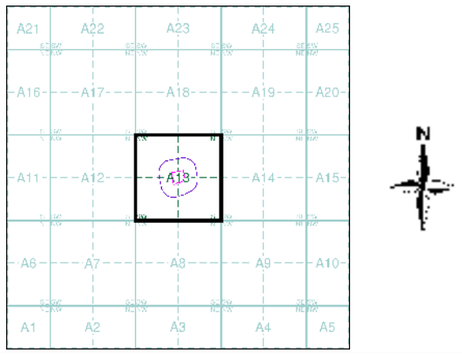


Historical Aerial Photography

Published 2001

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13

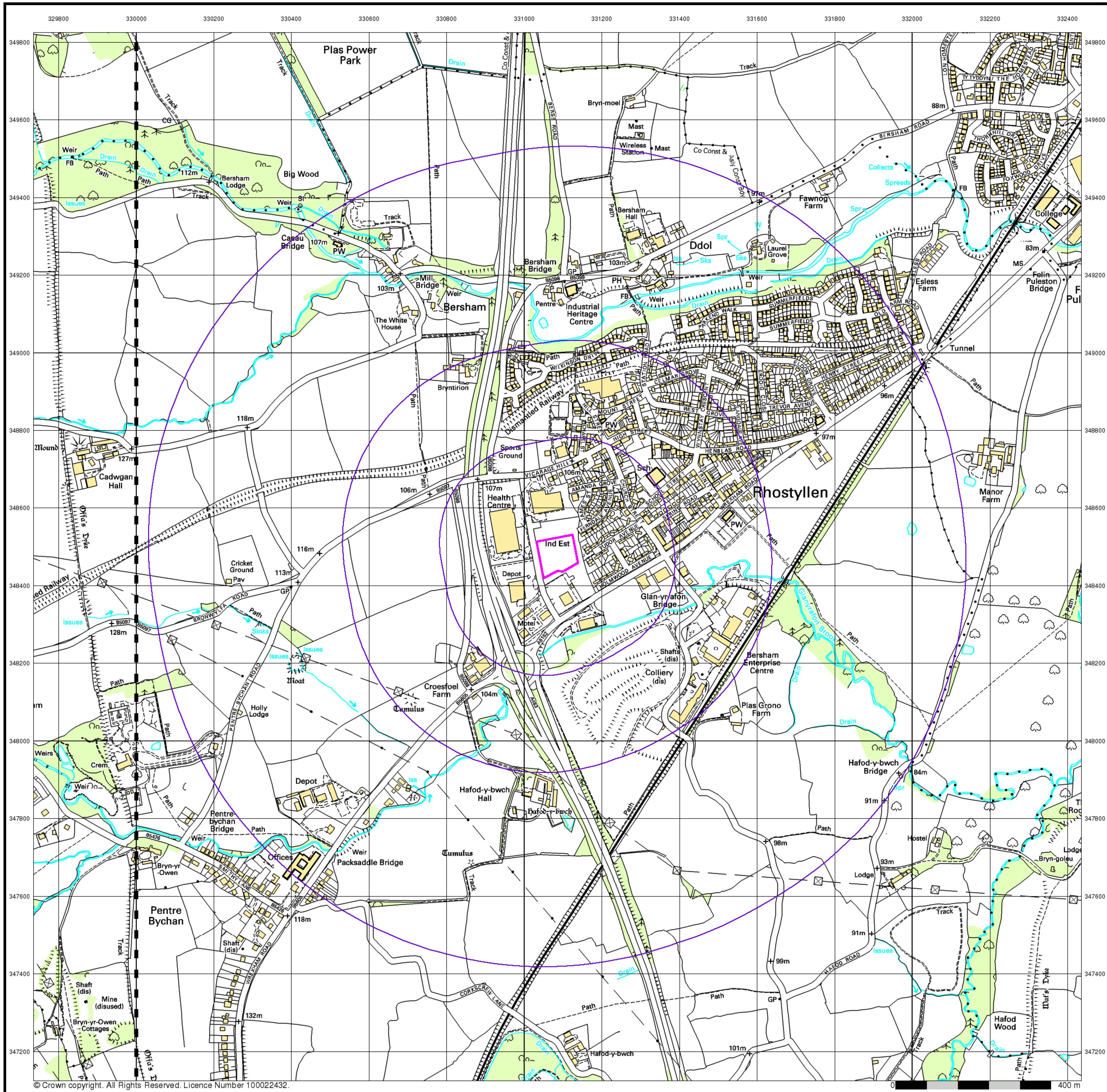


Order Details

Order Number:	347763743_1_1
Customer Ref:	E13803-1
National Grid Reference:	331080, 348480
Slice:	A
Site Area (Ha):	0.82
Search Buffer (m):	100

Site Details

, The Dickens Group of Comp Ltd, Dickens Garage, Croesfoel Industrial Estate, Rhostyllen, Wrexham, LL14 4EJ



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igne

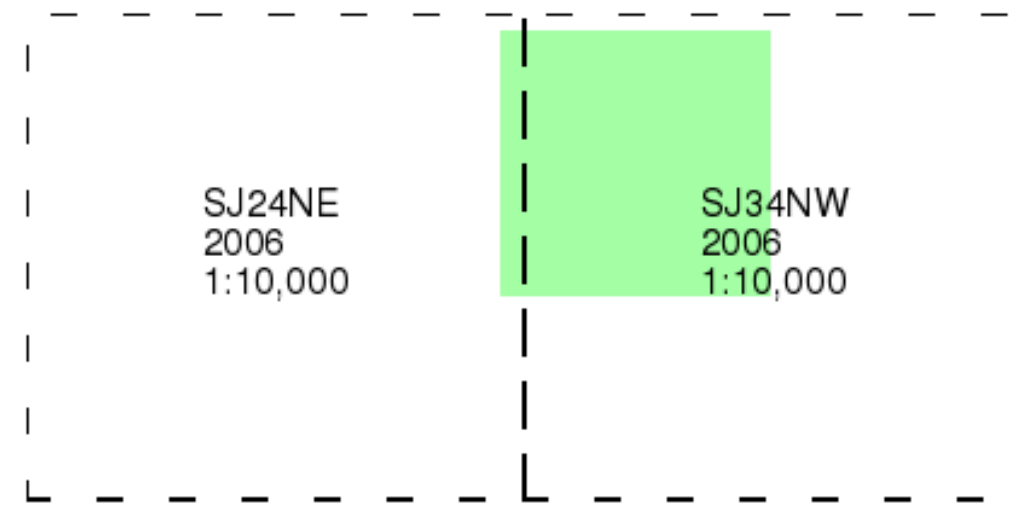
10k Raster Mapping

Published 2006

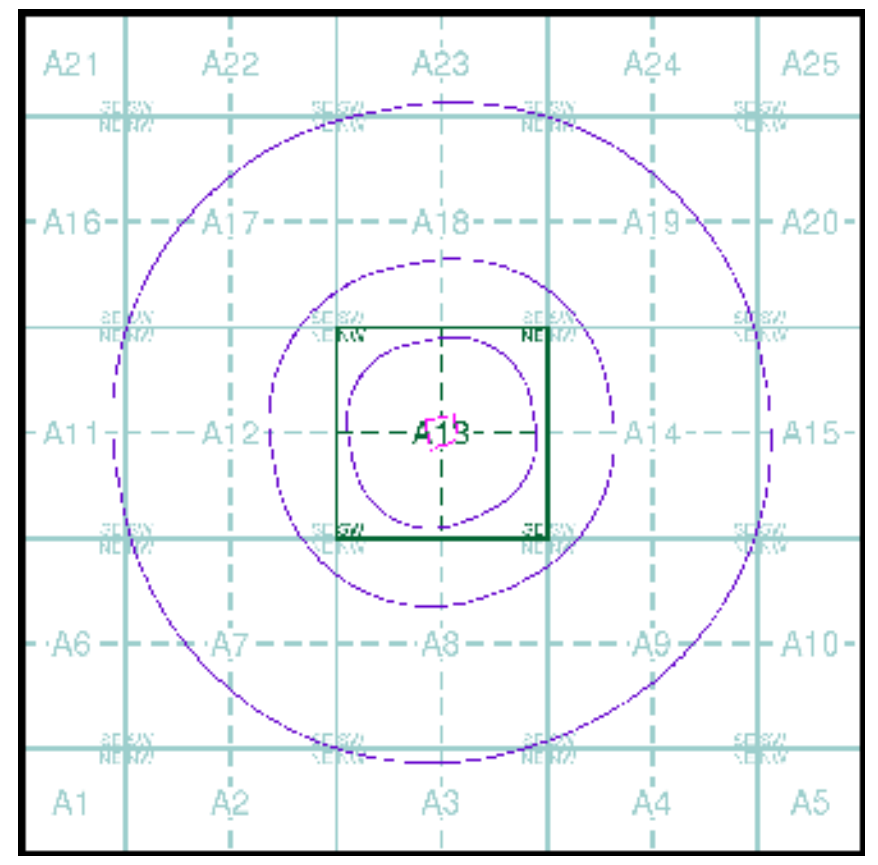
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



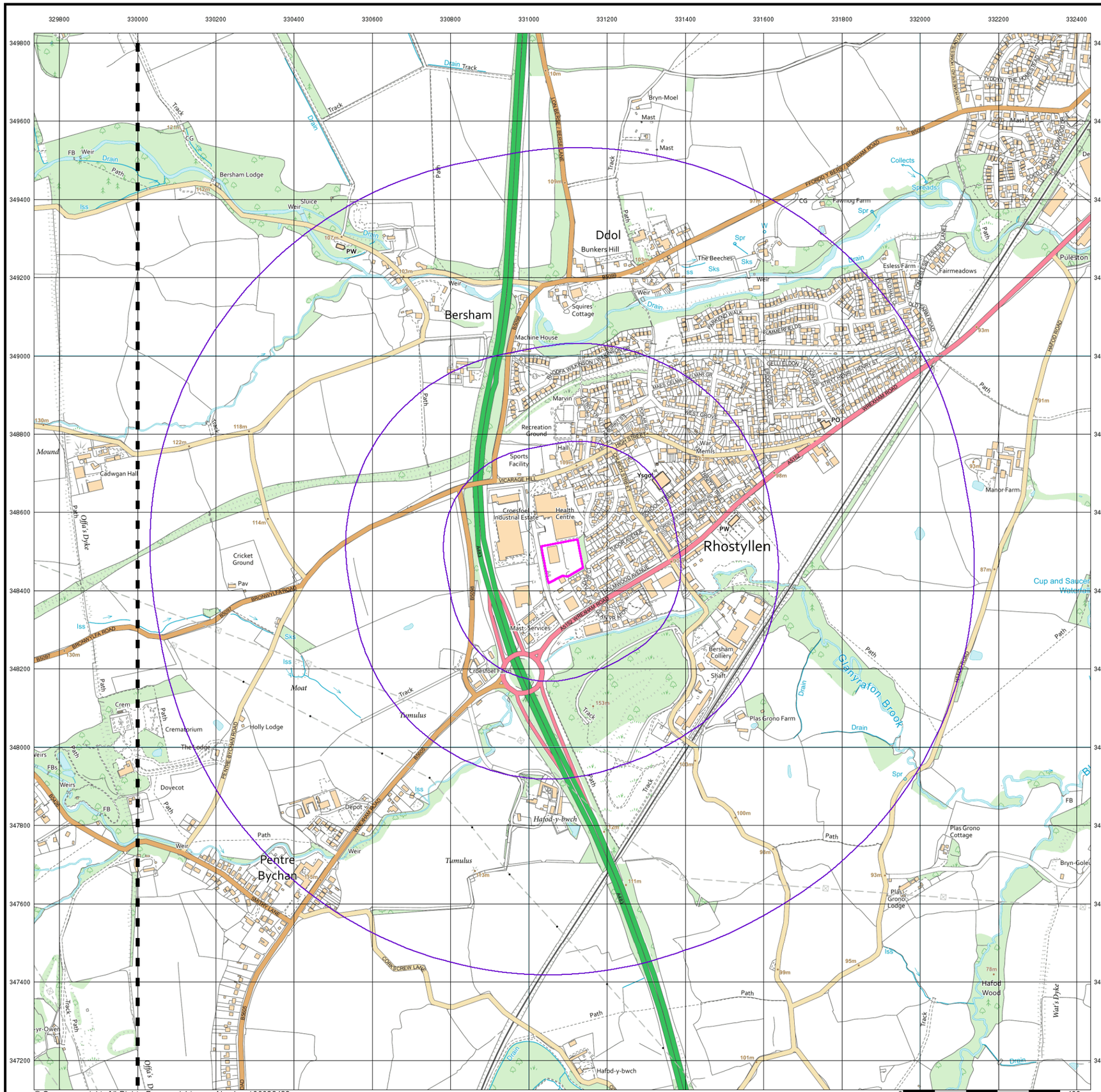
Order Details

Order Number: 347763743_1_1
Customer Ref: E13803-1
National Grid Reference: 331080, 348480
Slice: A
Site Area (Ha): 0.82
Search Buffer (m): 1000

Site Details

, The Dickens Group of Comp Ltd, Dickens Garage, Croesfoel Industrial Estate, Rhostyllen, Wrexham, LL14 4EJ

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



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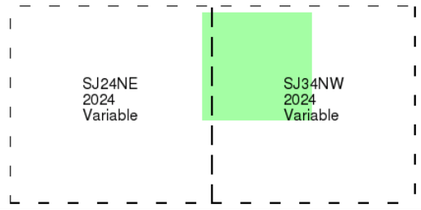
VectorMap Local

Published 2024

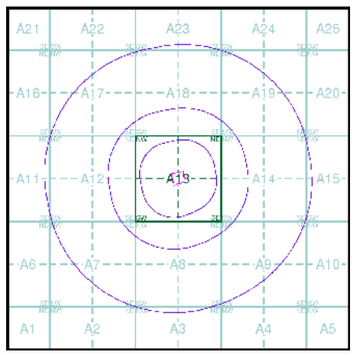
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	347763743_1_1
Customer Ref:	E13803-1
National Grid Reference:	331080, 348480
Slice:	A
Site Area (Ha):	0.82
Search Buffer (m):	1000

Site Details

, The Dickens Group of Comp Ltd, Dickens Garage, Croesfoel Industrial Estate, Rhostyllen, Wrexham, LL14 4EJ

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ENCLOSURE D

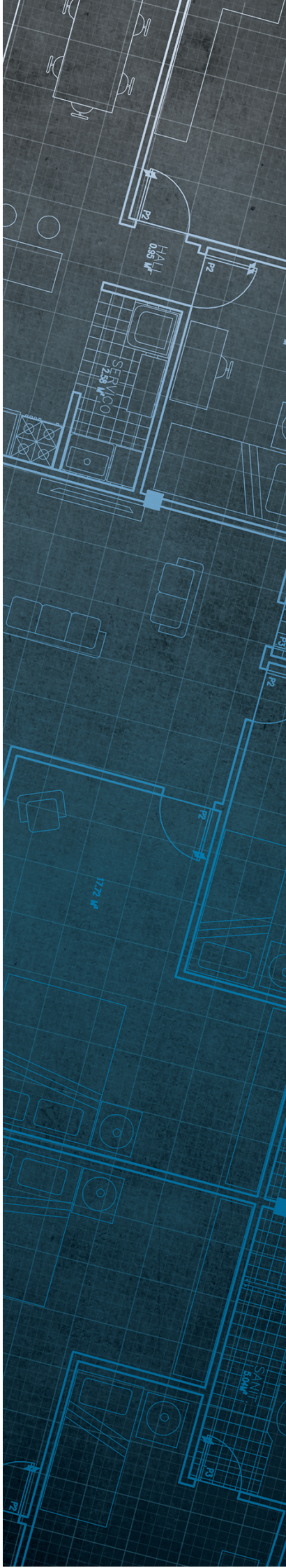
Coal Authority Consultants Coal Mining Report
(11 pages)

The Coal Authority

Consultants

Coal Mining Report

Dickens Garage
Croesfoel Industrial Estate
Rhostyllen
Wrexham
LL14 4EJ



Date of enquiry:	**10 July 2024**
Date enquiry received:	**10 July 2024**
Issue date:	**10 July 2024**
Our reference:	**51003436415001**
Your reference:	**33403/E13803/1**

Consultants

Coal Mining Report

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

Client name

DTS Raeburn

Enquiry address

Dickens Garage
Croesfoel Industrial Estate
Rhostyllen
Wrexham
LL14 4EJ



Approximate position of property

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+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

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@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	POWELL	Coal	3U2C	286	North-West	6.0	South-East	110	1960
unnamed	POWELL	Coal	3U2B	297	Beneath Property	4.4	South	110	1955
unnamed	POWELL	Coal	3U2E	301	South-East	1.7	South	110	1940
unnamed	TWO YARD	Coal	3U36	309	Beneath Property	3.0	South	170	1945
unnamed	TWO YARD	Coal	3U35	323	South-West	5.6	South	170	1940
unnamed	QUAKER	Coal	3U6J	324	Beneath Property	4.8	South	150	1910
unnamed	MAIN	Coal	3V4P	348	Beneath Property	6.6	South	240	1900
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	3U7G	435	West	4.1	South	80	1973
unnamed	WALL AND BENCH	Coal	3VIV	449	North-West	3.5	South-East	100	1967
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	3U7F	449	South-East	2.3	South	80	1965
unnamed	WALL AND BENCH	Coal	3VIW	453	Beneath Property	3.5	South	93	1967
unnamed	WALL AND BENCH	Coal	3VIX	458	South-East	3.1	South-East	97	1966

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

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Abandoned mine plan catalogue numbers

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

NW775	14245	16713
13689	14312	NW580
NW698	NW527	NW579

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

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

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

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

Site investigations
None recorded within 50 metres of the enquiry boundary.

