26(1)V2 Dated: Not Supplied Process Type: Production and Processing of Metals Description: 6/26 Status: Permit Issued Positional Accuracy: Manually positioned to the address or location	C2SE (SW)	534	2	337268 348641
	Nearest Surface Water Feature	(SE)	124	-	337949 348524
6	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Surface Runoff Location: Clywedog, Road Wrexham Industrial Estate, Marchwi Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Not Supplied Incident Date: 3rd November 1995 Incident Reference: 26678 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	C2SE (W)	661	1	337200 348750
7	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Redwither, Pumping Station Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Not Supplied Incident Date: 21st June 1996 Incident Reference: 28800 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	C4NE (E)	812	1	338500 349050
8	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Wrexham Industrial Estate, WREXHAM Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Vandalism Incident Date: 30th May 1997 Incident Reference: 32374 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	C2NE (W)	975	1	337000 349000
9	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewerage Location: Pickhill Bridge Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Inorganic Note: Blocked Sewer Incident Date: 10th October 1994 Incident Reference: 21384 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	C4NE (E)	976	1	338600 349200
10	Prosecutions Relating to Authorised Processes Location: Bridge Road, Wrexham Industrial Estate, WREXHAM, Clwyd, LL13 9PS Prosecution Text: Press Release HM389, Failure to comply with an improvement notice to prevent emissions of smoke from the factory vents. Prosecution Act: HSWA74 Hearing Date: 15th March 1996 Verdict: Guilty Fine: 10000 Costs: 9882 Positional Accuracy: Manually positioned to the road within the address or location	C3NE (N)	990	1	337692 349205

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Clywedog GQA Grade: River Quality B Reach: Conf.Redwithr Bk. - O/F Five Fords Stw Estimated Distance (km): 4.8 Flow Rate: Flow less than 1.25 cumecs Flow Type: River Year: 2000	(SE)	61	1	337949 348473
11	Water Abstractions Operator: Calypso Soft Drinks Ltd Licence Number: 24/67/7/0222 Permit Version: 1 Location: 144m Deep, 150mm Dia. Borehole Aw1 Authority: Environment Agency, Welsh Region Abstraction: Food And Drink: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Spectrum Business Park Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	C4NW (E)	660	1	338190 348940
11	Water Abstractions Operator: Calypso Soft Drinks Ltd Licence Number: 24/67/7/0213 Permit Version: 100 Location: 144m Deep, 150mm Dia. Borehole Aw1 Authority: Environment Agency, Welsh Region Abstraction: Food And Drink: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 144M Deep 150mm Diameter Borehole Aw1 Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	C4NW (E)	660	1	338190 348940
12	Water Abstractions Operator: Calypso Soft Drinks Ltd Licence Number: 24/67/7/0222 Permit Version: 1 Location: 144m Deep, 150mm Dia., Ob1 Authority: Environment Agency, Welsh Region Abstraction: Food And Drink: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Spectrum Business Park Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	C4NW (NE)	815	1	338240 349090
12	Water Abstractions Operator: Calypso Soft Drinks Ltd Licence Number: 24/67/7/0213 Permit Version: 100 Location: 144m Deep, 150mm Dia., Ob1 Authority: Environment Agency, Welsh Region Abstraction: Food And Drink: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 144M Deep 150mm Diameter Ob1 Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	C4NW (NE)	815	1	338240 349090

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	Water Abstractions Operator: Calypso Soft Drinks Ltd Licence Number: 24/67/7/0222 Permit Version: 1 Location: 144 M Deep, 200mm Dia Bh Aw2 Authority: Environment Agency, Welsh Region Abstraction: Food And Drink: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Spectrum Business Park Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	C4NE (NE)	931	1	338360 349190
13	Water Abstractions Operator: Calypso Soft Drinks Ltd Licence Number: 24/67/7/0213 Permit Version: 100 Location: 144 M Deep, 200mm Dia Bh Aw2 Authority: Environment Agency, Welsh Region Abstraction: Food And Drink: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 144M Deep 200mm Diameter Borehole Aw2 Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th September 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	C4NE (NE)	931	1	338360 349190
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	(S)	0	1	337470 348160
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	(S)	0	1	337638 348094
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	C4SW (SE)	0	1	338027 348620
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	C3SE (SE)	0	1	337750 348877
	Drift Deposits Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	(SE)	0	1	338109 348497
	Bedrock Aquifer Designations Aquifer Desination: Secondary Aquifer - A	C3SE (SE)	0	3	337750 348877
	Bedrock Aquifer Designations Aquifer Desination: Principal Aquifer	C4SW (SE)	0	3	338046 348655
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	(SE)	0	3	338163 348465

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	C3SE (SE)	0	1	337942 348744
15	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	C3SE (SE)	0	1	337918 348760
16	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	C4NW (NE)	759	1	338191 349068
17	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Groundwater Source	C4NW (NE)	815	1	338240 349090
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	C4SW (SE)	0	1	338015 348610
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	C4SW (SE)	0	1	338015 348610
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	(SW)	110	1	337500 348480
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	5	337750 348877

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian and Triassic sandstones, undifferentiated, including Bunter and Keuper	C3SE (SE)	0	3	337750 348877
	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.	C3SE (SE)	0	4	337750 348877
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards No Hazard				
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3SE (SE)	0	3	337750 348877
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C4SE (E)	0	3	338425 348877
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	C4SW (SE)	50	3	337975 348575
	Potential for Ground Dissolution Stability Hazards No Hazard				
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3SE (SE)	0	3	337750 348877
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3SE (SE)	0	3	337750 348877
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(SW)	0	3	337350 348450
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C4SW (SE)	50	3	337975 348575
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3SE (SE)	0	3	337750 348877
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	C4NW (NE)	0	3	338075 349075
	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	C4NW (NE)	0	3	338075 349075