Remediated sites
None recorded within 50 metres of the enquiry boundary.

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

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

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

Mine gas
None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes
None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

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

Court orders
None recorded.

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

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

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

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

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Section 4 – Further information

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

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

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

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

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Section 5 – Data definitions

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

Past underground coal mining

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

Probable unrecorded shallow workings

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

Spine roadways at shallow depth

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

Mine entries

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

Abandoned mine plan catalogue numbers

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

Outcrops

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

Geological faults, fissures and breaklines

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

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

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

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

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

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

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

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

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

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

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

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

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

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

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

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

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

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

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The Coal Authority

Summary of findings

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

Key

Approximate position of the enquiry boundary shown



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0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com

ENCLOSURE E

Environmental Database Information
(49 pages)

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
347763743_1_1

Customer Reference:
E13803-1

National Grid Reference:
331080, 348480

Slice:
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Site Area (Ha):
0.82

Search Buffer (m):
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Site Details:

, The Dickens Group of Comp Ltd, Dickens Garage
Croesfoel Industrial Estate
Rhostyllen
Wrexham
LL14 4EJ

Client Details:

Mr J Stokes
DTS Raeburn
Moor Lane
Witton
Birmingham
West Midlands
B6 7HG

Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	17
Hazardous Substances	-
Geological	19
Industrial Land Use	24
Sensitive Land Use	35
Data Currency	36
Data Suppliers	42
Useful Contacts	43

Introduction

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

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Report Version v53.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2		1	8	8
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
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	pg 6		1		
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 6		Yes		
Pollution Incidents to Controlled Waters	pg 6		2	3	3
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 8			1	
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 8				(*4)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 9	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 9	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 9	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 9		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 9		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
OS Water Network Lines	pg 9		2	7	54

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 17			3	
Local Authority Landfill Coverage	pg 17	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 17				2
Potentially Infilled Land (Water)	pg 17			3	7
Registered Landfill Sites					
Registered Waste Transfer Sites	pg 18			1	
Registered Waste Treatment or Disposal Sites					
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					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 19	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 19	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 21			3	
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 22	Yes	n/a	n/a	n/a
Mining Instability	pg 22	Yes	n/a	n/a	n/a
Man-Made Mining Cavities	pg 22			1	
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 22	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 22	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 22	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 22	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 23	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 23	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 23	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	pg 24	1	10	43	9
Fuel Station Entries	pg 30		1		1
Points of Interest - Commercial Services	pg 30		2	11	4
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 31	1	3	9	1
Points of Interest - Public Infrastructure	pg 32		4	3	8
Points of Interest - Recreational and Environmental	pg 34			3	1
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 35			1	8
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					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	0	1	331083 348450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	0	1	331100 348500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (SW)	0	1	331083 348479
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SW (S)	19	1	331083 348400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (W)	138	1	330900 348550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	145	1	331150 348300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	168	1	331200 348300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	169	1	331083 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	176	1	331000 348250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	176	1	331100 348250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (S)	219	1	331083 348200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	228	1	330850 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	261	1	330850 348700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	283	1	331400 348350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	298	1	330850 348750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	306	1	331400 348300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	319	1	331083 348100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	332	1	330800 348750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	334	1	331400 348250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	369	1	331050 348050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	369	1	331083 348050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (SE)	391	1	331300 348100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	392	1	330650 348600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	404	1	331400 348150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	406	1	330650 348650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	416	1	331350 348100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	419	1	331083 348950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	422	1	331100 348000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	433	1	330600 348479
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	435	1	331300 348050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	469	1	331083 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	471	1	331100 347950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	475	1	331050 349000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (SE)	480	1	331300 348000
1	**Discharge Consents** Operator: Wrexham Maelor Borough Council Property Type: Undefined Or Other Location: Rhostyllen Groesfoel Ind Park Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0151301 Permit Version: 1 Effective Date: 6th April 1987 Issued Date: 6th April 1987 Revocation Date: 18th March 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Glan-Yr-Afon,Brook **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A13SW (S)	180	2	331070 348240
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso At Colliery Road Rhostyllen, Nr 172 Wrexham Rd, Wrexham, Ll14 4fg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0356101 Permit Version: Not Supplied Effective Date: 21st October 2019 Issued Date: 21st October 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A13SE (E)	290	2	331419 348387

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, LI14 4fg Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cg0356101 Permit Version: 4 Effective Date: 31st March 2009 Issued Date: 19th March 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A13SE (E)	290	2	331419 348387
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, LI14 4fg Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cg0356101 Permit Version: 4 Effective Date: 31st March 2009 Issued Date: 19th March 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A13SE (E)	290	2	331419 348387
2	**Discharge Consents** Operator: Arlington Wrexham Property Type: Undefined Or Other Location: Wrexham Rhostyllen Car Sales Depot Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0042401 Permit Version: 1 Effective Date: 19th June 1967 Issued Date: 19th June 1967 Revocation Date: 22nd December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Glan-Yr-Afon Brook **Status:** **Consent expired** Positional Accuracy: Located by supplier to within 10m	A13SE (E)	302	2	331420 348350
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, LI14 4fg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0356101 Permit Version: 3 Effective Date: 14th September 2006 Issued Date: 14th September 2006 Revocation Date: 16th April 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status:** **Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	305	2	331430 348370

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, Ll14 4fg Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cg0356101 Permit Version: 2 Effective Date: 31st March 2008 Issued Date: 21st January 2005 Revocation Date: 13th September 2006 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	305	2	331430 348370
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Colliery Road Rhostyllen, Ll14 4fg Authority: Natural Resources Wales Catchment Area: Not Given Reference: CG0356101 Permit Version: 1 Effective Date: 21st July 1994 Issued Date: 21st July 1994 Revocation Date: 30th March 2008 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A14SW (E)	305	2	331430 348370
4	**Discharge Consents** Operator: British Coal Corporation Property Type: Undefined Or Other Location: Bersham Colliery Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0096401 Permit Version: 1 Effective Date: 21st October 1983 Issued Date: 21st October 1983 Revocation Date: 11th July 1991 Discharge Type: Miscellaneous Discharges - Surface Water Discharge Environment: Not Supplied Receiving Water: Glan Yr Afon Rhostyllen **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A14SW (E)	466	2	331600 348400
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Rhostyllen Bersham Colliery Cso, Nr 95 Wrexham Rd, Rhostyllen, Wrexham, Ll14 4dw Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Cm0199101 Permit Version: Not Supplied Effective Date: 24th September 2019 Issued Date: 24th September 2019 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	505	2	331641 348418

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Bersham Colliery Cso, Wrexham Road, Rhostyllen, Wrexham, Ll14 4dw Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0199101 Permit Version: 2 Effective Date: 31st March 2004 Issued Date: 19th March 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	505	2	331641 348418
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Bersham Colliery Cso, Wrexham Road, Rhostyllen, Wrexham, Ll14 4dw Authority: Natural Resources Wales Catchment Area: BLACK BROOK (CLYWEDOG) Reference: Cm0199101 Permit Version: 2 Effective Date: 31st March 2004 Issued Date: 19th March 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Glanyrafon Brook **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	505	2	331641 348418
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Rhostyllen Bersham Colliery - Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0199101 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 30th March 2004 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Glanrafon Brook **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A14NW (E)	564	2	331700 348500
6	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Undefined Or Other Location: Rhostyllen Combined Sewerage (See C, Combined Sewerage (See Cm 1991 Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0050001 Permit Version: 1 Effective Date: 20th May 1968 Issued Date: 20th May 1968 Revocation Date: 22nd December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Glan-Yr-Afon Brook **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A14SW (E)	584	2	331700 348300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: The Occupier Property Type: Domestic Property (Single) Location: 14 Ddol Bersham Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0053101 Permit Version: 1 Effective Date: 31st October 1968 Issued Date: 31st October 1968 Revocation Date: 31st October 1996 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Clywedog **Status: Lapsed (under Environment Act 1995, Schedule 23)** Positional Accuracy: Located by supplier to within 100m	A18NE (NE)	697	2	331380 349180
8	**Discharge Consents** Operator: Exors Of Col G E Fitzhugh Deceased Property Type: Undefined Or Other Location: Bersham Bersham Smithy & Mill Terra, Bersham Smithy & Mill Terrace/ Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0014401 Permit Version: 1 Effective Date: 13th November 1962 Issued Date: 13th November 1962 Revocation Date: 22nd December 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: To Land **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	827	2	330450 349100
9	**Discharge Consents** Operator: Manweb Plc Property Type: Business Services Location: Rhostyllen - Manweb Offices Smithy, Smithy Lane. Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0231201 Permit Version: 1 Effective Date: 28th December 1990 Issued Date: 28th December 1990 Revocation Date: 21st November 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Pentrebychan Brook **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	955	2	330390 347730
10	**Local Authority Pollution Prevention and Controls** Name: Rhostyllen Service Station Location: Wrexham Road, Rhostyllen, WREXHAM, Clwyd, LL14 4EJ Authority: Wrexham County Borough Council, Environmental Health Department Permit Reference: WCBC/PG1/14(16)V3 Dated: 23rd December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A13SW (S)	91	3	331062 348329
	Nearest Surface Water Feature	A13SE (S)	162	-	331139 348276
11	**Pollution Incidents to Controlled Waters** Property Type: Warehouses Location: Rhostyllen Roundabout Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Vandalism Incident Date: 3rd January 1995 Incident Reference: 22217 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	A13SE (S)	129	4	331100 348300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Pollution Incidents to Controlled Waters** Property Type: Land Location: RHOSTYLLEN Authority: Environment Agency, Welsh Region Pollutant: Chlorinated Water Note: Poor Operational Practise Incident Date: 24th August 1991 Incident Reference: 3201 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	A13SW (S)	160	4	331070 348260
12	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Rhos Fawr Cottage, Llen Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Blocked Sewer Incident Date: 25th July 1996 Incident Reference: 29260 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	A13SE (E)	268	4	331400 348400
13	**Pollution Incidents to Controlled Waters** Property Type: Road (Lost Load) Location: Esso Garage In, Plau Tree, QUEENSFERRY Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Mechanical Failure Incident Date: 14th October 1995 Incident Reference: 26238 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	A13NE (NE)	385	4	331400 348800
14	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Colliery End, By River Morlais Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Not Supplied Incident Date: 13th December 1996 Incident Reference: 30721 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	A14SW (E)	485	4	331620 348400
14	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Bersham Colliery, Storm Sewage Overflow Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 21st February 1997 Incident Reference: 31211 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	A14SW (E)	514	4	331650 348410
15	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Bersham Enterprise Centre, Rhostellen Authority: Environment Agency, Welsh Region Pollutant: Sewage - Septic Tank Effluent Note: Deliberate Act Incident Date: 9th July 1996 Incident Reference: 29187 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	A14SW (E)	565	4	331700 348400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Pollution Incidents to Controlled Waters** Property Type: Waste Handling Facilities Location: Packsaddle Bridge Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Accidental Spillage/Leakage Incident Date: 14th November 1995 Incident Reference: 26617 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	867	4	330500 347750
	River Quality Name: Clywedog GQA Grade: River Quality A Reach: Conf.Black Bk.Erddig Pk-Conf.Trib. Estimated Distance (km): 5.3 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A18SW (N)	491	4	331027 349012
	Water Abstractions Operator: The National Trust Licence Number: 24/67/7/0169 Permit Version: 100 Location: Spring Authority: Environment Agency, Welsh Region Abstraction: Household Water Supply: Drinking; Cooking; Sanitary; Washing; (Small Garden) 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: 6th May 1977 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15SE (E)	1331	4	332440 348180
	Water Abstractions Operator: Mr N Morris Licence Number: 24/67/7/0135 Permit Version: 101 Location: Tributary Of River Gwenfro Authority: Natural Resources Wales Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: At Lower Berse Farm Authorised Start: 04 January Authorised End: 09 June Permit Start Date: 13th June 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1529	2	331100 350060
	Water Abstractions Operator: Mr N Morris Licence Number: 24/67/7/0135 Permit Version: 101 Location: Tributary Of River Gwenfro Authority: Natural Resources Wales Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: At Lower Berse Farm Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 13th June 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A23NE (N)	1529	2	331100 350060

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Mr N Morris Licence Number: 24/67/7/0135 Permit Version: 101 Location: Tributary Of River Gwenfro Authority: Natural Resources Wales Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: At Lower Berse Farm Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 13th June 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A24NE (NE)	1708	2	331800 350100
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A13NW (SW)	0	2	331083 348479
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (SW)	0	2	331083 348479
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (SW)	0	2	331083 348479
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (S)	159	2	331138 348278
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (S)	160	2	331138 348277
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (S)	213	2	331090 348209
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
17	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 834.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A13SE (S)	164	5	331139 348274
18	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 123.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A13SW (S)	201	5	331041 348219

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A13SW (S)	300	5	330947 348138
20	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 2	A8NW (S)	323	5	330949 348113
21	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A8NW (S)	323	5	330944 348114
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A8NW (S)	334	5	330949 348101
23	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 59.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 2	A8NW (S)	342	5	330951 348092
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A8NW (S)	342	5	330951 348092
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 269.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A8NW (S)	380	5	330926 348060
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 739.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A18SW (N)	501	5	331060 349027
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A14SW (E)	531	5	331667 348415

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 174.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A14SW (E)	539	5	331675 348410
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7NE (SW)	558	5	330694 347990
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 335.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7NE (SW)	558	5	330694 347990
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A8NW (SW)	585	5	330762 347910
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 709.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A18SE (N)	616	5	331308 349119
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 282.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SW (E)	620	5	331716 348234
34	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A18SE (N)	625	5	331287 349134
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A18SE (N)	626	5	331282 349137
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 674.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A18SE (N)	628	5	331282 349139

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7NE (SW)	631	5	330718 347883
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 279.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A7NE (SW)	634	5	330745 347863
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 131.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A14SW (E)	637	5	331749 348278
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 74.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	657	5	330420 348233
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	657	5	330420 348233
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (SW)	667	5	330427 348184
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 63.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (E)	686	5	331781 348218
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SW (W)	698	5	330365 348284
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SW (W)	700	5	330364 348283

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 133.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SW (W)	707	5	330355 348288
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (E)	714	5	331819 348244
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A14SE (E)	726	5	331814 348194
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A14SE (E)	726	5	331826 348226
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (E)	728	5	331829 348227
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 193.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	741	5	331747 348036
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18NE (NE)	747	5	331395 349227
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 176.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A17NE (NW)	752	5	330746 349209
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 121.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	752	5	330746 349209

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A14SE (E)	757	5	331843 348182
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (SE)	766	5	331835 348140
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14SE (SE)	769	5	331844 348153
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 214.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A14SE (SE)	772	5	331849 348159
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SW (W)	814	5	330237 348343
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 76.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A17NE (NW)	820	5	330591 349205
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1051.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A17NE (NW)	820	5	330591 349205
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SW (W)	832	5	330217 348345
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SW (W)	837	5	330213 348343

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19NW (NE)	849	5	331560 349260
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	852	5	330644 349271
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 209.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SW (W)	863	5	330188 348330
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 655.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pentrebychan Brook Catchment Name: Dee Primacy: 1	A7SE (SW)	872	5	330530 347720
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 66.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	881	5	330582 349271
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	882	5	330584 349273
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	884	5	330591 349279
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 179.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Clywedog Catchment Name: Dee Primacy: 1	A17NE (NW)	889	5	330528 349244
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	889	5	330606 349293

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	893	5	330607 349298
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NE (SE)	912	5	331932 348009
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: Underground Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A9NE (SE)	913	5	331938 348017
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A9NE (SE)	914	5	331937 348013
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 803.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Glanyrafon Brook Catchment Name: Dee Primacy: 1	A9NE (SE)	915	5	331936 348010
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	949	5	330528 349317
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 2	A17NE (NW)	953	5	330524 349319

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	**Licensed Waste Management Facilities (Locations)** Licence Number: WP3994FR Location: Rhostyllen, Wrexham, Clwyd, LL14 4EG Operator Name: Heather Brown Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Effective** Issued: 28th July 2000 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	387	2	331488 348293
80	**Licensed Waste Management Facilities (Locations)** Licence Number: WP3994FR Location: Rhostyllen, Wrexham, Clwyd, LL14 4EG Operator Name: Heather Brown Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Effective** Issued: 28th July 2000 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	387	2	331488 348293
80	**Licensed Waste Management Facilities (Locations)** Licence Number: 37212 Location: Bersham Enterprise Centre, Plas Grono Road, Rhostyllen, Wrexham, LL14 4EG Operator Name: Brown Heather Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Modified** Issued: 28th July 2000 Last Modified: 14th October 2005 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	387	2	331488 348293
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	6	331083 348479
81	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1976	A18NW (N)	712	-	330969 349228
82	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7NE (SW)	857	-	330456 347802
83	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (SE)	271	-	331374 348326
84	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14SW (E)	306	-	331436 348391
85	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A14SW (SE)	383	-	331490 348308
86	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A9NW (SE)	607	-	331614 348081

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A8SE (S)	630	-	331089 347790
88	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A7NE (SW)	631	-	330741 347869
89	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A7NE (SW)	640	-	330673 347903
90	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1879	A8SW (S)	745	-	330933 347683
91	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7NE (SW)	761	-	330496 347899
92	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A19SE (NE)	805	-	331872 348831
93	**Registered Waste Transfer Sites** Licence Holder: H Brown t/a Brown's Mini Skips Licence Reference: EAWML37212 Site Location: Bersham Enterprise Centre, Plas Grono Road, Rhostyllen, WREXHAM, Clwyd, LL14 4EG Operator Location: 36 Chapel Street, Ponciau, WREXHAM, Clwyd, LL14 1SE Authority: Environment Agency Wales, North Area Site Category: Transfer Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 27th July 2000 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Maximum Waste Permitted By Licence Solid, Dry, Non-Haz. Degradable Household Waste (As In Post'98 E.A.Lics & Equivalent To 22.09.01) Solid, Dry, Non-Haz. Inert Materials (As In Post'98 E.A.Lics And Equivalent To 21.00.00) Solid, Dry, Non-Haz. Metal Waste/Scrap Metal (As In Post'98 E.A.Lics And Equivalent To 23.00.00) With Annual Maximum Of Prohibited Waste: Liquid Wastes Other Waste / Waste Not Otherwise Specified Sludge Wastes Special Waste (As In Epa 1990:S62 Of 1996 Regs) Waste Solely/Mainly Finely Divided Metals, Dust, Powder, Loose Fibres	A14SW (E)	404	4	331530 348362

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Warwickshire Group	A13NW (SW)	0	1	331083 348479
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (SW)	0	1	331083 348479
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (W)	33	1	331000 348500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18SW (N)	464	1	330969 348974
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18SW (N)	466	1	331000 348981
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NE (W)	478	1	330554 348514
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NE (W)	503	1	330530 348500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18SW (N)	558	1	331018 349078
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19SW (NE)	590	1	331458 349018
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NW (N)	665	1	331014 349186
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NE (NE)	769	1	331402 349248
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NW (N)	796	1	330978 349313
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A7NW (SW)	848	1	330314 348000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A23SW (N)	969	1	331083 349500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A23SW (N)	973	1	331036 349500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 200 - 300 mg/kg Nickel Concentration: 15 - 30 mg/kg	A23SW (N)	976	1	331007 349500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17NE (NW)	990	1	330520 349360
94	**BGS Recorded Mineral Sites** Site Name: Bersham Spoil Tip Location: Bersham, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 35869 Type: Tip **Status: Ceased** Operator: Bersham (Glenside) Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Mine Waste Tip (Colliery) Commodity: Colliery Spoil Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	321	1	331255 348155
95	**BGS Recorded Mineral Sites** Site Name: Bersham Colliery No 1 Shaft Location: Bersham, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 35867 Type: Underground **Status: Ceased** Operator: Ncb North-Western Division, Area No. 5 (North Wales) Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	375	1	331455 348257

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	**BGS Recorded Mineral Sites** Site Name: Bersham Colliery No 2 Shaft Location: Bersham, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 35868 Type: Underground **Status: Ceased** Operator: Ncb North-Western Division, Area No. 5 (North Wales) Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (Undifferentiated) Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	429	1	331460 348175
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NW (SW)	0	7	331083 348479
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (SW)	0	-	331083 348479
	Man-Made Mining Cavities Easting: 331400 Northing: 348200 Distance: 368 Quadrant Reference: A13 Quadrant Reference: SE Bearing Ref: SE Cavity Type: Unknown Commodity: Unknown Solid Geology Detail: No Details Superficial Geology Detail: No Details	A13SE (SE)	368	8	331400 348200
	Non Coal Mining Areas of Great Britain Risk: Rare Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	331083 348479
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	331083 348479
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	159	1	331129 348275
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	331083 348479
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	331082 348483
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	119	1	330924 348424
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	149	1	331004 348662
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	159	1	331129 348275
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	331083 348479
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	331083 348479

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	165	1	331142 348276
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	172	1	331170 348279
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	331083 348479
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	159	1	331129 348275
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	331083 348479
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	17	1	331084 348409
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	0	1	331083 348425
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NW (SW)	0	1	331083 348479
	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	A13SW (S)	0	1	331083 348425
	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	A13NW (SW)	0	1	331083 348479

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	**Contemporary Trade Directory Entries** Name: Arthurs Peugeot Location: Croesfoel Industrial Estate, Rhostyllen, Wrexham, Clwyd, LL14 4BJ Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	0	-	331060 348491
98	**Contemporary Trade Directory Entries** Name: Dickens Wrexham Location: Croesfoel Industrial Estate, Rhostyllen, Wrexham, LL14 4BJ Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (S)	9	-	331086 348428
99	**Contemporary Trade Directory Entries** Name: Huws Gray Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4EJ Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	78	-	330981 348386
99	**Contemporary Trade Directory Entries** Name: European Fine Blanking Ltd Location: Croesfoel Industrial Estate, Rhostyllen, Wrexham, Clwyd, LL14 4BJ Classification: Sheet Metal Work **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	82	-	330980 348379
100	**Contemporary Trade Directory Entries** Name: Esso Location: Wrexham Road Rhostyllen, Rhostyllen, Wrexham, Clwyd, LL14 4EJ Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	90	-	331062 348330
100	**Contemporary Trade Directory Entries** Name: Rhostyllen Service Station Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4EJ Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	91	-	331062 348329
101	**Contemporary Trade Directory Entries** Name: Evans Halshaw Ford Wrexham Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4EJ Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	143	-	331163 348308
102	**Contemporary Trade Directory Entries** Name: T R P Motus Commercials Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4DP Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (E)	221	-	331357 348425
102	**Contemporary Trade Directory Entries** Name: Imperial Commercials Ltd Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DP Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	221	-	331357 348425
102	**Contemporary Trade Directory Entries** Name: T R P Motus Commercials Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DP Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (E)	221	-	331357 348425
102	**Contemporary Trade Directory Entries** Name: Motor Commericials Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DP Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (E)	221	-	331357 348425

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
102	**Contemporary Trade Directory Entries** Name: Randy'S Motor Services Location: 11 Bersham Enterprise Centre,Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SE (E)	254	-	331391 348435
103	**Contemporary Trade Directory Entries** Name: Barie-C-Vaughan & Son Ltd Location: Colliery Garage, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	270	-	331408 348438
104	**Contemporary Trade Directory Entries** Name: Alkemi Mf Technologies Ltd Location: Hill St, Rhostyllen, Wrexham, Clwyd, LL14 4AT Classification: Metal Finishing Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (N)	284	-	331194 348806
105	**Contemporary Trade Directory Entries** Name: Smd Auto Services Location: Mount St, Rhostyllen, Wrexham, Clwyd, LL14 4AU Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SE (NE)	356	-	331256 348862
105	**Contemporary Trade Directory Entries** Name: E R Williams Location: Mount Street, Rhostyllen, Wrexham, LL14 4AU Classification: Engine Rebuilding & Reconditioning **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	366	-	331249 348875
105	**Contemporary Trade Directory Entries** Name: E R Williams Location: Mount Street, Rhostyllen, Wrexham, Clwyd, LL14 4AU Classification: Engine Rebuilding & Reconditioning **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	371	-	331256 348878
105	**Contemporary Trade Directory Entries** Name: Motor Trade Machine Shop Location: Mount Street, Rhostyllen, WREXHAM, Clwyd, LL14 4AU Classification: Engine Rebuilding & Reconditioning **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	371	-	331256 348878
106	**Contemporary Trade Directory Entries** Name: T J Crane Hire Ltd Location: Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	366	-	331490 348359
107	**Contemporary Trade Directory Entries** Name: The Lining & Coating Company Ltd Location: 3, Highgrove Close, Heritage Gardens, Bersham, Wrexham, LL14 4FB Classification: Coating Specialists **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (N)	368	-	330993 348880
108	**Contemporary Trade Directory Entries** Name: J A Soleil Ltd Location: Unit F17, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	394	-	331462 348233
108	**Contemporary Trade Directory Entries** Name: Gareth Shipley Acs Ltd Location: Unit F13, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	420	-	331478 348212

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	**Contemporary Trade Directory Entries** Name: M & M Engineering Services Location: Unit F3, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	414	-	331503 348262
109	**Contemporary Trade Directory Entries** Name: Specialist Communication Systems Location: Unit F4,Bersham Enterprise Centre,Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Telecommunications Equipment & Systems **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SW (SE)	421	-	331508 348257
109	**Contemporary Trade Directory Entries** Name: A R H Technical Services Division Location: Unit F5 Bersham Enterprise Centre,Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SW (SE)	428	-	331514 348254
109	**Contemporary Trade Directory Entries** Name: Microtech Location: Unit D1, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Precision Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	433	-	331530 348274
109	**Contemporary Trade Directory Entries** Name: M.K. Lpg Service Llp Location: Unit F11, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SW (SE)	443	-	331498 348200
109	**Contemporary Trade Directory Entries** Name: Clarity Location: Unit F8, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Classification: Photocopiers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	449	-	331521 348224
109	**Contemporary Trade Directory Entries** Name: Roberts Country Fayre Location: Unit F9-F10, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	449	-	331517 348217
109	**Contemporary Trade Directory Entries** Name: The Wheel Restorer Location: Unit F7, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Classification: Car Painters & Sprayers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	449	-	331527 348233
109	**Contemporary Trade Directory Entries** Name: Chem-Dry North East Wales & Chester Location: Unit F7, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	452	-	331530 348233
109	**Contemporary Trade Directory Entries** Name: Chem-Dry Location: Unit F7, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	452	-	331530 348233

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	**Contemporary Trade Directory Entries** Name: T J Crane Hire Ltd Location: Bersham Enterprise Centre, Colliery Road, Rhostyllen, WREXHAM, Clwyd, LL14 4EG Classification: Crane Hire, Sales & Service **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SW (SE)	452	-	331529 348232
109	**Contemporary Trade Directory Entries** Name: Chemdry Chester Mould & Wrexham Location: Unit F7, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	452	-	331530 348233
110	**Contemporary Trade Directory Entries** Name: Marcher Distributions Location: Unit B10,Bersham Enterprise Centre,Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NE (SE)	419	-	331406 348136
110	**Contemporary Trade Directory Entries** Name: Morton & Jones Location: Unit D3 Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: PVC-U Products - Manufacturers & Suppliers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A14SW (SE)	421	-	331437 348161
110	**Contemporary Trade Directory Entries** Name: Sparkle Services Location: Unit C2, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	423	-	331427 348149
110	**Contemporary Trade Directory Entries** Name: Gareth Shipley A C S Ltd Location: Unit F13 Bersham Enterprise Centre,Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14SW (SE)	423	-	331427 348149
110	**Contemporary Trade Directory Entries** Name: J K L Woodcrafts Location: Unit A1 Bersham Enterprise Centre,Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Wood Products, Except Furniture - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14SW (SE)	423	-	331427 348149
111	**Contemporary Trade Directory Entries** Name: Morton & Jones Pallet Co Location: D2-D4, Unit, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Fencing Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	421	-	331532 348311
112	**Contemporary Trade Directory Entries** Name: Aptt Ltd Location: Unit 1 & 2,Bersham Enterprise Centre,Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Fork Lift Trucks **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A9NW (SE)	441	-	331423 348122
112	**Contemporary Trade Directory Entries** Name: Eames Of Wrexham (Rewinds) Ltd Location: Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Electric Motor Sales & Service **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NE (SE)	449	-	331389 348086

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**Contemporary Trade Directory Entries** Name: Design Line Location: Unit E1, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	460	-	331387 348071
112	**Contemporary Trade Directory Entries** Name: Rockrite Ltd Location: Unit B5, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Classification: Mortar Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	462	-	331444 348112
112	**Contemporary Trade Directory Entries** Name: Smartclean (Uk) Ltd Location: Unit A19, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	465	-	331432 348098
112	**Contemporary Trade Directory Entries** Name: Westminster Engineering Ltd Location: Unit A1, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Precision Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	470	-	331427 348087
112	**Contemporary Trade Directory Entries** Name: B & S Home Care Location: Unit A1, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Vacuum Cleaners - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	470	-	331427 348087
112	**Contemporary Trade Directory Entries** Name: Industrial Electronics Control By Design Location: Unit F5, Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Electronic Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	470	-	331427 348087
112	**Contemporary Trade Directory Entries** Name: J & D Aubry Location: Bersham Enterprise Centre,Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	473	-	331412 348072
112	**Contemporary Trade Directory Entries** Name: Jupiter Cleaning Services Ltd Location: Bersham Enterprise Centre,Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	473	-	331412 348072
112	**Contemporary Trade Directory Entries** Name: Wrecsam Wrecycled Ltd Location: Bersham Enterprise Centre,Plas Grono Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Recycling Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NE (SE)	475	-	331420 348076
112	**Contemporary Trade Directory Entries** Name: Piper Systems Location: Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Classification: Meter Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NE (SE)	475	-	331418 348074

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**Contemporary Trade Directory Entries** Name: M & P Enterprises Location: Unit A4, Bersham Enterprise Centre, Colliery Road, Rhostyllen, WREXHAM, Clwyd, LL14 4EG Classification: Car Paint & Lacquer Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	476	-	331418 348074
113	**Contemporary Trade Directory Entries** Name: T H Hughes Location: 97, Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DW Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	452	-	331567 348621
114	**Contemporary Trade Directory Entries** Name: Pickering & Davies Location: Hafod-y-Bwch Hall, Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DR Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	558	-	331009 347863
115	**Contemporary Trade Directory Entries** Name: Pcp Uk Location: 13, Trevor Avenue, Rhostyllen, Wrexham, Clwyd, LL14 4BT Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	647	-	331691 348844
116	**Contemporary Trade Directory Entries** Name: The Welsh M G Centre Location: Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DW Classification: Classic Car Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	658	-	331744 348753
116	**Contemporary Trade Directory Entries** Name: Malcolm Hughes Location: 53, Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4DW Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	675	-	331757 348767
117	**Contemporary Trade Directory Entries** Name: Mt Electrical & Plumbing Services Location: 5, Westbourne Drive, Rhostyllen, Wrexham, Clwyd, LL14 4BU Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	686	-	331697 348909
118	**Contemporary Trade Directory Entries** Name: M D Industrial Cleaning Services Location: Adaley, Henry Street, Rhostyllen, Wrexham, LL14 4BY Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	749	-	331749 348944
119	**Contemporary Trade Directory Entries** Name: First Line Maintenance Ltd Location: Bersham Road, Bersham, Wrexham, Clwyd, LL14 4HS Classification: Office Equipment Servicing & Maintenance **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18NE (N)	794	-	331334 349297
120	**Contemporary Trade Directory Entries** Name: North Wales Energy Ltd Location: Packsaddle, Wrexham Road, Rhostyllen, Wrexham, Clwyd, LL14 4EH Classification: Gas Companies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	802	-	330479 347857
121	**Contemporary Trade Directory Entries** Name: S P Power Systems Ltd Location: Electricity House, Wrexham Road, Pentre Bychan, Wrexham, LL14 4DU Classification: Electricity Companies **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	992	-	330427 347648