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Wrexham County Borough Council - Public Protection Department	May 2011	Annual Rolling Update
Discharge Consents Environment Agency - Welsh Region	April 2011	Quarterly
Enforcement and Prohibition Notices Environment Agency - Welsh Region	May 2011	Quarterly
Integrated Pollution Controls Environment Agency - Welsh Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - Welsh Region	April 2011	Quarterly
Local Authority Integrated Pollution Prevention And Control Wrexham County Borough Council - Environmental Health Department	November 2010	Annual Rolling Update
Local Authority Pollution Prevention and Controls Wrexham County Borough Council - Environmental Health Department	November 2010	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Wrexham County Borough Council - Environmental Health Department	November 2010	Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	March 2011	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region	May 2011	Monthly
Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region	May 2011	Monthly
Registered Radioactive Substances Environment Agency - Welsh Region	April 2011	Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	January 2011	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	January 2011	Annually
Substantiated Pollution Incident Register Environment Agency Wales - North Area	April 2011	Quarterly
Water Abstractions Environment Agency - Welsh Region	January 2011	Quarterly
Water Industry Act Referrals Environment Agency - Welsh Region	January 2011	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	January 2011	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2010	Annually
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2010	Annually
Source Protection Zones Environment Agency - Head Office	April 2011	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	April 2011	Quarterly

Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	April 2011	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	April 2011	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	April 2011	Quarterly
Flood Defences Environment Agency - Head Office	April 2011	Quarterly
Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency Wales - North Area	April 2011	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency Wales - North Area	January 2011	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency Wales - North Area	January 2011	Quarterly
Local Authority Landfill Coverage Wrexham County Borough Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites Wrexham County Borough Council	June 2003	Not Applicable
Registered Landfill Sites Environment Agency Wales - North Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency Wales - North Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency Wales - North Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	May 2010	Bi-Annually
Explosive Sites Health and Safety Executive	January 2011	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Wrexham County Borough Council - Planning Department	December 2010	Annual Rolling Update
Planning Hazardous Substance Consents Wrexham County Borough Council - Planning Department	December 2010	Annual Rolling Update

Geological	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2011	Bi-Annually
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	January 2006	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	February 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	May 2007	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	May 2007	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	February 2011	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2011	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Outstanding Natural Beauty Countryside Council for Wales	November 2010	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	August 2008	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Wrexham County Borough Council	December 2010	Bi-Annually
Marine Nature Reserves Countryside Council for Wales	November 2010	Bi-Annually
National Nature Reserves Countryside Council for Wales	November 2010	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	March 2003	Not Applicable
Nitrate Vulnerable Zones The National Assembly for Wales - GI Services (Department of Planning & Countryside)	October 2005	Annually
Ramsar Sites Countryside Council for Wales	May 2011	Bi-Annually
Sites of Special Scientific Interest Countryside Council for Wales	November 2010	Bi-Annually
Special Areas of Conservation Countryside Council for Wales	November 2010	Bi-Annually
Special Protection Areas Countryside Council for Wales	November 2010	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Health Protection Agency	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	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
3	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
4	The Coal Authority - Mining Report Service 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
5	Wrexham County Borough Council Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
-	Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@hpa.org.uk Website: www.hpa.org.uk
-	Landmark Information Group Limited The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



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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

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
- 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

Hazardous Substances

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

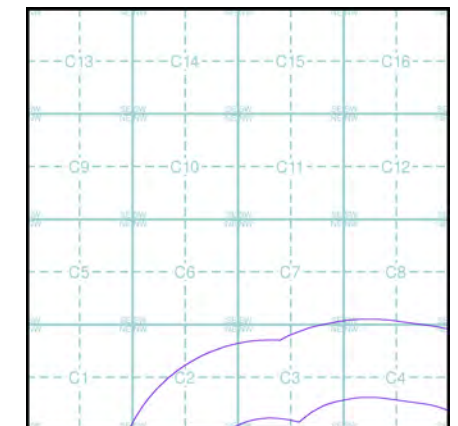
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Slice C



Order Details

Order Number: 35238207_1_1
Customer Ref: 305001-00001 50065-29 ARS
National Grid Reference: 337750, 348880
Slice: C
Site Area (Ha): 17.46
Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

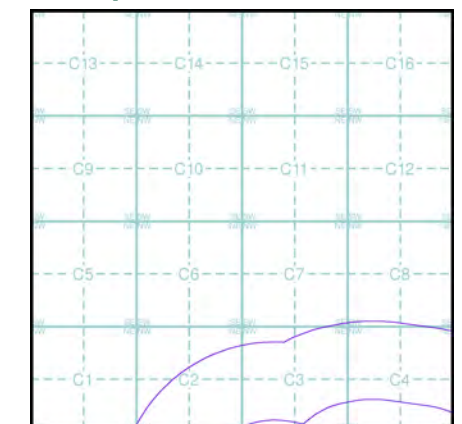
General

-  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 C



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 337750, 348880
 Slice: C
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW





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General

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

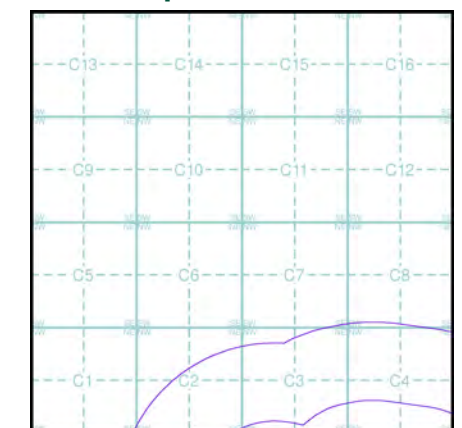
Agency and Hydrological (Boreholes)