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
122	**Fuel Station Entries** Name: Rhostyllen Service Station Location: Wrexham Road , Rhostyllen , Wrexham, Wrexham, LL14 4EJ Brand: ESSO Premises Type: Service Area **Status: Open** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	90	-	331062 348330
123	**Fuel Station Entries** Name: Welsh Mg Centre Location: Wrexham Road , , Wrexham, Wrexham, LL14 4DW Brand: Unbranded Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A14NW (NE)	658	-	331744 348753
124	**Points of Interest - Commercial Services** Name: T R P Motus Commercials Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4DP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (E)	212	9	331348 348431
124	**Points of Interest - Commercial Services** Name: T R P Motus Commercials Location: Wrexham Road Garage, Wrexham Road, Rhostyllen, Wrexham, LL14 4DP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (E)	221	9	331357 348425
124	**Points of Interest - Commercial Services** Name: B C Vaughan & Son Ltd Location: Colliery Garage Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (E)	270	9	331408 348438
124	**Points of Interest - Commercial Services** Name: Barie-c-vaughan & Son Ltd Location: Colliery Garage Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (E)	270	9	331407 348438
125	**Points of Interest - Commercial Services** Name: E R Williams Location: Mount Street, Rhostyllen, Wrexham, LL14 4AU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SE (NE)	366	9	331249 348875
125	**Points of Interest - Commercial Services** Name: Motor Trade Machine Shop Location: Mount Street, Rhostyllen, Wrexham, LL14 4AU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18SE (NE)	366	9	331249 348875
126	**Points of Interest - Commercial Services** Name: Wrecsam Wrecycled Ltd Location: Bersham Enterprise Centre, Plas Grono Road, Rhostyllen, Wrexham, LL14 4EG Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A14SW (E)	390	9	331514 348356
127	**Points of Interest - Commercial Services** Name: C J C Motor Services Location: Unit 17 The Courtyard Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	394	9	331462 348233
127	**Points of Interest - Commercial Services** Name: Red Dragon Vapour Blasting Location: Unit F2 The Courtyard Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A14SW (SE)	407	9	331498 348267

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
127	**Points of Interest - Commercial Services** Name: The Wheel Restorer Ltd Location: Unit F13 Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	420	9	331478 348212
127	**Points of Interest - Commercial Services** Name: Randys Motor Services Location: Unit F11 Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	443	9	331498 348200
127	**Points of Interest - Commercial Services** Name: The Wheel Restorer Location: Unit F7 The Courtyard Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	452	9	331529 348232
128	**Points of Interest - Commercial Services** Name: Wrecsam Wrecycled Ltd Location: Bersham Enterprise Centre Plas Grono Road, Rhostyllen, Wrexham, Clwyd, LL14 4EG Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A9NW (SE)	465	9	331433 348098
129	**Points of Interest - Commercial Services** Name: Pickering & Davies Location: Hafod y Bwch Hall, Wrexham Road, Pentre Bychan, Wrexham, LL14 4DR Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8NW (S)	559	9	331008 347862
129	**Points of Interest - Commercial Services** Name: Pickering & Davies Location: Hafod y Bwlch Hall, Wrexham Road, Rhostyllen, Wrexham, LL14 4DR Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8NW (S)	605	9	330974 347819
130	**Points of Interest - Commercial Services** Name: The Welsh M G Centre Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4DW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NW (NE)	658	9	331744 348753
130	**Points of Interest - Commercial Services** Name: Welsh M G Centre Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4DW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NW (NE)	658	9	331744 348753
131	**Points of Interest - Manufacturing and Production** Name: Croesfoel Industrial Estate Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	0	9	331056 348448
131	**Points of Interest - Manufacturing and Production** Name: Croesfoel Industrial Estate Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13NE (N)	1	9	331093 348526
131	**Points of Interest - Manufacturing and Production** Name: Factory Location: LL14 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	61	9	331075 348583

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
132	**Points of Interest - Manufacturing and Production** Name: Tank Location: LL14 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	165	9	331195 348300
133	**Points of Interest - Manufacturing and Production** Name: Shaft (Disused) Location: LL14 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	370	9	331438 348242
133	**Points of Interest - Manufacturing and Production** Name: Shaft (Disused) Location: LL14 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A14SW (SE)	430	9	331458 348170
133	**Points of Interest - Manufacturing and Production** Name: Shaft (Disused) Location: LL14 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	435	9	331459 348164
134	**Points of Interest - Manufacturing and Production** Name: Bersham Colliery Location: LL14 Category: Extractive Industries Class Code: Coal Mining Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	372	9	331338 348145
134	**Points of Interest - Manufacturing and Production** Name: Bersham Colliery Location: LL14 Category: Extractive Industries Class Code: Coal Mining Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	388	9	331370 348147
134	**Points of Interest - Manufacturing and Production** Name: Bersham Enterprise Centre Location: Unit A2 Bersham Enterprise Centre, Colliery Road, Rhostyllen, Wrexham, LL14 4EG Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A8NE (SE)	476	9	331418 348074
135	**Points of Interest - Manufacturing and Production** Name: Bersham Enterprise Centre Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	424	9	331459 348181
135	**Points of Interest - Manufacturing and Production** Name: Bersham Enterprise Centre Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	427	9	331470 348190
135	**Points of Interest - Manufacturing and Production** Name: Bersham Enterprise Park Location: Colliery Rd, Rhostyllen, Wrexham, Clwyd, LL14 4EG Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A14SW (SE)	452	9	331529 348232
136	**Points of Interest - Manufacturing and Production** Name: Industrial Heritage Centre Location: LL14 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	595	9	331148 349125
137	**Points of Interest - Public Infrastructure** Name: Esso Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4EJ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	90	9	331062 348330

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
137	**Points of Interest - Public Infrastructure** Name: Esso Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4EJ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	91	9	331062 348329
137	**Points of Interest - Public Infrastructure** Name: Rhostyllen Service Station Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4EJ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	91	9	331062 348329
137	**Points of Interest - Public Infrastructure** Name: Rhostyllen Service Station Location: Wrexham Road, Rhostyllen, Wrexham, LL14 4EJ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (S)	91	9	331062 348328
138	**Points of Interest - Public Infrastructure** Name: Spoil Heap Location: LL14 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	298	9	331400 348316
139	**Points of Interest - Public Infrastructure** Name: Spoil Heap Location: LL14 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	312	9	331228 348151
140	**Points of Interest - Public Infrastructure** Name: Spoil Heap Location: LL14 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	499	9	331224 347951
141	**Points of Interest - Public Infrastructure** Name: Weir Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	639	9	331279 349151
141	**Points of Interest - Public Infrastructure** Name: Weir Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	643	9	331286 349153
142	**Points of Interest - Public Infrastructure** Name: Weir Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	684	9	330834 349168
142	**Points of Interest - Public Infrastructure** Name: Weir Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	689	9	330829 349171
143	**Points of Interest - Public Infrastructure** Name: Weir Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	817	9	331574 349213
143	**Points of Interest - Public Infrastructure** Name: Weir Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	821	9	331580 349214

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
144	**Points of Interest - Public Infrastructure** Name: Weir Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	869	9	330540 347716
144	**Points of Interest - Public Infrastructure** Name: Weir Location: LL14 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	871	9	330528 347723
145	**Points of Interest - Recreational and Environmental** Name: Play Area Location: LL14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	325	9	331080 348853
145	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	325	9	331082 348853
145	**Points of Interest - Recreational and Environmental** Name: Skatepark Location: LL14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	349	9	331065 348875
146	**Points of Interest - Recreational and Environmental** Name: Play Area Location: LL14 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	636	9	331183 349164

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
147	**Ancient Woodland** Name: Not Supplied Reference: 33409 Area(m²): 11674.34 Type: Ancient and Semi-Natural Woodland	A18SW (N)	468	2	331059 348994
148	**Ancient Woodland** Name: Not Supplied Reference: 33396 Area(m²): 3465.49 Type: Ancient and Semi-Natural Woodland	A14SW (E)	544	2	331680 348407
149	**Ancient Woodland** Name: Not Supplied Reference: 37165 Area(m²): 14030.91 Type: Restored Ancient Woodland Site	A18NW (N)	662	2	331052 349189
150	**Ancient Woodland** Name: Not Supplied Reference: 33410 Area(m²): 4736.4 Type: Ancient and Semi-Natural Woodland	A19SW (NE)	798	2	331629 349149
151	**Ancient Woodland** Name: Not Supplied Reference: 31892 Area(m²): 3689.66 Type: Ancient and Semi-Natural Woodland	A17SE (NW)	813	2	330517 349142
152	**Ancient Woodland** Name: Not Supplied Reference: 31894 Area(m²): 5298.12 Type: Ancient and Semi-Natural Woodland	A17NE (NW)	837	2	330639 349252
153	**Ancient Woodland** Name: Not Supplied Reference: 31893 Area(m²): 3423.04 Type: Ancient and Semi-Natural Woodland	A17NE (NW)	849	2	330562 349221
154	**Ancient Woodland** Name: Not Supplied Reference: 36795 Area(m²): 10124.27 Type: Restored Ancient Woodland Site	A17NE (NW)	947	2	330519 349309
155	**Ancient Woodland** Name: Not Supplied Reference: 29691 Area(m²): 23810.49 Type: Restored Ancient Woodland Site	A17NE (NW)	956	2	330525 349323

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Natural Resources Wales	November 2023	Annually
Flintshire Council - Environmental Health Department	October 2017	Annual Rolling Update
Wrexham County Borough Council - Public Protection Department	October 2017	Annually
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	May 2024	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Welsh Region	March 2013	
Integrated Pollution Controls		
Environment Agency - Welsh Region	January 2009	
Integrated Pollution Prevention And Control		
Environment Agency - Welsh Region	January 2021	Quarterly
Natural Resources Wales	May 2024	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Flintshire Council - Environmental Health Department	April 2016	Variable
Local Authority Pollution Prevention and Controls		
Wrexham County Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Flintshire Council - Environmental Health Department	April 2016	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Wrexham County Borough Council - Environmental Health Department	April 2014	Variable
Flintshire Council - Environmental Health Department	April 2016	Variable
Nearest Surface Water Feature		
Ordnance Survey	March 2024	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	
Prosecutions Relating to Authorised Processes		
Environment Agency - Welsh Region	July 2015	
Natural Resources Wales	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	
Natural Resources Wales	March 2013	
Registered Radioactive Substances		
Natural Resources Wales	January 2015	
Environment Agency - Welsh Region	June 2016	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
Substantiated Pollution Incident Register		
Natural Resources Wales	February 2024	Quarterly
Environment Agency Wales - North Area	January 2021	Quarterly
Water Abstractions		
Environment Agency - Welsh Region	April 2024	Quarterly
Natural Resources Wales	May 2024	Quarterly
Water Industry Act Referrals		
Environment Agency - Welsh Region	October 2017	
Natural Resources Wales	October 2022	
Groundwater Vulnerability Map		
Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations		
Natural Resources Wales	January 2018	As notified

Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations Natural Resources Wales	January 2018	As notified
Source Protection Zones Natural Resources Wales	July 2022	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	
Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	
Areas Benefiting from Flood Defences Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas Natural Resources Wales	August 2019	Quarterly
Flood Defences Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	April 2024	Quarterly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water Suitability Natural Resources Wales	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites		
Natural Resources Wales	March 2023	As notified
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Welsh Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency Wales - North Area	January 2023	Quarterly
Natural Resources Wales	October 2021	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency Wales - North Area	July 2021	Quarterly
Natural Resources Wales	May 2024	Quarterly
Local Authority Landfill Coverage		
Flintshire Council - Environmental Health Department	February 2003	Not Applicable
Wrexham County Borough Council	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Flintshire Council - Environmental Health Department	October 2018	
Wrexham County Borough Council	October 2018	
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	
Registered Landfill Sites		
Environment Agency Wales - North Area	March 2006	Not Applicable
Registered Waste Transfer Sites		
Environment Agency Wales - North Area	April 2018	
Registered Waste Treatment or Disposal Sites		
Environment Agency Wales - North Area	June 2015	
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	January 2024	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
Wrexham County Borough Council - Planning Department	February 2016	Variable
Flintshire Council	January 2016	Variable
Planning Hazardous Substance Consents		
Wrexham County Borough Council - Planning Department	February 2016	Variable
Flintshire Council	January 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	October 2023	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	October 2023	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	April 2024	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2024	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	March 2024	Quarterly
Points of Interest - Education and Health PointX	March 2024	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2024	Quarterly
Points of Interest - Public Infrastructure PointX	March 2024	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2024	Quarterly
Underground Electrical Cables National Grid	January 2024	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural Resources Wales	April 2024	Bi-Annually
Areas of Adopted Green Belt		
Flintshire Council	February 2024	Quarterly
Wrexham County Borough Council	February 2024	Quarterly
Areas of Unadopted Green Belt		
Flintshire Council	February 2024	Quarterly
Wrexham County Borough Council	February 2024	Quarterly
Areas of Outstanding Natural Beauty		
Natural Resources Wales	May 2024	Bi-Annually
Environmentally Sensitive Areas		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks		
Forestry Commission	May 2023	Not Applicable
Local Nature Reserves		
Flintshire Council	February 2024	Bi-Annually
Wrexham County Borough Council	February 2024	Bi-Annually
Marine Nature Reserves		
Natural Resources Wales	February 2024	Bi-Annually
National Nature Reserves		
Natural Resources Wales	February 2024	Bi-Annually
National Parks		
Natural Resources Wales	February 2018	Annually
Nitrate Vulnerable Zones		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	April 2016	
Natural Resources Wales	April 2024	Bi-Annually
Ramsar Sites		
Natural Resources Wales	February 2024	Bi-Annually
Sites of Special Scientific Interest		
Natural Resources Wales	October 2023	Bi-Annually
Special Areas of Conservation		
Natural Resources Wales	April 2024	Bi-Annually
Special Protection Areas		
Natural Resources Wales	April 2024	Bi-Annually

Data Suppliers

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	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**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
4	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Wrexham County Borough Council** Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
7	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
8	**Stantec UK Ltd** Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
9	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

APPENDIX 1

Exploratory Hole Records
(24 pages)

DTS Raeburn Ltd t/a Igne
4th Floor, 17 Lichfield Street, Walsall, WS1 1TU
+44 (0) 121 344 5885
enquiries.DTS@igne.com www.igne.com

Borehole No.
BH01
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331121E - 348528N	Hole Type: CP
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	108.23m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
					0.10	108.13		Tarmac
		0.35 - 0.75	B		0.25	107.98		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.80 - 1.20	B					Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.20 - 1.70	B					
	▼	1.20	SPT	N=12 (1,2/2,3,3,4)	1.40	106.83		Firm becoming stiff brown mottled grey slightly silty sandy CLAY.
		1.80	D					
		2.00	SPT	N=15 (1,2/2,3,5,5)				
		3.00 - 3.50	B					
		3.00	SPT	N=18 (2,2/3,4,5,6)				
		3.90	D		3.80	104.43		Medium dense becoming dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		4.00 - 4.45	B					
		4.00	SPT	N=28 (2,4/5,6,8,9)				
		4.80	D					
		5.00 - 5.45	B					
		5.00	SPT	N=34 (3,4/6,7,10,11)				
		6.00	D		6.00	102.23		Very dense dark grey clayey sandy sub-angular fine to coarse sandstone GRAVEL with frequent cobbles.
		6.50 - 6.81	B					
		6.50	SPT	50 (5,16/50 for 235mm)				
		7.00	SPT	50 (25 for 90mm/50 for 235mm)	7.00	101.23		End of borehole at 7.00m bgl

Remarks

Borehole terminated at 7.0m bgl after refusal on suspected sandstone bedrock.

Final

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enquiries.DTS@igne.com www.igne.com

Borehole No.
BH02
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331093E - 348509N	Hole Type: CP
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	107.90m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	03/06/2024 - 04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
					0.10	107.80		Tarmac
					0.17	107.73		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.40 - 0.70	B					Firm brownish grey slightly sandy slightly gravelly CLAY.
		0.80 - 1.20	B					
		1.20 - 1.70	B					
		1.20	SPT	N=10 (1,2/2,2,3,3)	1.40	106.50		Firm brown slightly sandy CLAY.
		1.90	D					
		2.00 - 2.50	B		2.00	105.90		Firm brownish grey slightly sandy very gravelly CLAY. Gravel is sub-angular to sub-rounded fine to coarse of sandstone.
		2.00	SPT	N=11 (1,2/2,2,3,4)				
		2.80	D		2.70	105.20		Medium dense dark grey clayey sandy sub-angular fine to coarse sandstone GRAVEL.
		3.00 - 3.50	B					
		3.00	SPT	N=16 (2,3/3,4,4,5)				
		3.80	D					
		4.00 - 4.38	B					
		4.00	SPT	N=50 (5,8/50 for 230mm)				4.30-4.60 - Sandstone cobble obstruction
		4.70	D					
		5.00	SPT	50 (11,12/50 for 250mm)	5.00	102.90		Very dense dark grey gravel clayey sandy sub-angular fine to coarse sandstone GRAVEL with frequent cobbles.
								5.20-5.50 - Sandstone cobble obstruction
		5.60	D					
		6.00	SPT	50 (25 for 80mm/50 for 290mm)	6.00	101.90		End of borehole at 6.00m bgl

1 2 3 4 5 6 7 8 9 10

Remarks

Borehole terminated at 6.0m bgl after refusal on suspected sandstone bedrock

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Borehole No. BH03
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331071E - 348423N	Hole Type: CP
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	105.69m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing: Depth (m bgl)	Type	Results	Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
					0.18	105.51		Tarmac
		0.30 - 0.70	B		0.25	105.44		Grey sandy sub-angular fine to coarse sandstone GRAVEL subbase
		0.80 - 1.20	B					Firm reddish brown and grey silty slightly sandy CLAY. Gravel is sub-angular fine to coarse of sandstone
		1.20 - 1.70	B					
		1.20	SPT	N=11 (1,2/3,3,3,2)				1.40-2.60 - becoming slightly gravelly
		1.90	D					
		2.00	SPT	N=9 (1,1/2,2,3,2)				
		2.70	D		2.60	103.09		Stiff brownish grey slightly sandy very gravelly CLAY. Gravel is sub-angular fine to coarse sandstone.
		3.00 - 3.45	B					
		3.00	SPT	N=15 (2,2/3,3,4,5)				
		3.80	D					
		4.00 - 4.45	B		4.00	101.69		Very stiff dark greyish brown slightly sandy gravelly CLAY. Gravel is sub-angular fine to coarse of sandstone with occasional cobbles
		4.00	SPT	N=31 (2,4/5,7,9,10)				
		4.80	D					
		5.00 - 5.45	B					
		5.00	SPT	N=35 (3,5/6,6,11,12)				
		6.00	D					
		6.50 - 6.89	B					
		6.50	SPT	N=50 (7,9/50 for 245mm)				
		7.20	D		6.90	98.79		Yellowish brown SANDSTONE recovered as fine to coarse gravel
		7.30	SPT	50 (25 for 80mm/50 for 270mm)	7.42	98.27		End of borehole at 7.42m bgl

Remarks: Borehole terminated at 7.42 m bgl after refusal on suspected sandstone bedrock

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Borehole No.
WS01
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331122E - 348519N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	108.16m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.08	SPT	N=17 (7,7/7,4,3,3)	0.08	108.08		Tarmac
		0.30	ES		0.40	107.76		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.60	ES					Soft slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=6 (1,4/2,1,2,1)				
		1.50	D					1.50-4.60 - Becoming stiff
		2.00	SPT	N=21 (3,4/4,4,6,7)				
		2.60	D					
		3.00	SPT	N=22 (4,4/5,5,6,6)				
		3.40	D					
		4.00	SPT	N=19 (2,3/3,4,8,4)				
		4.80	D		4.60	103.56		Medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		5.00	SPT	N=19 (3,3/4,5,4,6)				
					5.45	102.71		End of borehole at 5.45m bgl

1 2 3 4 5 6 7 8 9 10

Remarks

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Borehole No.
WS02
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331086E - 348521N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	107.87m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.10	SPT	N=9 (2,2/2,2,2,3)	0.10	107.77		Tarmac
		0.20	ES					MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.50	ES		0.35	107.52		Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=10 (2,2/3,2,2,3)				
		1.40	D					
		2.00	SPT	N=12 (2,2/3,2,3,4)				
		2.70	D					
		3.00	SPT	N=10 (1,2/1,2,3,4)				
		3.50	D					3.60-4.40 - Becoming stiff
		4.00	SPT	N=25 (3,4/6,6,6,7)				
		4.60	D		4.40	103.47		Medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		5.00	SPT	N=24 (8,6/5,5,6,8)				
					5.45	102.42		End of borehole at 5.45m bgl

Remarks

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Borehole No.
WS03
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331080E - 348521N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.61m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	05/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.07	SPT	N=13 (5,5/6,3,2,2)	0.07	106.54		Tarmac
		0.20	ES		0.30	106.31		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.80	ES					Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=10 (1,2/2,3,2,3)				
		1.60	D					
		2.00	SPT	N=11 (3,2/2,3,3,3)				
		2.70	D					
		3.00	SPT	50 (25 for 95mm/50 for 230mm)				
					3.23	103.38		End of borehole at 3.23m bgl

Remarks

Borehole terminated at 3.23m bgl due to practical refusal

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Borehole No.
WS04
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331126E - 348502N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	108.06m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.09	SPT	N=20 (7,8/6,5,5,4)	0.09	107.97		Tarmac
		0.20	ES		0.30	107.76		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.50	ES					Firm becoming stiff brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=10 (1,0/1,3,3,3)				
		1.20	D					
		2.00	SPT	N=18 (3,3/3,4,5,6)				
		2.50	D					
		3.00	SPT	N=29 (10,5/6,5,6,12)				
		3.20	D					
		4.00	SPT	50 (25 for 80mm/50 for 245mm)				
		4.10	D		4.25	103.81		End of borehole at 4.24m bgl

Remarks

Borehole terminated at 4.25m bgl due to practical refusal

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Borehole No.
WS05
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331110E - 348493N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	107.84m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.07	SPT	N=18 (8,7/5,4,5,4)	0.07	107.76		Tarmac
		0.20	ES		0.25	107.58		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.40	ES					Stiff, locally soft, brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=17 (2,3/3,4,5,5)				
		1.40	D					
		2.00	SPT	N=7 (2,3/2,1,2,2)				
		2.60	D					
		3.00	SPT	N=15 (2,3/4,4,3,4)				
		3.80	D					
		4.00	SPT	50 (9,9/50 for 240mm)				
					4.32	103.52		End of borehole at 4.32m bgl

1 2 3 4 5 6 7 8 9 10

Remarks

Borehole terminated at 4.32m bgl due to practical refusal

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Borehole No.
WS06
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331085E - 348490N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.54m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	05/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.06	SPT	N=17 (6,6/5,4,4,4)	0.06	106.48		Tarmac
		0.15	ES		0.28	106.26		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.50	ES					Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=12 (2,3/2,3,4,3)				
		1.70	B					
		2.00	SPT	N=12 (3,2/3,3,3,3)				
		2.90	B		2.80	103.74		Probably medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.00	SPT	N=50 (11,13/50 for 225mm)	3.23	103.32		End of borehole at 3.22m bgl

Remarks: Borehole terminated at 3.23m bgl due to practical refusal

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Borehole No.
WS07
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331133E - 348471N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	107.54m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.08	SPT	N=13 (1,2/3,3,3,4)	0.08	107.46		Tarmac
		0.40	ES					MADEGROUND: Medium dense dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.80	ES		0.70	106.84		Very stiff becoming stiff and firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=42 (6,8/10,10,11,11)				
		1.60	D					
		2.00	SPT	N=21 (4,4/5,5,6,5)				
		2.40	D					
		3.00	SPT	N=12 (2,2/3,2,3,4)				
		3.70	D					
		4.00	SPT	50 (25 for 115mm/50 for 235mm)	4.24	103.31		End of borehole at 4.24m bgl

Remarks: Borehole terminated at 4.24m bgl due to practical refusal

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Borehole No.
WS08
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331098E - 348464N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	107.16m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	05/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.10	SPT	N=6 (1,1/1,1,2,2)	0.10	107.07		Tarmac
		0.15	ES		0.25	106.91		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.55	ES					Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=15 (1,2/2,3,5,5)				
		1.60	D					
		2.00	SPT	N=9 (2,1/2,2,3,2)				
		2.70	D		2.60	104.56		Very stiff brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.00	SPT	50 (5,10/50 for 225mm)				
					3.23	103.94		End of borehole at 3.22m bgl

Remarks: Borehole terminated at 3.23m bgl due to practical refusal

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Borehole No.
WS09
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331090E - 348460N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.32m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	05/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.09	SPT	N=15 (6,1/5,4,3,3)	0.09	106.23		Tarmac
		0.30	ES		0.40	105.92		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.70	ES					Firm brown very sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=11 (2,3/2,3,3,3)				
		1.40	D					
		2.00	SPT	N=14 (3,4/3,4,3,4)				
		2.50	D		2.30	104.02		Medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.00	SPT	N=28 (6,7/6,6,8,8)				
		3.60	D					
		3.70	SPT	50 (25 for 115mm/50 for 250mm)	3.95	102.37		End of borehole at 3.95m bgl

Remarks

Borehole terminated at 3.95m bgl due to practical refusal

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igne	DTS Raeburn Ltd t/a Igne 4th Floor, 17 Lichfield Street, Walsall, WS1 1TU +44 (0) 121 344 5885 enquiries.DTS@igne.com www.igne.com				Borehole No. WS10 Sheet 1 of 1
Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331120E - 348452N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	107.13m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	04/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.09	SPT	N=27 (7,8/8,8,6,5)	0.09	107.04		Tarmac
		0.20	ES		0.30	106.83		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.40	ES					Stiff becoming very stiff brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=14 (2,3/3,4,3,3,4)				
		1.50	D					
		2.00	SPT	N=39 (3,4/5,7,8,19)				
		2.90	D					
		3.00	SPT	N=50 (25 for 115mm/50 for 230mm)	3.23	103.90		End of borehole at 3.23m bgl

Remarks	
	Borehole terminated at 3.23m bgl due to practical refusal

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Borehole No.
WS11
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331099E - 348443N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.87m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	05/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.07	SPT	N=14 (11,8/6,3,3,2)	0.07	106.80		Tarmac
					0.35	106.52		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		1.00	SPT	N=13 (3,3/4,3,3,3)				Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		2.00	SPT	N=14 (5,6/3,3,4,4)				
					2.60	104.27		Medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.00	SPT	N=15 (3,4/6,3,3,3)				
		4.00	SPT	N=25 (6,4/5,6,6,8)				
		5.00	SPT	50 (25 for 125mm/50 for 235mm)				
					5.24	101.63		End of borehole at 5.24m bgl

Remarks

Borehole terminated at 5.24m bgl due to practical refusal

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Borehole No.
WS12
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331098E - 348421N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	105.53m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	07/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.07	SPT	N=26 (12,12/12,6,4,4)	0.07	105.46		Tarmac
		0.50	ES					MADEGROUND: Medium dense dark greyish brown SAND and GRAVEL subbase
					0.60	104.93		Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=11 (1,2/3,2,2,4)	1.00	104.53		Firm dark brown very sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.20	ES					1.40-1.50 - Sandstone cobble
		2.00	SPT	N=12 (3,2/3,3,3,3)				
		2.90	D					
		3.00	SPT	N=50 (12,10/50 for 225mm)	3.23	102.31		End of borehole at 3.22m bgl

Remarks

Borehole terminated at 3.23m bgl due to practical refusal

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Borehole No.
WS13
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331071E - 348405N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	105.80m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	07/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.10	SPT	N=13 (5,5/3,4,3,3)	0.10	105.71		Tarmac
		0.30	ES		0.40	105.40		MADEGROUND: Light greyish brown SAND and GRAVEL subbase
		0.80	ES					Firm slightly sandy gravelly CLAY. Gravel is sub-angular fine to coarse of sandstone and coal.
		1.00	SPT	N=10 (2,2/3,2,2,3)				1.00-1.10 - Sandstone cobble
		1.50	D					
		2.00	SPT	N=25 (4,5/6,7,6,6)	2.00	103.80		Stiff light greyish brown slightly sandy gravelly CLAY. Gravel is sub-angular fine to coarse of sandstone and coal.
		2.70	D					2.00-2.15 - Sandstone cobble
					3.00	102.80		End of borehole at 3.00m bgl

Remarks

Borehole terminated at 3.0m bgl due to deflection off obstruction

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Borehole No.
WS14
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331065E - 348411N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	105.84m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	07/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.08	SPT	N=29 (6,5/6,8,7,8)	0.08	105.76		Tarmac
		0.30	ES		0.40	105.44		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		1.00	SPT	N=13 (2,3/3,3,4,3)				Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.40	D					
		2.00	SPT	N=14 (3,2/3,4,4,3)				
		2.80	D		2.60	103.24		Loose brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone and coal.
		3.00	SPT	N=8 (3,2/2,2,2,2)				
		3.60	D					
		4.00	SPT	N=9 (3,3/2,2,3,2)				
		4.50	ES					
		5.00	SPT	N=9 (2,2/3,2,2,2)				
					5.45	100.39		End of borehole at 5.45m bgl

Remarks

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Borehole No.
WS15
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331051E - 348431N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	105.95m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	06/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.08	SPT	N=17 (4,6/5,4,4,4)	0.08	105.87		Tarmac
		0.25	ES		0.35	105.60		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.80	ES					Soft brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=5 (1,2/1,1,2,1)				
		1.50	D					
		2.00	SPT	N=12 (2,2/3,3,3,3)	2.00	103.95		Medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		2.70	D					
		3.00	SPT	N=9 (2,2/3,2,2,2)				
		3.40	D					
		4.00	SPT	N=31 (4,6/6,7,9,9)	4.00	101.95		Dense brown and grey slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		4.50	D					
		5.00	SPT	N=32 (25 for 135mm/12,7,7,6)				
					5.45	100.50		End of borehole at 5.45m bgl

1 2 3 4 5 6 7 8 9 10

Remarks

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Borehole No.
WS16
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331051E - 348453N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.10m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	06/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.08	SPT	N=19 (4,4/6,4,4,5)	0.08	106.02		Tarmac
		0.20	ES		0.30	105.80		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.70	ES					Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=12 (1,3/3,3,3,3)				
		1.40	D					
		2.00	SPT	N=8 (2,2/3,2,1,2)				
		2.70	D		2.50	103.60		Firm brown very sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		3.00	SPT	N=11 (2,3/3,3,2,3)				
		3.80	D		3.50	102.60		Medium dense brown SAND and GRAVEL. Gravel is sub-angular fine to coarse of sandstone
		4.00	SPT	N=10 (3,4/3,3,2,2)				
		4.60	D					
		5.00	SPT	N=14 (4,4/4,3,4,3)				
					5.45	100.65		End of borehole at 5.45m bgl

Remarks

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Borehole No.
WS17
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331044E - 348484N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.53m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	06/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.07	SPT	N=18 (4,6/4,4,4,6)	0.06	106.48		Tarmac
		0.20	ES		0.30	106.23		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.60	ES					Firm, locally soft, brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=13 (2,2/3,3,4,3)				
		1.40	D					
		2.00	SPT	N=6 (2,2/1,2,1,2)				
		2.80	D					
		3.00	SPT	N=38 (5,10/9,7,10,12)	3.00	103.53		Dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.30	D					
		3.50	SPT	50 (25 for 105mm/50 for 275mm)				
					3.78	102.76		End of borehole at 3.78m bgl

1 2 3 4 5 6 7 8 9 10

Remarks

Borehole terminated at 3.78m bgl due to practical refusal

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Borehole No.
WS18
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331040E - 348508N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.49m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	05/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.06	SPT	N=30 (25 for 135mm/10,10,6,4)	0.06	106.43		Tarmac
		0.40	ES					MADEGROUND: Dense dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
					0.50	105.99		Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		0.90	ES					
		1.00	SPT	N=13 (2,2/3,4,3,3)				
		1.60	D					
		2.00	SPT	N=9 (2,2/3,2,2,2)				
		2.50	D					
		3.00	SPT	N=20 (4,3/3,4,3,10)	3.00	103.49		Medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.40	D					
		4.00	SPT	N=16 (8,5/4,4,3,5)				
		4.80	D					
		5.00	SPT	N=19 (5,4/5,5,4,5)				
					5.45	101.04		End of borehole at 5.45m bgl