- 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 C



Order Details

Order Number: 35238207_1_1
Customer Ref: 305001-00001 50065-29 ARS
National Grid Reference: 337750, 348880
Slice: C
Site Area (Ha): 17.46
Search Buffer (m): 1000

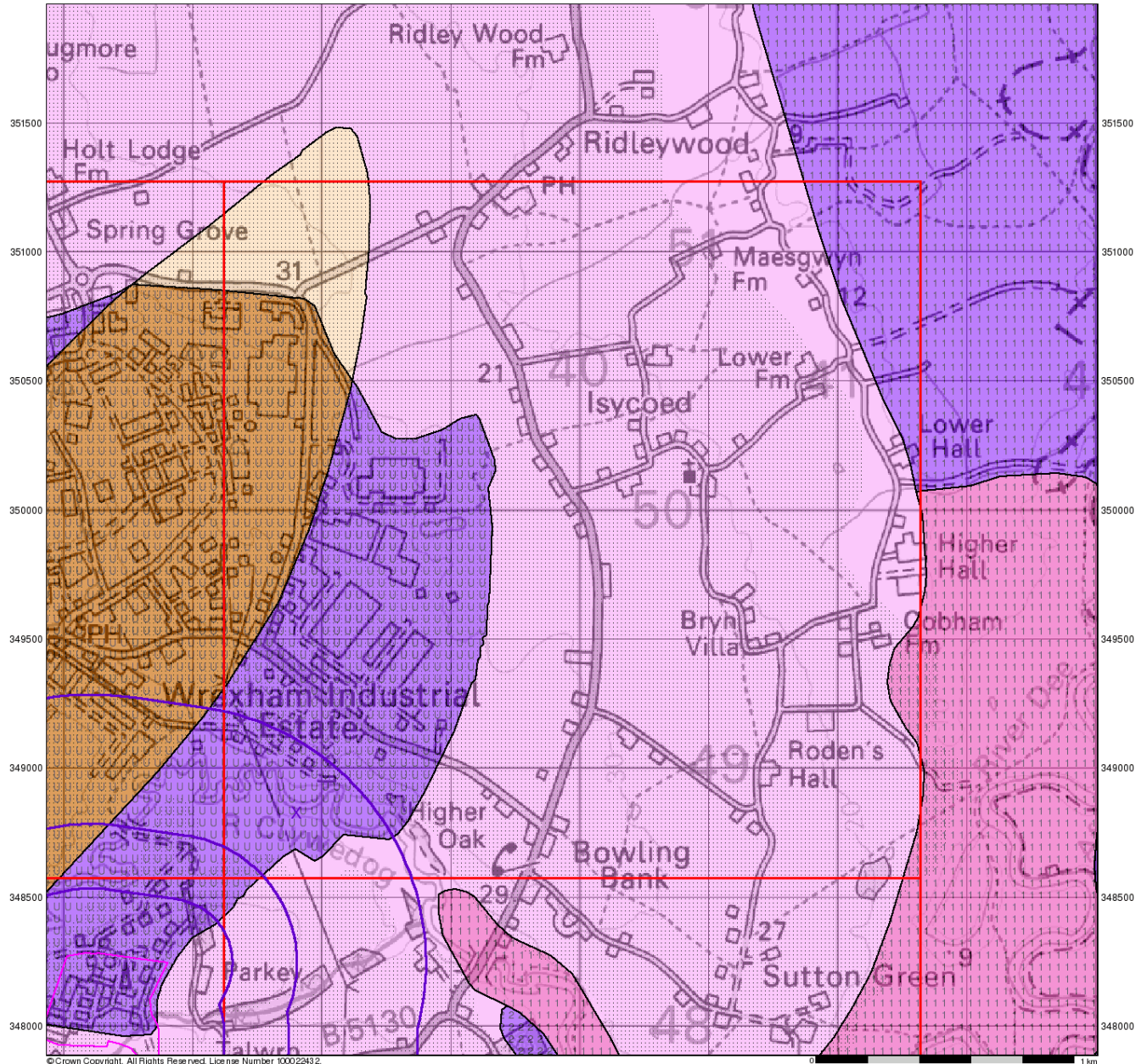
Site Details

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0 1 km



Groundwater Vulnerability

General

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

Agency and Hydrological

Geological Classes

Major Aquifer (Highly Permeable)

Minor Aquifer (Variably Permeable)

Non Aquifer (Negligibly Permeable)

Water or Sea

Drift Deposit

Soil Classes

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

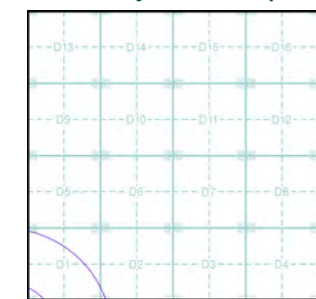
Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

Site Sensitivity Context Map - Slice D



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338900, 348830
 Slice: D
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

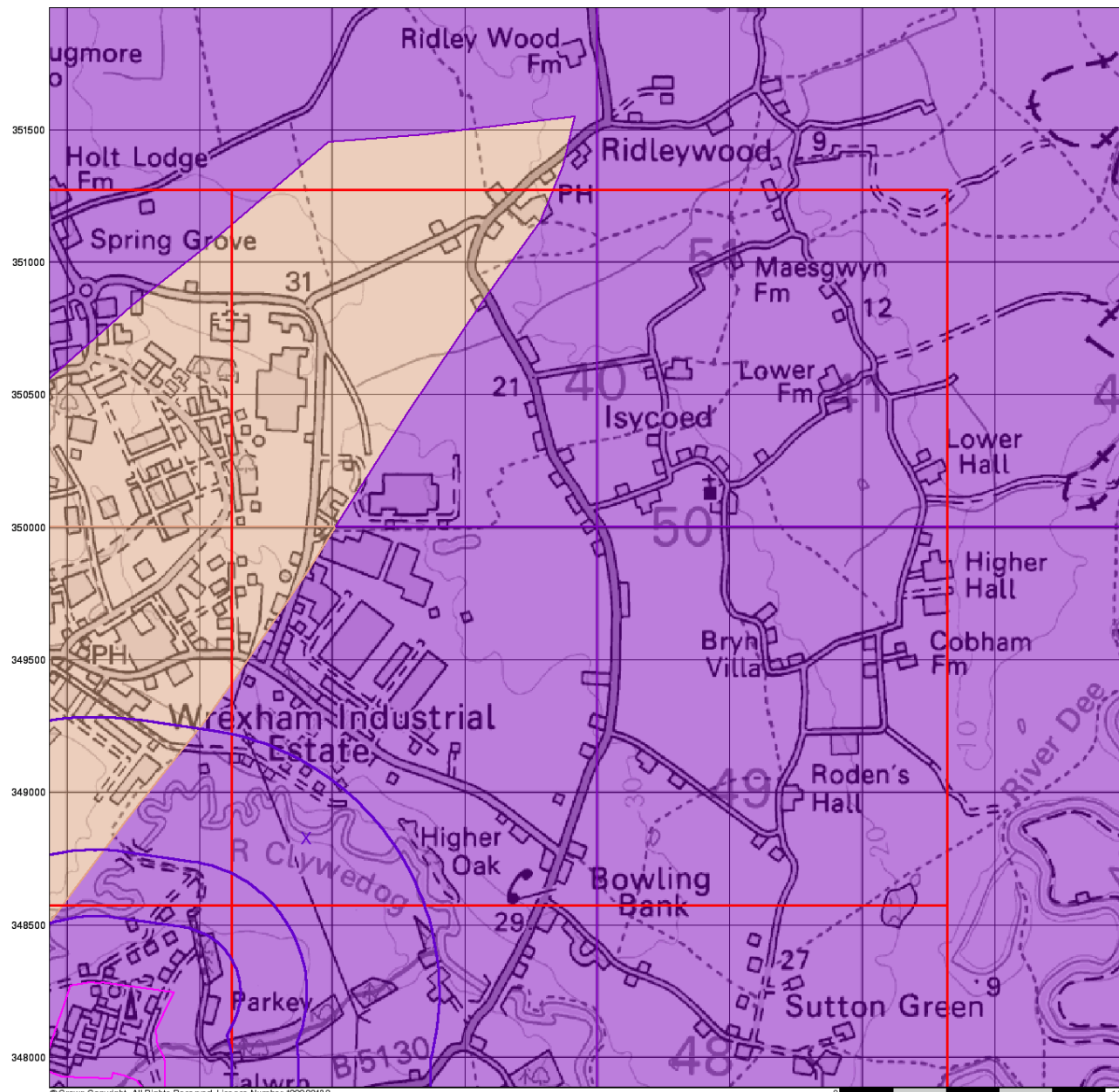
Site Details

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 Fax: 0844 844 9951
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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

Site Sensitivity Context Map - Slice D



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338900, 348830
 Slice: D
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