Remarks

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Borehole No.
WS19
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331079E - 348476N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.68m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	06/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.20	SPT	N=48 (6,13/15,13,11,9)	0.20	106.48		Concrete
		0.50	ES		0.60	106.08		MADEGROUND: Dense dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.90	ES					Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=12 (2,3/4,3,2,3)				
		1.60	D					
		2.00	SPT	N=12 (3,3/4,3,2,3)				
		2.80	D		2.90	103.78		
		3.00	SPT	N=33 (5,5/7,6,6,14)				Dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.40	D					
		3.50	SPT	50 (25 for 85mm/50 for 245mm)	3.75	102.93		End of borehole at 3.74m bgl

Remarks: Borehole terminated at 3.75m bgl due to practical refusal

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Borehole No.
WS20
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331049E - 348496N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.66m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	06/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.19	SPT	N=32 (6,10/15,8,4,5)	0.19	106.47		Tarmac
		0.35	ES		0.45	106.21		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.70	ES					Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=10 (2,3/3,2,2,3)				
		1.30	D					
		2.00	SPT	N=14 (3,3/4,3,4,3)				
		2.70	D					
		3.00	SPT	N=15 (2,3/3,4,3,5)	3.00	103.66		Medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.30	D					
		4.00	SPT	N=50 (12,12/50 for 230mm)	4.23	102.43		End of borehole at 4.23m bgl

Remarks: Borehole terminated at 4.23m bgl due to practical refusal

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Borehole No.
WS21
Sheet 1 of 1

Project Name:	Wrexham	Project No. E13803-1	Co-ords:	331073E - 348512N	Hole Type: WLS
Location:	Croesfoel Industrial Estate, Rhostyllen, Wrexham		Level:	106.68m AOD	Scale: 1:50
Client:	Travis Perkins Ltd		Dates:	06/06/2024	Logged by: SW

Well	Water Strikes	Samples and In Situ Testing			Depth (m bgl)	Level (m AOD)	Legend	Stratum Description
		Depth (m bgl)	Type	Results				
		0.19	SPT	N=16 (5,6/6,3,3,4)	0.19	106.49		Concrete
		0.30	ES		0.45	106.23		MADEGROUND: Dark grey sandy angular to sub-rounded fine to coarse sandstone GRAVEL subbase.
		0.60	ES					Firm brown slightly sandy gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of sandstone and occasional coal fragments.
		1.00	SPT	N=8 (2,2/2,2,2,2)				
		1.90	D					
		2.00	SPT	N=14 (2,2/2,3,4,5)				
		2.80	D		2.70	103.98		Probably medium dense brown slightly clayey very gravelly fine to coarse SAND. Gravel is angular to sub-rounded fine to coarse of sandstone.
		3.00	SPT	N=50 (11,10/50 for 235mm)	3.23	103.46		End of borehole at 3.24m bgl

Remarks: Borehole terminated at 3.24m bgl due to practical refusal

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APPENDIX 2

Soil Contamination Laboratory Test Results
(18 pages)

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Herts,
WD18 8YS

t: 01923 225404
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e: reception@i2analytical.com

Analytical Report Number : 24-025340

Project / Site name:	Wrexham	Samples received on:	14/06/2024
Your job number:	E13803	Samples instructed on/ Analysis started on:	14/06/2024
Your order number:		Analysis completed by:	24/06/2024
Report Issue Number:	1	Report issued on:	25/06/2024
Samples Analysed:	18 soil samples - 2 leachate samples		

Signed:

Dominika Liana
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229077	229078	229079	229080	229081
Sample Reference				WS01	WS02	WS04	WS05	WS07
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.50	0.50	0.40	0.80
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	12	8.9	12	12
Total mass of sample received	kg	0.1	NONE	1.2	1.1	0.9	0.9	0.9
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.7	7.8	8.1	7.9	8
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	220	150	390	140	430
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	29	58	160	43	100
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO_4 16hr extraction (2:1)	mg/l	1.25	MCERTS	14.7	29	78.4	21.5	50
Sulphide	mg/kg	1	MCERTS	1.1	1	17	1.3	8.2
Total Sulphur	mg/kg	50	MCERTS	110	210	270	150	470
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.6	0.4	-	-	-
Loss on Ignition @ 450°C	%	0.2	MCERTS	2.4	1.9	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.05	0.2	< 0.05	0.09
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.09	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.08	1.3	< 0.05	0.31
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.09	1.6	< 0.05	0.4
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.77	12	0.22	2.4
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.2	3.6	0.09	1
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.3	19	0.52	6.3
Pyrene	mg/kg	0.05	MCERTS	< 0.05	1	15	0.48	5.6
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.44	8.3	0.35	3.2
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.52	8.5	0.48	3.7
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.47	9.2	0.52	4
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.26	3.7	0.23	1.6
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.42	8	0.42	3.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.2	3.5	0.19	1.5
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.05	1	0.06	0.44
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.2	3.5	0.19	1.5
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	6.06	99.4	3.74	35.2

Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229077	229078	229079	229080	229081
Sample Reference				WS01	WS02	WS04	WS05	WS07
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.50	0.50	0.40	0.80
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.8	10	7	9	8.1
Boron (water soluble)	mg/kg	0.2	MCERTS	0.2	0.2	< 0.2	0.2	0.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.2	< 0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	19	17	18	19
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	23	14	17	14
Lead (aqua regia extractable)	mg/kg	1	MCERTS	36	35	25	32	37
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	24	18	18	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	1.4	1.5	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	48	59	58	53	75
Magnesium (water soluble)	mg/kg	5	NONE	9.2	6.3	12	< 5.0	9.1
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	12	< 2.0	11
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	23	< 8.0	26
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	150	< 8.0	190
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10	< 10	180	< 10	230
TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	8.8	< 2.0	5.7
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	51	< 10	24
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	100	< 10	83
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10	< 10	160	< 10	110
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229082	229083	229084	229085	229086
Sample Reference				WS08	WS10	WS11	WS12	WS16
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.55	0.40	None Supplied	1.20	0.70
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	41.8	< 0.1	53.4	< 0.1
Moisture Content	%	0.01	NONE	13	11	8.8	5.3	10
Total mass of sample received	kg	0.1	NONE	0.9	0.9	0.9	1	1
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.5	7.7	7.7	7.7	7.6
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	mg/kg	50	MCERTS	280	290	74	190	120
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	39	31	22	43	44
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO_4 16hr extraction (2:1)	mg/l	1.25	MCERTS	19.3	15.7	10.8	21.3	22.2
Sulphide	mg/kg	1	MCERTS	< 1.0	< 1.0	1.4	1.5	2.3
Total Sulphur	mg/kg	50	MCERTS	110	100	< 50	110	< 50
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-
Loss on Ignition @ 450°C	%	0.2	MCERTS	-	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.15	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.28	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.23	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.14	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.11	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.16	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.12	< 0.80	< 0.80	< 0.80	< 0.80

Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229082	229083	229084	229085	229086
Sample Reference				WS08	WS10	WS11	WS12	WS16
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.55	0.40	None Supplied	1.20	0.70
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	9.3	9	9.7	8
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	0.3	0.3	< 0.2	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.5	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	26	20	19	28	20
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	14	17	21	16
Lead (aqua regia extractable)	mg/kg	1	MCERTS	37	35	32	31	25
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	18	21	29	22
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	1.6
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	48	45	87	61	40
Magnesium (water soluble)	mg/kg	5	NONE	6.8	5.6	< 5.0	6.1	6.3
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	4.6	4.4	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	10	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	100	< 8.0
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10	< 10	< 10	120	< 10
TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	31	< 10
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	31	< 10
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229087	229088	229089	229090	229091
Sample Reference				WS18	WS19	WS20	BH01	BH01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.90	0.90	0.70	1.80	3.90
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	75.3	< 0.1	54.4
Moisture Content	%	0.01	NONE	11	8.6	7.2	14	7.9
Total mass of sample received	kg	0.1	NONE	1	0.9	1	0.7	0.7
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.1	7.3	7.1	8.1	8.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Total Sulphate as SO_4	mg/kg	50	MCERTS	150	540	190	180	190
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	64	380	72	32	34
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	16.2	16.9
Water Soluble SO_4 16hr extraction (2:1)	mg/l	1.25	MCERTS	32.1	192	35.8	16.2	16.9
Sulphide	mg/kg	1	MCERTS	< 1.0	< 1.0	1.3	-	-
Total Sulphur	mg/kg	50	MCERTS	53	170	78	56	93
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-
Loss on Ignition @ 450°C	%	0.2	MCERTS	-	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	-	-
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	-	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	-	-

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Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229087	229088	229089	229090	229091
Sample Reference				WS18	WS19	WS20	BH01	BH01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.90	0.90	0.70	1.80	3.90
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.3	9.2	4.9	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	0.2	< 0.2	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	32	20	18	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	20	3.6	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	32	34	15	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24	20	9.4	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	1.4	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	54	44	26	-	-
Magnesium (water soluble)	mg/kg	5	NONE	5.2	13	< 5.0	10	8.4
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	-	-
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020	-	-
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	-	-
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	-	-
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	-	-
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	-	-
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10	< 10	< 10	-	-
TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	-	-
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010	-	-
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050	-	-
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	-	-
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	-	-
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	-	-
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	-	-
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	-	-
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
p & m-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229092	229093	229094
Sample Reference				BH02	BH02	BH02
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				2.80	4.70	5.60
Date Sampled				Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Stone Content	%	0.1	NONE	< 0.1	59.2	64.8
Moisture Content	%	0.01	NONE	8.9	6.9	3.4
Total mass of sample received	kg	0.1	NONE	0.7	0.7	0.7
General Inorganics						
pH (L099)	pH Units	N/A	MCERTS	8.4	8.6	8.6
Total Cyanide	mg/kg	1	MCERTS	-	-	-
Free Cyanide	mg/kg	1	MCERTS	-	-	-
Total Sulphate as SO_4	mg/kg	50	MCERTS	220	250	270
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	15	27	47
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	7.29	13.4	23.6
Water Soluble SO_4 16hr extraction (2:1)	mg/l	1.25	MCERTS	7.29	13.4	23.6
Sulphide	mg/kg	1	MCERTS	-	-	-
Total Sulphur	mg/kg	50	MCERTS	64	200	150
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-
Loss on Ignition @ 450°C	%	0.2	MCERTS	-	-	-
Total Phenols						
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-
Speciated PAHs						
Naphthalene	mg/kg	0.05	MCERTS	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-
Total PAH						
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	-	-	-

Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229092	229093	229094
Sample Reference				BH02	BH02	BH02
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				2.80	4.70	5.60
Date Sampled				Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Heavy Metals / Metalloids						
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0
Petroleum Hydrocarbons						
TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.02	NONE	-	-	-
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.02	NONE	-	-	-
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.05	NONE	-	-	-
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	-	-	-
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	-	-	-
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-	-
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	-	-	-
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	-	-	-
TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	NONE	-	-	-
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	NONE	-	-	-
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.05	NONE	-	-	-
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	-	-	-
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	-	-	-
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-	-
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	-	-	-
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	-	-	-
VOCs						
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-	-	-
Benzene	µg/kg	5	MCERTS	-	-	-
Toluene	µg/kg	5	MCERTS	-	-	-
Ethylbenzene	µg/kg	5	MCERTS	-	-	-
p & m-Xylene	µg/kg	5	MCERTS	-	-	-
o-Xylene	µg/kg	5	MCERTS	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number: 24-025340
Project / Site name: Wrexham

Lab Sample Number				229077	229078
Sample Reference				WS01	WS02
Sample Number				None Supplied	None Supplied
Depth (m)				0.60	0.50
Date Sampled				Deviating	Deviating
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		
10:1 WAC Leachate					
Arsenic	mg/l	0.001	ISO 17025	0.0012	0.00197
Barium	mg/l	0.00005	ISO 17025	0.0265	0.0298
Cadmium	mg/l	0.0001	ISO 17025	< 0.000100	< 0.000100
Chromium	mg/l	0.0004	ISO 17025	0.0023	0.0024
Copper	mg/l	0.0007	ISO 17025	0.011	0.012
Mercury	mg/l	0.0005	ISO 17025	< 0.000500	< 0.000500
Molybdenum	mg/l	0.0004	ISO 17025	0.0019	0.0031
Nickel	mg/l	0.0003	ISO 17025	0.00098	0.0013
Lead	mg/l	0.001	ISO 17025	0.004	0.0032
Antimony	mg/l	0.0017	ISO 17025	0.0046	0.0037
Selenium	mg/l	0.004	ISO 17025	< 0.0040	< 0.0040
Zinc	mg/l	0.0004	ISO 17025	0.0098	0.0071
Chloride	mg/l	0.15	ISO 17025	0.24	0.85
Fluoride	mg/l	0.05	ISO 17025	0.59	0.39
Sulphate	mg/l	0.045	ISO 17025	1.8	2.9
Total dissolved solids	mg/l	6	ISO 17025	68	79
Total monohydric phenols	mg/l	0.01	ISO 17025	< 0.010	< 0.010
Dissolved organic carbon	mg/l	0.1	NONE	8.11	9.38
10:1 WAC Leachate					
Arsenic	mg/kg	0.01	NONE	0.012	0.0197
Barium	mg/kg	0.0005	NONE	0.265	0.298
Cadmium	mg/kg	0.001	NONE	< 0.00100	< 0.00100
Chromium	mg/kg	0.004	NONE	0.023	0.024
Copper	mg/kg	0.007	NONE	0.11	0.12
Mercury	mg/kg	0.005	NONE	< 0.00500	< 0.00500
Molybdenum	mg/kg	0.004	NONE	0.019	0.031
Nickel	mg/kg	0.003	NONE	0.0098	0.013
Lead	mg/kg	0.01	NONE	0.04	0.032
Antimony	mg/kg	0.017	NONE	0.046	0.037
Selenium	mg/kg	0.04	NONE	< 0.040	< 0.040
Zinc	mg/kg	0.004	NONE	0.098	0.071
Chloride	mg/kg	1.5	NONE	2.4	8.5
Fluoride	mg/kg	0.5	NONE	5.9	3.9
Sulphate	mg/kg	0.45	NONE	18	29
Total dissolved solids	mg/kg	60	ISO 17025	680	790
Total monohydric phenols	mg/kg	0.1	NONE	< 0.10	< 0.10
Dissolved organic carbon	mg/kg	1	NONE	81.1	93.8

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number : 24-025340
Project / Site name: Wrexham

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
229077	WS01	None Supplied	0.6	Brown clay and sand with gravel and vegetation
229078	WS02	None Supplied	0.5	Brown clay and sand with gravel
229079	WS04	None Supplied	0.5	Brown clay and sand with gravel
229080	WS05	None Supplied	0.4	Brown clay and sand with gravel
229081	WS07	None Supplied	0.8	Brown clay and sand with gravel
229082	WS08	None Supplied	0.55	Brown clay and sand with gravel
229083	WS10	None Supplied	0.4	Brown clay and sand with gravel and stones
229084	WS11	None Supplied	None Supplied	Brown clay and sand with gravel
229085	WS12	None Supplied	1.2	Brown clay and sand with gravel and stones
229086	WS16	None Supplied	0.7	Brown clay and sand with gravel
229087	WS18	None Supplied	0.9	Brown clay and sand with gravel
229088	WS19	None Supplied	0.9	Brown clay and sand with gravel
229089	WS20	None Supplied	0.7	Brown clay and sand with stones
229090	BH01	None Supplied	1.8	Brown clay
229091	BH01	None Supplied	3.9	Brown clay and sand with gravel and stones
229092	BH02	None Supplied	2.8	Brown clay and sand with gravel
229093	BH02	None Supplied	4.7	Brown clay and sand with gravel and stones
229094	BH02	None Supplied	5.6	Brown clay and sand with gravel and stones

Analytical Report Number : 24-025340
Project / Site name: Wrexham

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031B	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination	L033B	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR Analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Sample Preparation		In-house method	L043B	W	NONE
Loss on ignition of soil @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	In-house method	L047	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS

Analytical Report Number : 24-025340
Project / Site name: Wrexham

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088	D/W	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	MCERTS
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	ISO 17025
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser	In-house based on MEWAM Method ISBN 0117516260	L082B	W	ISO 17025
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS
WAC Leachate 10:1		In-house method	L043B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Analytical Report Number : 24-025340
Project / Site name: Wrexham