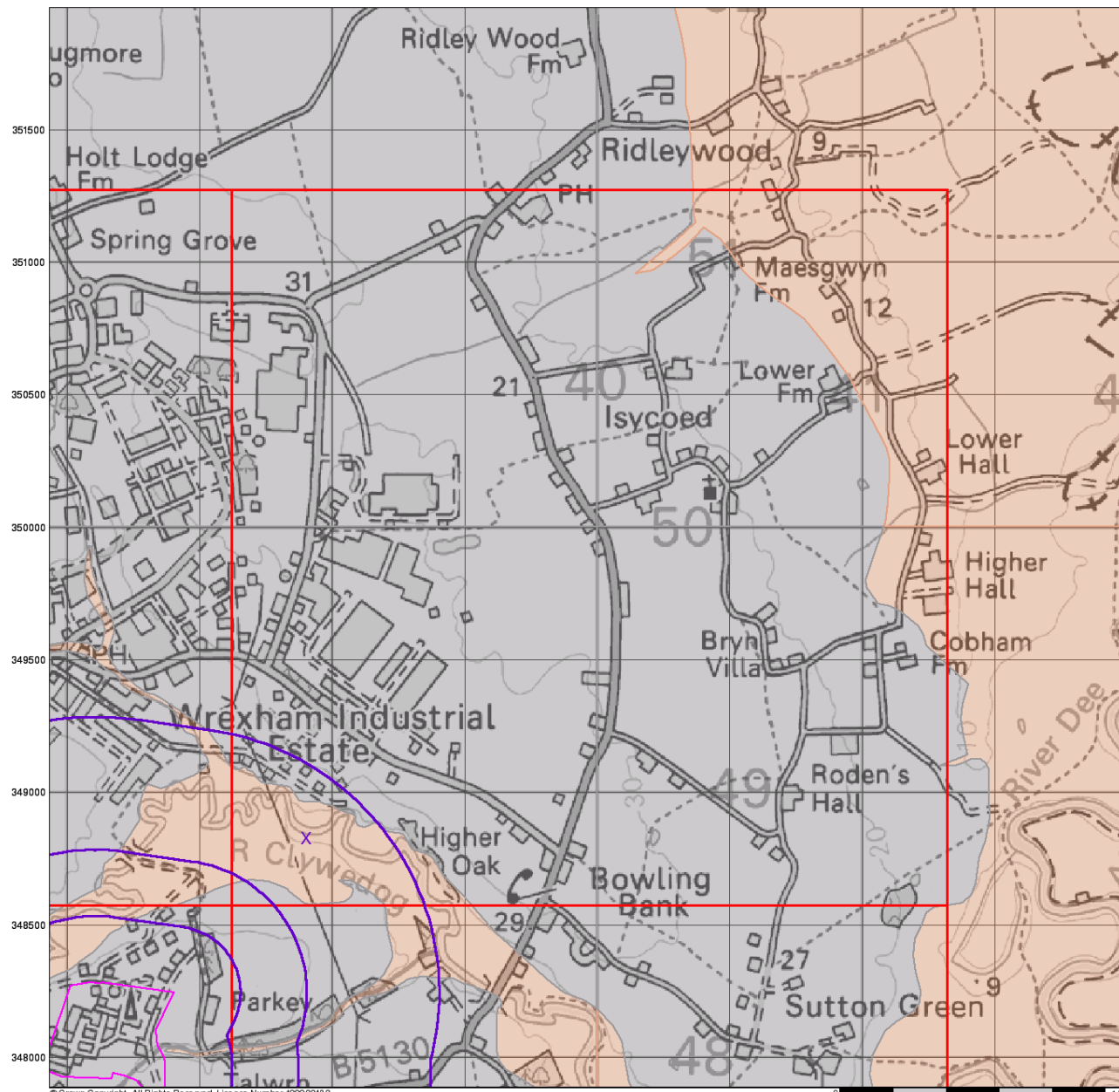
Site Details

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0 1 km



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

Site Sensitivity Context Map - Slice D



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338900, 348830
 Slice: D
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

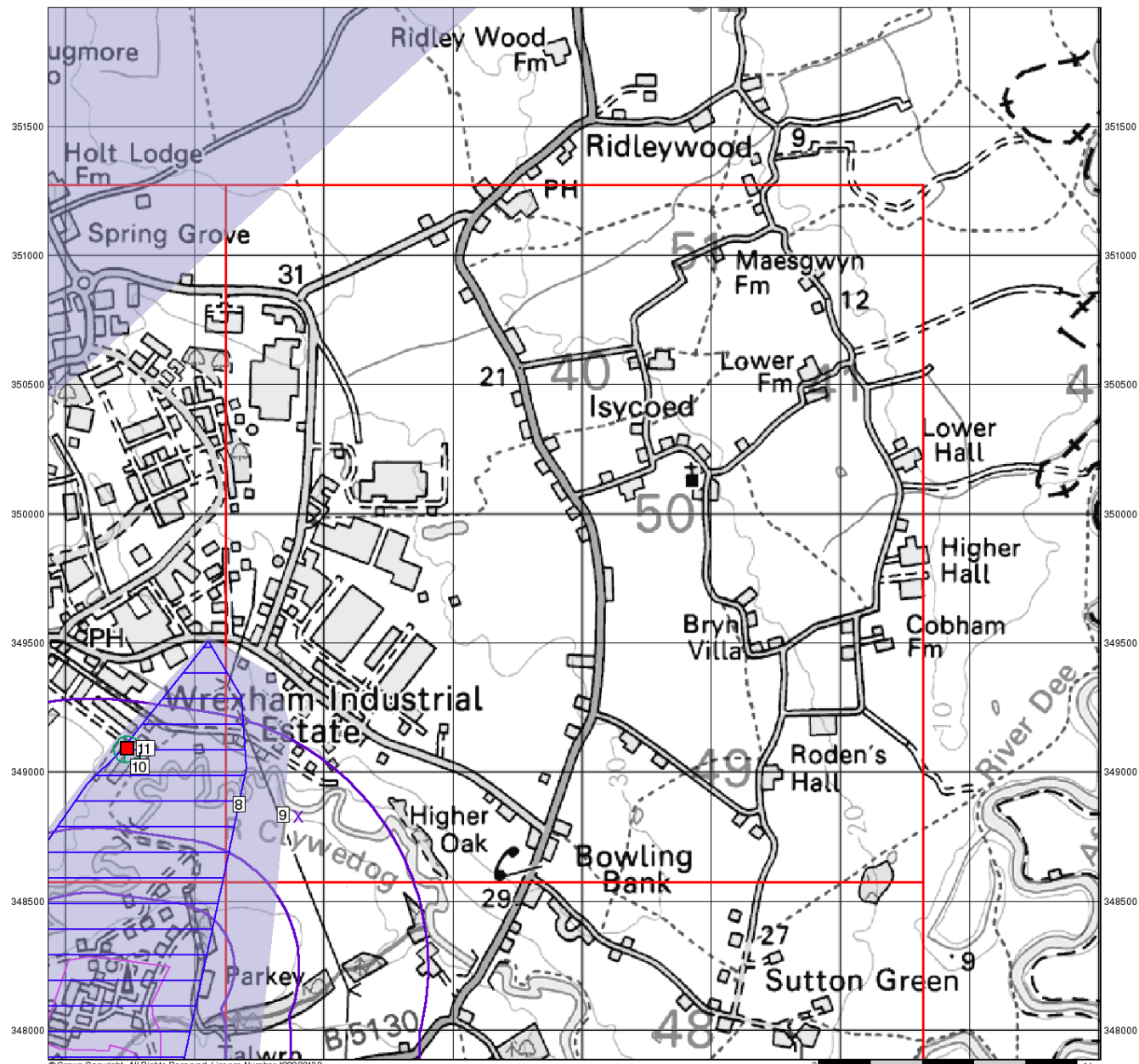
Site Details

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Source Protection Zones

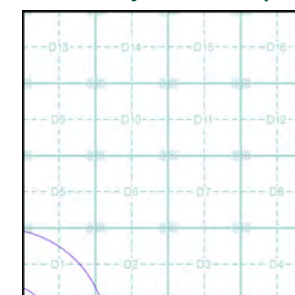
General

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

Agency and Hydrological

- Source Protection Zone I
- Source Protection Zone II
- Source Protection Zone III
- Zone of Special Interest
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice D



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338900, 348830
 Slice: D
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

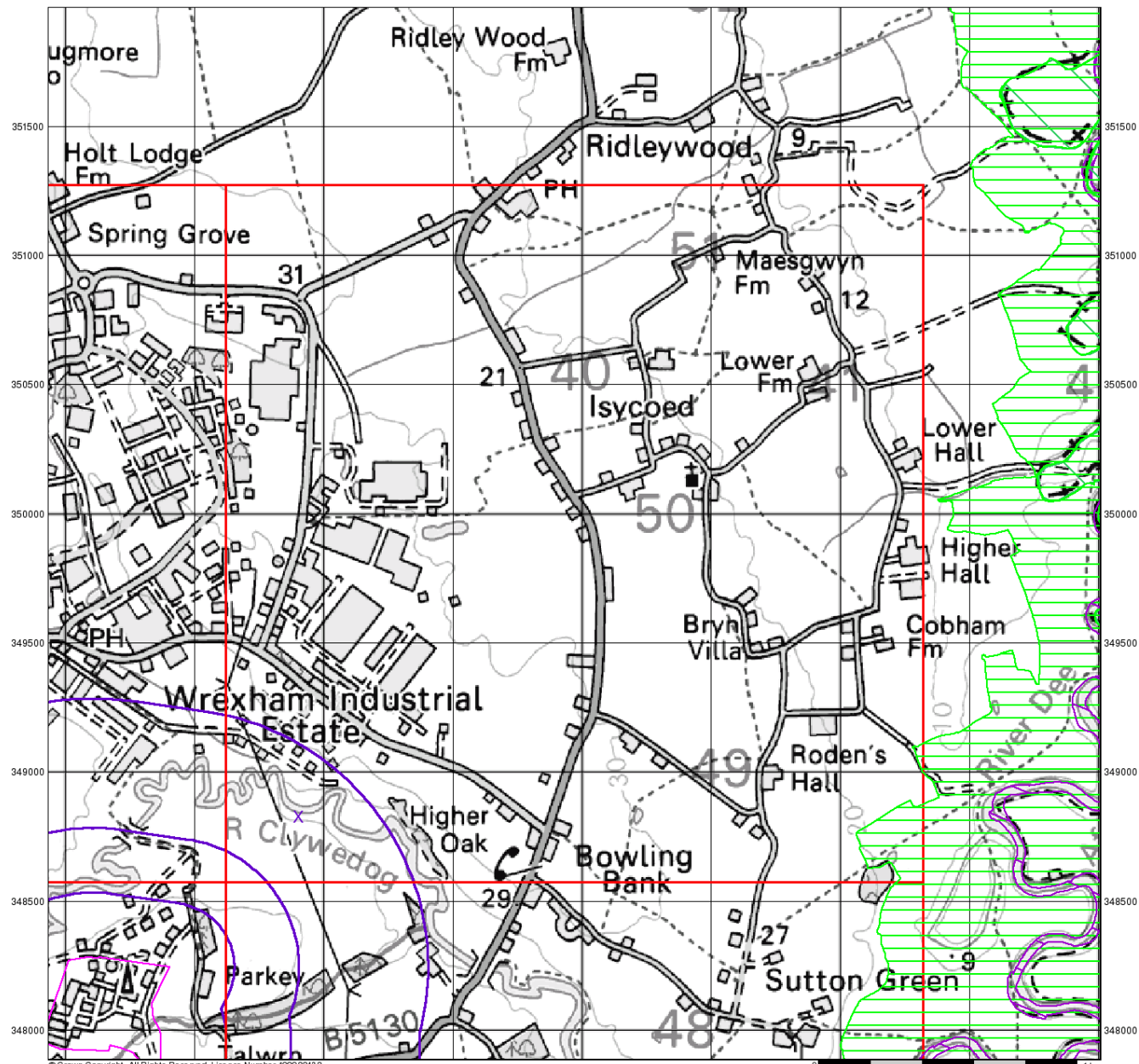
Site Details

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Sensitive Land Uses

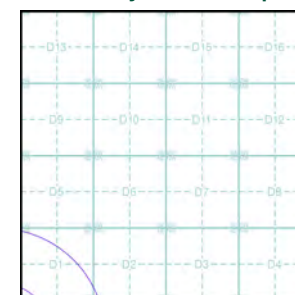
General

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

Sensitive Land Uses

- 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

Site Sensitivity Context Map - Slice D



Order Details

Order Number: 35238207_1_1
 Customer Ref: 305001-00001 50065-29 ARS
 National Grid Reference: 338900, 348830
 Slice: D
 Site Area (Ha): 17.46
 Search Buffer (m): 1000

Site Details

Wales & West Utilities Ltd, Maelor Works, Marchwiell, WREXHAM, Clwyd, LL13 0UW



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 Fax: 0844 844 9951
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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

35238207_1_1

Customer Reference:

305001-00001 50065-29 ARS

National Grid Reference:

338900, 348830

Slice:

D

Site Area (Ha):

17.46

Search Buffer (m):

1000

Site Details:

Wales & West Utilities Ltd, Maelor Works
Marchwiel
WREXHAM
Clwyd
LL13 0UW

Client Details:

Ms C Coldrey
Worley Parsons Ltd
3-8 Redcliffe Parade West
Bristol
BS1 6SP

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	4
Hazardous Substances	-
Geological	5
Industrial Land Use	-
Sensitive Land Use	-
Data Currency	6
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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 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 the attached 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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Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1				2
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 1			Yes	
Pollution Incidents to Controlled Waters	pg 1				5
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters					
Registered Radioactive Substances					
River Quality	pg 2		1		1
River Quality Biology Sampling Points	pg 2				1
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability	pg 2	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Source Protection Zones	pg 3	2			2
Extreme Flooding from Rivers or Sea without Defences	pg 3	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 3	Yes		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
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
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					
Geological					
BGS Recorded Mineral Sites					
BGS 1:625,000 Solid Geology	pg 5	Yes	n/a	n/a	n/a
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 5	Yes	n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 5		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 5	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries (50m)				n/a	n/a
Fuel Station Entries					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
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					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: Prysmian Cables & Systems Ltd Property Type: Insulated Wires & Cables Location: Wrexham Ind Estate Wrexham Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: CM0041701 Permit Version: 2 Effective Date: 4th October 1994 Issued Date: 4th October 1994 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Cooling Water Discharge: Freshwater Stream/River Environment: Receiving Water: River Clywedog Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	D1SE (E)	866	1	339050 348820
1	Discharge Consents Operator: Bicc Cables Ltd Property Type: Insulated Wires & Cables Location: Wrexham Ind Estate Wrexham Authority: Environment Agency, Welsh Region Catchment Area: River Dee Reference: Cm0041701 Permit Version: 1 Effective Date: 25th April 1967 Issued Date: 25th April 1967 Revocation Date: 3rd October 1994 Discharge Type: Trade Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: River Clywedog Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	D1SE (E)	866	1	339050 348820
	Nearest Surface Water Feature	D1SW (SW)	478	-	338755 348593
2	Pollution Incidents to Controlled Waters Property Type: Process Location: B I C C Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 19th June 1991 Incident Reference: 2821 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	D1SE (E)	891	1	339100 348800
3	Pollution Incidents to Controlled Waters Property Type: Process Location: Bicc Discharge, Point On River Clywedog Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 27th August 1991 Incident Reference: 3186 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	D1SE (SE)	918	1	339200 348700
4	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Other Location: Pickhill Bridge Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Mechanical Failure Incident Date: 25th August 1994 Incident Reference: 20996 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Bypass Of Treatment Facilities Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	D1NW (N)	944	1	338800 349100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Surface Water Outfall Location: Pickhill Bridge Authority: Environment Agency, Welsh Region Pollutant: Sewage Fungus Note: Poor Operational Practise Incident Date: 1st December 1994 Incident Reference: 21924 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	D1SE (E)	957	1	339100 348900
6	Pollution Incidents to Controlled Waters Property Type: Not Given Location: At Consented Discharge Point Of Bicc, Wrexham Industrial Estate, WREXHAM Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Weather Incident Date: 22nd January 1997 Incident Reference: 30941 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	D1SE (E)	986	1	339250 348750
	River Quality Name: Clywedog GQA Grade: River Quality B Reach: Conf.Redwithr Bk. - O/F Five Fords Stw Estimated Distance (km): 4.8 Flow Rate: Flow less than 1.25 cumecs Flow Type: River Year: 2000	D1NW (NW)	61	1	338811 348911
	River Quality Name: Clywedog GQA Grade: River Quality B Reach: Conf.Dee - Conf.Red'R Bk. Estimated Distance (km): 4 Flow Rate: Flow less than 2.5 cumecs Flow Type: River Year: 2000	D1SW (S)	717	1	338897 348801
7	River Quality Biology Sampling Points Name: Clywedog (Dee) Reach: Confluence River Dee To Confluence Red'R Brook Estimated Distance: 4.00 Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 1995 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2000 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2002 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2003 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2004 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2005 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2006 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2007 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2008 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2009 GQA Grade: River Quality Biology GQA Grade B - Good	D1NW (NW)	854	1	338800 349000
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	D1SW (S)	0	1	338899 348684

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	D1SW (W)	0	1	338904 348827
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	(NW)	0	1	338507 349156
	Drift Deposits Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 16 West Cheshire Scale: 1:100,000	D1SW (SW)	0	1	338821 348660
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(NW)	0	2	338452 349183
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	D1SW (W)	0	2	338904 348827
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	D1SE (SE)	0	2	339026 348665
8	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	D1SW (W)	0	1	338674 348875
9	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	D1SW (W)	0	1	338843 348832
10	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Zone I (Inner Protection Zone): Travel time of 50 days or less to the groundwater source.	(W)	759	1	338289 349072
11	Source Protection Zones Name: Calpso Drinks (Wrexham) Source: Environment Agency, Head Office Reference: We097 Type: Groundwater Source	(W)	815	1	338240 349090
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	D1SW (W)	0	1	338904 348827
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Boundary Accuracy: As Supplied	D1SW (W)	0	1	338904 348827
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	7	338904 348827

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian and Triassic sandstones, undifferentiated, including Bunter and Keuper	D1SW (W)	0	2	338904 348827
	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.	D1SW (W)	0	3	338904 348827
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards No Hazard				
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SW (S)	0	2	338904 348800
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	D1SW (W)	50	2	338904 348827
	Potential for Ground Dissolution Stability Hazards No Hazard				
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SW (W)	0	2	338904 348827
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SW (S)	0	2	338904 348800
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	D1SW (W)	50	2	338904 348827
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SW (W)	0	2	338904 348827
	Radon Potential - Radon Affected Areas Affected Area: The property is in a lower probability radon area, as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	D1SW (W)	0	2	338904 348827
	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	D1SW (W)	0	2	338904 348827