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

Sample Deviation Report

Analytical Report Number : 24-025340
Project / Site name: Wrexham

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH01	N/A	S	229090	a	Magnesium, water soluble, in soil	L038B	a
BH01	N/A	S	229090	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
BH01	N/A	S	229090	a	Total Sulphur in soil	L038B	a
BH01	N/A	S	229090	a	Total sulphate (as SO4 in soil)	L038B	a
BH01	N/A	S	229090	a	pH in soil (automated)	L099	a
BH01	N/A	S	229091	a	Magnesium, water soluble, in soil	L038B	a
BH01	N/A	S	229091	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
BH01	N/A	S	229091	a	Total Sulphur in soil	L038B	a
BH01	N/A	S	229091	a	Total sulphate (as SO4 in soil)	L038B	a
BH01	N/A	S	229091	a	pH in soil (automated)	L099	a
BH02	N/A	S	229092	a	Magnesium, water soluble, in soil	L038B	a
BH02	N/A	S	229092	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
BH02	N/A	S	229092	a	Total Sulphur in soil	L038B	a
BH02	N/A	S	229092	a	Total sulphate (as SO4 in soil)	L038B	a
BH02	N/A	S	229092	a	pH in soil (automated)	L099	a
BH02	N/A	S	229093	a	Magnesium, water soluble, in soil	L038B	a
BH02	N/A	S	229093	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
BH02	N/A	S	229093	a	Total Sulphur in soil	L038B	a
BH02	N/A	S	229093	a	Total sulphate (as SO4 in soil)	L038B	a
BH02	N/A	S	229093	a	pH in soil (automated)	L099	a
BH02	N/A	S	229094	a	Magnesium, water soluble, in soil	L038B	a
BH02	N/A	S	229094	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
BH02	N/A	S	229094	a	Total Sulphur in soil	L038B	a
BH02	N/A	S	229094	a	Total sulphate (as SO4 in soil)	L038B	a
BH02	N/A	S	229094	a	pH in soil (automated)	L099	a
WS01	N/A	L	229077	a	Chloride 10:1 WAC	L082B	a
WS01	N/A	L	229077	a	Dissolved organic carbon 10:1 WAC	L037B	a
WS01	N/A	L	229077	a	Fluoride 10:1 WAC	L033B	a
WS01	N/A	L	229077	a	Metals in leachate by ICP-OES	L039B	a
WS01	N/A	L	229077	a	Monohydric phenols 10:1 WAC	L080	a
WS01	N/A	L	229077	a	Sample Preparation	L043B	a
WS01	N/A	L	229077	a	Total dissolved solids 10:1 WAC	L031B	a
WS01	N/A	L	229077	a	WAC Leachate 10:1	L043B	a
WS01	N/A	S	229077	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS01	N/A	S	229077	a	Boron, water soluble, in soil	L038B	a
WS01	N/A	S	229077	a	Free cyanide in soil	L080	a
WS01	N/A	S	229077	a	Loss on ignition of soil @ 450°C	L047	a
WS01	N/A	S	229077	a	Magnesium, water soluble, in soil	L038B	a
WS01	N/A	S	229077	a	Metals in soil by ICP-OES	L038B	a
WS01	N/A	S	229077	a	Monohydric phenols in soil	L080	a
WS01	N/A	S	229077	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS01	N/A	S	229077	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS01	N/A	S	229077	a	Sulphide in soil	L010	a
WS01	N/A	S	229077	a	Total Sulphur in soil	L038B	a
WS01	N/A	S	229077	a	Total cyanide in soil	L080	a
WS01	N/A	S	229077	a	Total organic carbon (Automated) in soil	L009B	a
WS01	N/A	S	229077	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS01	N/A	S	229077	a	Total sulphate (as SO4 in soil)	L038B	a
WS01	N/A	S	229077	a	pH in soil (automated)	L099	a
WS02	N/A	L	229078	a	Chloride 10:1 WAC	L082B	a
WS02	N/A	L	229078	a	Dissolved organic carbon 10:1 WAC	L037B	a
WS02	N/A	L	229078	a	Fluoride 10:1 WAC	L033B	a
WS02	N/A	L	229078	a	Metals in leachate by ICP-OES	L039B	a
WS02	N/A	L	229078	a	Monohydric phenols 10:1 WAC	L080	a
WS02	N/A	L	229078	a	Sample Preparation	L043B	a
WS02	N/A	L	229078	a	Total dissolved solids 10:1 WAC	L031B	a
WS02	N/A	L	229078	a	WAC Leachate 10:1	L043B	a
WS02	N/A	S	229078	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS02	N/A	S	229078	a	Boron, water soluble, in soil	L038B	a

Sample Deviation Report

Analytical Report Number : 24-025340
Project / Site name: Wrexham

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
WS02	N/A	S	229078	a	Free cyanide in soil	L080	a
WS02	N/A	S	229078	a	Loss on ignition of soil @ 450°C	L047	a
WS02	N/A	S	229078	a	Magnesium, water soluble, in soil	L038B	a
WS02	N/A	S	229078	a	Metals in soil by ICP-OES	L038B	a
WS02	N/A	S	229078	a	Monohydric phenols in soil	L080	a
WS02	N/A	S	229078	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS02	N/A	S	229078	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS02	N/A	S	229078	a	Sulphide in soil	L010	a
WS02	N/A	S	229078	a	Total Sulphur in soil	L038B	a
WS02	N/A	S	229078	a	Total cyanide in soil	L080	a
WS02	N/A	S	229078	a	Total organic carbon (Automated) in soil	L009B	a
WS02	N/A	S	229078	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS02	N/A	S	229078	a	Total sulphate (as SO4 in soil)	L038B	a
WS02	N/A	S	229078	a	pH in soil (automated)	L099	a
WS04	N/A	S	229079	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS04	N/A	S	229079	a	Boron, water soluble, in soil	L038B	a
WS04	N/A	S	229079	a	Free cyanide in soil	L080	a
WS04	N/A	S	229079	a	Magnesium, water soluble, in soil	L038B	a
WS04	N/A	S	229079	a	Metals in soil by ICP-OES	L038B	a
WS04	N/A	S	229079	a	Monohydric phenols in soil	L080	a
WS04	N/A	S	229079	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS04	N/A	S	229079	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS04	N/A	S	229079	a	Sulphide in soil	L010	a
WS04	N/A	S	229079	a	Total Sulphur in soil	L038B	a
WS04	N/A	S	229079	a	Total cyanide in soil	L080	a
WS04	N/A	S	229079	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS04	N/A	S	229079	a	Total sulphate (as SO4 in soil)	L038B	a
WS04	N/A	S	229079	a	pH in soil (automated)	L099	a
WS05	N/A	S	229080	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS05	N/A	S	229080	a	Boron, water soluble, in soil	L038B	a
WS05	N/A	S	229080	a	Free cyanide in soil	L080	a
WS05	N/A	S	229080	a	Magnesium, water soluble, in soil	L038B	a
WS05	N/A	S	229080	a	Metals in soil by ICP-OES	L038B	a
WS05	N/A	S	229080	a	Monohydric phenols in soil	L080	a
WS05	N/A	S	229080	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS05	N/A	S	229080	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS05	N/A	S	229080	a	Sulphide in soil	L010	a
WS05	N/A	S	229080	a	Total Sulphur in soil	L038B	a
WS05	N/A	S	229080	a	Total cyanide in soil	L080	a
WS05	N/A	S	229080	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS05	N/A	S	229080	a	Total sulphate (as SO4 in soil)	L038B	a
WS05	N/A	S	229080	a	pH in soil (automated)	L099	a
WS07	N/A	S	229081	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS07	N/A	S	229081	a	Boron, water soluble, in soil	L038B	a
WS07	N/A	S	229081	a	Free cyanide in soil	L080	a
WS07	N/A	S	229081	a	Magnesium, water soluble, in soil	L038B	a
WS07	N/A	S	229081	a	Metals in soil by ICP-OES	L038B	a
WS07	N/A	S	229081	a	Monohydric phenols in soil	L080	a
WS07	N/A	S	229081	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS07	N/A	S	229081	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS07	N/A	S	229081	a	Sulphide in soil	L010	a
WS07	N/A	S	229081	a	Total Sulphur in soil	L038B	a
WS07	N/A	S	229081	a	Total cyanide in soil	L080	a
WS07	N/A	S	229081	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS07	N/A	S	229081	a	Total sulphate (as SO4 in soil)	L038B	a
WS07	N/A	S	229081	a	pH in soil (automated)	L099	a
WS08	N/A	S	229082	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS08	N/A	S	229082	a	Boron, water soluble, in soil	L038B	a
WS08	N/A	S	229082	a	Free cyanide in soil	L080	a

Sample Deviation Report

Analytical Report Number : 24-025340
Project / Site name: Wrexham

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
WS08	N/A	S	229082	a	Magnesium, water soluble, in soil	L038B	a
WS08	N/A	S	229082	a	Metals in soil by ICP-OES	L038B	a
WS08	N/A	S	229082	a	Monohydric phenols in soil	L080	a
WS08	N/A	S	229082	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS08	N/A	S	229082	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS08	N/A	S	229082	a	Sulphide in soil	L010	a
WS08	N/A	S	229082	a	Total Sulphur in soil	L038B	a
WS08	N/A	S	229082	a	Total cyanide in soil	L080	a
WS08	N/A	S	229082	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS08	N/A	S	229082	a	Total sulphate (as SO4 in soil)	L038B	a
WS08	N/A	S	229082	a	pH in soil (automated)	L099	a
WS10	N/A	S	229083	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS10	N/A	S	229083	a	Boron, water soluble, in soil	L038B	a
WS10	N/A	S	229083	a	Free cyanide in soil	L080	a
WS10	N/A	S	229083	a	Magnesium, water soluble, in soil	L038B	a
WS10	N/A	S	229083	a	Metals in soil by ICP-OES	L038B	a
WS10	N/A	S	229083	a	Monohydric phenols in soil	L080	a
WS10	N/A	S	229083	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS10	N/A	S	229083	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS10	N/A	S	229083	a	Sulphide in soil	L010	a
WS10	N/A	S	229083	a	Total Sulphur in soil	L038B	a
WS10	N/A	S	229083	a	Total cyanide in soil	L080	a
WS10	N/A	S	229083	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS10	N/A	S	229083	a	Total sulphate (as SO4 in soil)	L038B	a
WS10	N/A	S	229083	a	pH in soil (automated)	L099	a
WS11	N/A	S	229084	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS11	N/A	S	229084	a	Boron, water soluble, in soil	L038B	a
WS11	N/A	S	229084	a	Free cyanide in soil	L080	a
WS11	N/A	S	229084	a	Magnesium, water soluble, in soil	L038B	a
WS11	N/A	S	229084	a	Metals in soil by ICP-OES	L038B	a
WS11	N/A	S	229084	a	Monohydric phenols in soil	L080	a
WS11	N/A	S	229084	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS11	N/A	S	229084	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS11	N/A	S	229084	a	Sulphide in soil	L010	a
WS11	N/A	S	229084	a	Total Sulphur in soil	L038B	a
WS11	N/A	S	229084	a	Total cyanide in soil	L080	a
WS11	N/A	S	229084	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS11	N/A	S	229084	a	Total sulphate (as SO4 in soil)	L038B	a
WS11	N/A	S	229084	a	pH in soil (automated)	L099	a
WS12	N/A	S	229085	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS12	N/A	S	229085	a	Boron, water soluble, in soil	L038B	a
WS12	N/A	S	229085	a	Free cyanide in soil	L080	a
WS12	N/A	S	229085	a	Magnesium, water soluble, in soil	L038B	a
WS12	N/A	S	229085	a	Metals in soil by ICP-OES	L038B	a
WS12	N/A	S	229085	a	Monohydric phenols in soil	L080	a
WS12	N/A	S	229085	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS12	N/A	S	229085	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS12	N/A	S	229085	a	Sulphide in soil	L010	a
WS12	N/A	S	229085	a	Total Sulphur in soil	L038B	a
WS12	N/A	S	229085	a	Total cyanide in soil	L080	a
WS12	N/A	S	229085	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS12	N/A	S	229085	a	Total sulphate (as SO4 in soil)	L038B	a
WS12	N/A	S	229085	a	pH in soil (automated)	L099	a
WS16	N/A	S	229086	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS16	N/A	S	229086	a	Boron, water soluble, in soil	L038B	a
WS16	N/A	S	229086	a	Free cyanide in soil	L080	a
WS16	N/A	S	229086	a	Magnesium, water soluble, in soil	L038B	a
WS16	N/A	S	229086	a	Metals in soil by ICP-OES	L038B	a
WS16	N/A	S	229086	a	Monohydric phenols in soil	L080	a

Sample Deviation Report

Analytical Report Number : 24-025340
Project / Site name: Wrexham

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
WS16	N/A	S	229086	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS16	N/A	S	229086	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS16	N/A	S	229086	a	Sulphide in soil	L010	a
WS16	N/A	S	229086	a	Total Sulphur in soil	L038B	a
WS16	N/A	S	229086	a	Total cyanide in soil	L080	a
WS16	N/A	S	229086	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS16	N/A	S	229086	a	Total sulphate (as SO4 in soil)	L038B	a
WS16	N/A	S	229086	a	pH in soil (automated)	L099	a
WS18	N/A	S	229087	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS18	N/A	S	229087	a	Boron, water soluble, in soil	L038B	a
WS18	N/A	S	229087	a	Free cyanide in soil	L080	a
WS18	N/A	S	229087	a	Magnesium, water soluble, in soil	L038B	a
WS18	N/A	S	229087	a	Metals in soil by ICP-OES	L038B	a
WS18	N/A	S	229087	a	Monohydric phenols in soil	L080	a
WS18	N/A	S	229087	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS18	N/A	S	229087	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS18	N/A	S	229087	a	Sulphide in soil	L010	a
WS18	N/A	S	229087	a	Total Sulphur in soil	L038B	a
WS18	N/A	S	229087	a	Total cyanide in soil	L080	a
WS18	N/A	S	229087	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS18	N/A	S	229087	a	Total sulphate (as SO4 in soil)	L038B	a
WS18	N/A	S	229087	a	pH in soil (automated)	L099	a
WS19	N/A	S	229088	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS19	N/A	S	229088	a	Boron, water soluble, in soil	L038B	a
WS19	N/A	S	229088	a	Free cyanide in soil	L080	a
WS19	N/A	S	229088	a	Magnesium, water soluble, in soil	L038B	a
WS19	N/A	S	229088	a	Metals in soil by ICP-OES	L038B	a
WS19	N/A	S	229088	a	Monohydric phenols in soil	L080	a
WS19	N/A	S	229088	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS19	N/A	S	229088	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS19	N/A	S	229088	a	Sulphide in soil	L010	a
WS19	N/A	S	229088	a	Total Sulphur in soil	L038B	a
WS19	N/A	S	229088	a	Total cyanide in soil	L080	a
WS19	N/A	S	229088	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS19	N/A	S	229088	a	Total sulphate (as SO4 in soil)	L038B	a
WS19	N/A	S	229088	a	pH in soil (automated)	L099	a
WS20	N/A	S	229089	a	BTEX and/or Volatile organic compounds in soil	L073B	a
WS20	N/A	S	229089	a	Boron, water soluble, in soil	L038B	a
WS20	N/A	S	229089	a	Free cyanide in soil	L080	a
WS20	N/A	S	229089	a	Magnesium, water soluble, in soil	L038B	a
WS20	N/A	S	229089	a	Metals in soil by ICP-OES	L038B	a
WS20	N/A	S	229089	a	Monohydric phenols in soil	L080	a
WS20	N/A	S	229089	a	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	a
WS20	N/A	S	229089	a	Sulphate, water soluble, in soil (16hr extraction)	L038B	a
WS20	N/A	S	229089	a	Sulphide in soil	L010	a
WS20	N/A	S	229089	a	Total Sulphur in soil	L038B	a
WS20	N/A	S	229089	a	Total cyanide in soil	L080	a
WS20	N/A	S	229089	a	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088	a
WS20	N/A	S	229089	a	Total sulphate (as SO4 in soil)	L038B	a
WS20	N/A	S	229089	a	pH in soil (automated)	L099	a

APPENDIX 3

Groundwater Contamination Laboratory Test Results
(5 pages)