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Cheshire West and Chester Council - Environmental Health Department Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Wrexham County Borough Council - Public Protection Department	April 2009 August 2008 May 2011	Annually Not Applicable Annual Rolling Update
Discharge Consents Environment Agency - Welsh Region	April 2011	Quarterly
Enforcement and Prohibition Notices Environment Agency - North West Region Environment Agency - Welsh Region	May 2011 May 2011	Quarterly Quarterly
Integrated Pollution Controls Environment Agency - North West Region Environment Agency - Welsh Region	October 2008 October 2008	Not Applicable Not Applicable
Integrated Pollution Prevention And Control Environment Agency - North West Region Environment Agency - Welsh Region	April 2011 April 2011	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Cheshire West and Chester Council - Environmental Health Department Wrexham County Borough Council - Environmental Health Department	December 2008 February 2011 November 2010	Not Applicable Annually Annual Rolling Update
Local Authority Pollution Prevention and Controls Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Cheshire West and Chester Council - Environmental Health Department Wrexham County Borough Council - Environmental Health Department	December 2008 February 2011 November 2010	Not Applicable Annually Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Cheshire West and Chester Council - Environmental Health Department Wrexham County Borough Council - Environmental Health Department	December 2008 June 2011 November 2010	Not Applicable Annually Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	March 2011	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - North West Region Environment Agency - Welsh Region	May 2011 May 2011	Monthly Monthly
Prosecutions Relating to Controlled Waters Environment Agency - North West Region Environment Agency - Welsh Region	May 2011 May 2011	Monthly Monthly
Registered Radioactive Substances Environment Agency - North West Region Environment Agency - Welsh Region	April 2011 April 2011	Quarterly Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	January 2011	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	January 2011	Annually
Substantiated Pollution Incident Register Environment Agency - North West Region - South Area Environment Agency Wales - North Area	April 2011 April 2011	Quarterly Quarterly

Agency & Hydrological	Version	Update Cycle
Water Abstractions Environment Agency - Welsh Region	January 2011	Quarterly
Water Industry Act Referrals Environment Agency - North West Region Environment Agency - Welsh Region	January 2011 January 2011	Quarterly Quarterly
Groundwater Vulnerability Environment Agency - Head Office	January 2011	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2010	Annually
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	October 2010	Annually
Source Protection Zones Environment Agency - Head Office	April 2011	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	April 2011	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	April 2011	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	April 2011	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	April 2011	Quarterly
Flood Defences Environment Agency - Head Office	April 2011	Quarterly

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - North West Region - South Area Environment Agency Wales - North Area	April 2011 April 2011	Quarterly Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North West Region Environment Agency - Welsh Region	October 2008 October 2008	Not Applicable Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North West Region - South Area Environment Agency Wales - North Area	January 2011 January 2011	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North West Region - South Area Environment Agency Wales - North Area	January 2011 January 2011	Quarterly Quarterly
Local Authority Landfill Coverage Cheshire County Council (now part of Cheshire East Council) - Environmental Planning Department Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department Wrexham County Borough Council	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Cheshire County Council (now part of Cheshire East Council) - Environmental Planning Department Wrexham County Borough Council Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department	February 2005 June 2003 May 2000	Not Applicable Not Applicable Not Applicable
Registered Landfill Sites Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003	Not Applicable Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	May 2010	Bi-Annually
Explosive Sites Health and Safety Executive	January 2011	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Wrexham County Borough Council - Planning Department Cheshire West and Chester Council - Planning Department Cheshire County Council (now part of Cheshire East Council) - Planning Department Chester City Council (now part of Cheshire West and Chester Council)	December 2010 February 2011 July 2008 October 2008	Annual Rolling Update Annually Annual Rolling Update Not Applicable
Planning Hazardous Substance Consents Wrexham County Borough Council - Planning Department Cheshire West and Chester Council - Planning Department Cheshire County Council (now part of Cheshire East Council) - Planning Department Chester City Council (now part of Cheshire West and Chester Council)	December 2010 February 2011 July 2008 October 2008	Annual Rolling Update Annually Annual Rolling Update Not Applicable

Geological	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	April 2011	Bi-Annually
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	January 2006	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	February 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2010	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	May 2007	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	May 2007	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	February 2011	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2011	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt Chester City Council (now part of Cheshire West and Chester Council)	May 2011	As notified
Areas of Unadopted Green Belt Chester City Council (now part of Cheshire West and Chester Council)	May 2011	As notified
Areas of Outstanding Natural Beauty Natural England Countryside Council for Wales	April 2011 November 2010	Bi-Annually Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside) Natural England	August 2008 October 2010	Annually Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Wrexham County Borough Council Natural England	December 2010 March 2011	Bi-Annually Bi-Annually
Marine Nature Reserves Countryside Council for Wales	November 2010	Bi-Annually
National Nature Reserves Countryside Council for Wales	November 2010	Bi-Annually
National Parks Natural England	August 2010	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	March 2003	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) The National Assembly for Wales - GI Services (Department of Planning & Countryside)	February 2011 October 2005	Annually Annually
Ramsar Sites Countryside Council for Wales	May 2011	Bi-Annually
Sites of Special Scientific Interest Natural England Countryside Council for Wales	March 2011 November 2010	Bi-Annually Bi-Annually
Special Areas of Conservation Natural England Countryside Council for Wales	March 2011 November 2010	Bi-Annually Bi-Annually
Special Protection Areas Countryside Council for Wales	November 2010	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Health Protection Agency	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	The Coal Authority - Mining Report Service 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
4	Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	Telephone: 0113 2613333 Fax: 0113 230 0879
5	Countryside Council for Wales Plas Penrhose, Fford Penrhos, Bangor, Gwynedd, LL57 2LQ	Telephone: 01248 385500 Fax: 01248 355782
6	Natural England Northminster House, Northminster Road, Peterborough, Cambridgeshire, PE1 1UA	Telephone: 0845 600 3078 Fax: 01733 455103 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
7	Wrexham County Borough Council Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
-	Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@hpa.org.uk Website: www.hpa.org.uk
-	Landmark Information Group Limited The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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