Analytical Report Number: 24-025333
Project / Site name: Wrexham

Your Order No: 33349-E13803-2

Lab Sample Number				229045
Sample Reference				BH03
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				13/06/2024
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	
General Inorganics				
pH (L099)	pH Units	N/A	ISO 17025	7.9
Total Cyanide (Low Level 1 µg/l)	µg/l	1	NONE	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	NONE	< 1.0
Sulphate as SO_4	mg/l	0.045	ISO 17025	37.9
Total Sulphur	mg/l	0.015	NONE	12.63
Sulphide	µg/l	5	NONE	< 5.0
Total Phenols				
Total Phenols (Monohydric) Low Level	µg/l	1	NONE	< 1.0
Speciated PAHs				
Naphthalene	µg/l	0.01	ISO 17025	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01
Total PAH				
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16
Heavy Metals / Metalloids				
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.27
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	1.1
Copper (dissolved)	µg/l	0.5	ISO 17025	0.6
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	< 0.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	1.5
Boron (dissolved)	µg/l	10	ISO 17025	22
Magnesium (dissolved)	µg/l	5	ISO 17025	5400

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 24-025333
Project / Site name: Wrexham

Your Order No: 33349-E13803-2

Lab Sample Number				229045
Sample Reference				BH03
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				13/06/2024
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	
Petroleum Hydrocarbons				
TPH - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0
TPH - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0
TPH - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0
TPH - Aliphatic >EC10 - EC12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10
TPH - Aliphatic >EC12 - EC16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10
TPH - Aliphatic >EC16 - EC21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10
TPH - Aliphatic >EC21 - EC35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10
TPH - Aliphatic >EC5 - EC35 $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10
TPH - Aliphatic >EC35 - EC40 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10
TPH - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0
TPH - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0
TPH - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0
TPH - Aromatic >EC10 - EC12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10
TPH - Aromatic >EC12 - EC16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10
TPH - Aromatic >EC16 - EC21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10
TPH - Aromatic >EC21 - EC35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10
TPH - Aromatic >EC5 - EC35 $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10
TPH - Aromatic >EC35 - EC40 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10
TPH (>EC5 - EC10) $_{HS\_1D\_TOTAL}$	µg/l	10	NONE	< 10
TPH Total >EC5 - EC40 $_{HS+EH\_1D\_TOTAL\_MS}$	µg/l	10	NONE	< 10
TPH (EC10 - EC40) $_{EH\_1D\_TOTAL\_MS}$	µg/l	10	NONE	< 10
VOCs				
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number : 24-025333
Project / Site name: Wrexham

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW	In-house method based on USEPA Method 6020 & 200.8 for the determination of trace elements in water by ICP-MS	L012B	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode	In-house method	L029	W	NONE
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices: SW, GW, PW, PrW (Al, Cu, Fe,Zn)	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW, LL	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Total petroleum hydrocarbons with carbon banding by GC-MS in water	Determination of total petroleum hydrocarbons in water by GC-MS/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L070B	W	NONE
Total petroleum hydrocarbons by GC-MS in water	Determination of total petroleum hydrocarbons in water by GC-MS/GC-MS	In-house method	L070B	W	NONE
BTEX and/or Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA 8260	L073B	W	ISO 17025
Free cyanide (low level) in water	Determination of free cyanide by distillation followed by colorimetry.Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	NONE
Monohydric phenols (low level) in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	NONE
Total cyanide (low level) in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	NONE
Total petroleum hydrocarbons by GC-MS HS in water	Determination of total petroleum hydrocarbons in water by GC-MS HS	In-house method	L088B	W	ISO 17025
pH at 20°C in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method	L099	W	ISO 17025
Speciated PAHs and/or Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds (including PAH) in leachate by extraction in dichloromethane followed by GC-MS	In-house method based on USEPA 8270	L102B	W	ISO 17025

Analytical Report Number : 24-025333
Project / Site name: Wrexham

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphur in water	Determination of total sulphur in water by acidification followed by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil	L039B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

Sample Deviation Report

Analytical Report Number : 24-025333
Project / Site name: Wrexham

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH03	N/A	W	229045	c	pH at 20°C in water (automated)	L099	c

APPENDIX 4

Geotechnical Laboratory Test Results
(11 pages)

1367

ALLIED EXPLORATION AND GEOTECHNICS t/a IGNE

LABORATORY REPORT CERTIFICATE

Contract Title: E1323/2 - Wrexham **Contract Number:** SLS1427E

Client: Igne

We certify that Laboratory testing was carried out on samples from the above contract in accordance with techniques outlined in BS 1377: 1990, BS EN ISO 17892:2014 or other appropriate standards as quoted. The samples were received on 19th June 2024 and the following results given on the attached enclosures were obtained

The tests carried out are indicated in the attached table showing the enclosure number and the total number of pages

For and on behalf of Allied Exploration & Geotechnics Limited t/a Igne

☐ Nick Vater (Director)

☑ Michelle Selkirk (Laboratory Manager)

☐ Graeme Scaife (Assistant Laboratory Manager)

Signed _____ Date: 28 June 2024

Tests marked not UKAS accredited in this certificate are not included in the UKAS accreditation schedule for our laboratory. Any opinions and interpretations expressed herein are outside the scope of the laboratory's UKAS accreditation. The results reported relate to samples received in the laboratory only. This report should not be reproduced except in full without the written approval of the laboratory.

Please note the material was derived from samples taken outside the control of the laboratory

ALLIED EXPLORATION AND GEOTECHNICS t/a IGNE

LABORATORY REPORT CERTIFICATE

ENCLOSURES

Enclosure Number	Description	UKAS Accredited	Reference	No. of Pages
0	Laboratory Report Certificate	N/A		3
1	Sample Description Sheets	N/A		2
2	Atterberg Limits and Water Content	Yes	BS EN ISO 17892-12:2018	4
3	Particle Size Distribution Sieving	Yes	BS EN ISO 17892-4:2016	2

ALLIED EXPLORATION AND GEOTECHNICS t/a IGNE

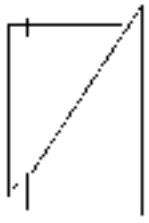
LABORATORY REPORT CERTIFICATE

ABBREVIATIONS

B	Large disturbed (bulk) sample	**OED**	One Dimensional Consolidation
CBR	California Bearing Ratio	**PCH**	Permeability Constant Head
CDT	Consolidated Drained Triaxial	**PD**	Particle Density
CP2	Dry Density/Moisture Content 2.5kg	**PFH**	Permeability Falling Head
CP4	Dry Density/Moisture Content 4.5kg	**PI**	Atterberg Limits
CPV	Dry Density/Moisture Content vibrating	**PL**	Point Load
CUT	Consolidated Undrained Triaxial	**PSD**	Particle Size Distribution (sieve)
D	Small disturbed (jar) sample	**PTXL**	Permeability in Triaxial Cell
ES	Environmental sample	**R**	Remoulded
GC	Geochemical Testing	**SB**	Shear Box
HSV	Hand Shear Vane	**SED**	Sedimentation by Pipette
IS	Insufficient sample for test	**U**	Undisturbed sample
L	Liner sample	**US**	Unsuitable sample for test
M	Multi-stage testing	**UUT**	Undrained Unconsolidated Triaxial
MC	Moisture Content		
MCV	Moisture Content Value		

Typical Mode of Failure for Triaxial Testing

Brittle **(BR)**



Compound **(C)**



Plastic **(P)**



ALLIED EXPLORATION & GEOTECHNICS LIMITED

Head Office: 2 Lilyhall Industrial Park, Lilyhall, Cheadle, Staffordshire, ST10 1TT. Tel: 01538 [illegible] Fax: 01538 [illegible]
Regional Office: Unit 1 Block 1, Hall Road, Rhosddu, Wrexham, LL11 2TD. Tel: 01978 [illegible] Fax: 01978 [illegible]

LABORATORY SAMPLE DESCRIPTION SHEET

Exploratory Hole No.	Sample Depth (m)	ID	Description	Laboratory Tests/Remarks
BH01	0.80	B	Brown silty slightly sandy slightly gravelly CLAY of low to intermediate plasticity.	MC PI
BH01	1.80	D	Brown silty sandy gravelly CLAY of low plasticity	MC PI
BH01	5.00	B	Brown very clayey very sandy GRAVEL	PSD
BH02	2.00	B	Brown very clayey very gravelly SAND with a medium cobble content.	PSD
BH03	0.80	B	MADE GROUND (Brown silty slightly sandy slightly gravelly clay of low plasticity)	MC PI
BH03	2.70	D	MADE GROUND (Brown sandy gravelly clay of intermediate plasticity).	MC PI
BH03	4.50	D	MADE GROUND (Brown sandy gravelly clay of low plasticity. Gravel includes brick fragments).	MC PI
WS01	1.50	D	Brown slightly sandy slightly gravelly CLAY of intermediate plasticity	MC P
WS02	1.10	D	Reddish brown slightly sandy slightly gravelly CLAY of intermediate plasticity	MC P
WS02	3.50	D	Brown silty slightly sandy slightly gravelly CLAY of low plasticity.	MC PI
WS04	1.20	D	Brown slightly sandy slightly gravelly CLAY of intermediate plasticity.	MC PI
WS04	2.50	D	Reddish brown slightly sandy slightly gravelly CLAY of low plasticity	MC PI
WS05	1.40	D	Fissured reddish brown silty slightly sandy slightly gravelly CLAY of intermediate plasticity	MC PI
WS05	2.60	D	Reddish brown silty slightly sandy slightly gravelly CLAY of low plasticity	MC PI
WS07	1.60	D	Brown silty slightly sandy slightly gravelly CLAY of low plasticity	MC PI
WS07	2.40	D	Reddish brown silty slightly sandy slightly gravelly CLAY of intermediate plasticity.	MC PI
WS08	1.60	D	Brown silty sandy slightly gravelly CLAY of low plasticity	MC PI
WS09	1.40	D	Reddish brown sandy slightly gravelly CLAY of low plasticity	MC PI
WS10	1.50	D	Reddish brown silty slightly sandy slightly gravelly CLAY of low plasticity.	MC PI
WS13	1.50	D	MADE GROUND (Brown silty sandy slightly gravelly clay of low plasticity. Gravel includes slag and rootlets)	MC PI
WS15	1.50	D	MADE GROUND (Brown silty slightly sandy slightly gravelly clay of low plasticity. Gravel includes rootlets and brick fragments)	MC PI

Contract Title: E13802 - Wrexham

Client:

Signed: MSelk Name: M. SELKIRK

Date of Issue: 28/05/2024

Certificate No.: SD/SLS1427E.1

AEG Contract No: SLS1427E

UKAS 1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED t/a IGNE

LABORATORY SAMPLE DESCRIPTION SHEET

Exploratory Hole No.	Sample Depth (m)	ID	Description	Laboratory Tests/Remarks
WS16	1.40	D	MADE GROUND (Reddish brown silty slightly sandy slightly gravelly clay of low plasticity)	MC PI
WS18	1.60	D	MADE GROUND (Reddish brown silty slightly sandy slightly gravelly clay of low plasticity).	MC PI
WS19	1.50	D	MADE GROUND (Reddish brown slightly sandy slightly gravelly clay of low plasticity).	MC P
WS20	1.30	D	MADE GROUND (Reddish brown slightly sandy slightly gravelly clay of intermediate plasticity)	MC PI
WS21	1.50	D	MADE GROUND (Reddish brown slightly sandy slightly gravelly clay of low plasticity).	MC PI

Contract Title :- E13832 - Wrexham

Client :-

Signed :- MSmk

Name :- M. SMARK

 Igne

Date of Issue :- 28/06/2024

Certificate No :- SUGLS1427E2

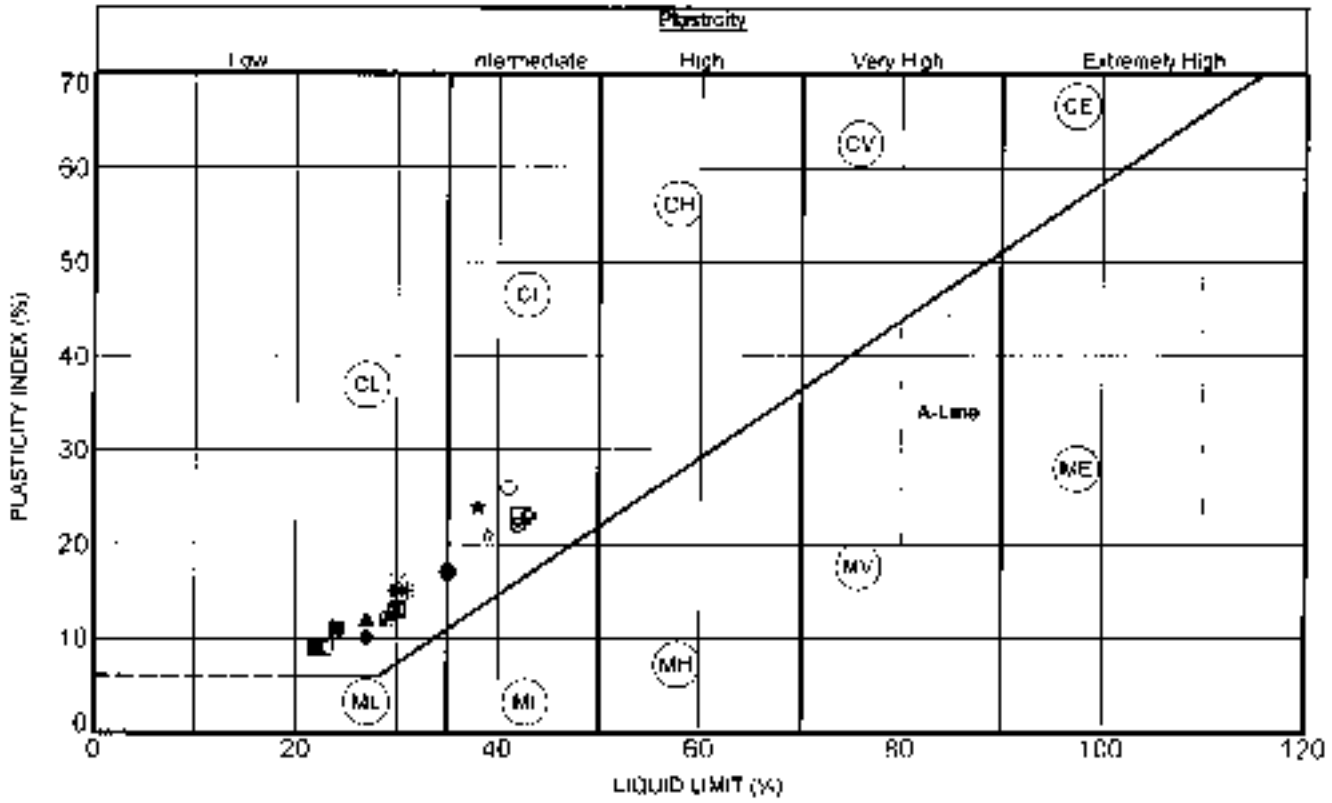
Contract No :- SLS1427E

UKAS 1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED t/a IGNE

ATTERBERG LIMITS

BS EN ISO 17892-12 : 2018 Part 12 - Fall Cone Method (80g/30° cone)



Exploratory Hole No.	Depth (m)	Sample Type/Ref.	Specific Depth (m)	LL	PI	Exploratory Hole No	Depth (m)	Sample Type/Ref.	Specific Depth (m)	LL	PI
●BH01	0.80	B	0.80	35	17	□WS05	1.40	D	1.40	42	23
■BH01	1.80	D	1.80	30	13	⊕WS05	2.60	D	2.60	30	15
▲BH03	0.80	B	0.80	27	12	◆WS07	1.60	D	1.60	29	12
★BH03	2.70	D	2.70	38	24	✦WS07	2.40	D	2.40	39	21
⊕BH03	4.60	D	4.60	30	13	⊗WS08	1.60	D	1.60	23	9
✤WS01	1.50	D	1.50	43	23	■WS09	1.40	D	1.40	22	9
○WS02	1.40	D	1.40	41	26	◆WS10	1.50	D	1.50	27	10
△WS02	3.50	D	3.50	27	12	◇WS13	1.50	D	1.50	22	9
⊕WS04	1.20	D	1.20	42	22	⁄WS15	1.50	D	1.50	30	13
⊕WS04	2.50	D	2.50	31	16	■WS15	1.40	D	1.40	24	11

For description of sample please refer to the Laboratory Sample Description Sheet

Contract Title :
E13832 - Wrexham

Client :

Signed : msone

Name :- M. S[illegible]

Page 1 of 2

Date of Issue :-
28/05/2024

Certificate No :-
PI/SLS1427E/1

Contract No :
SLS1427E

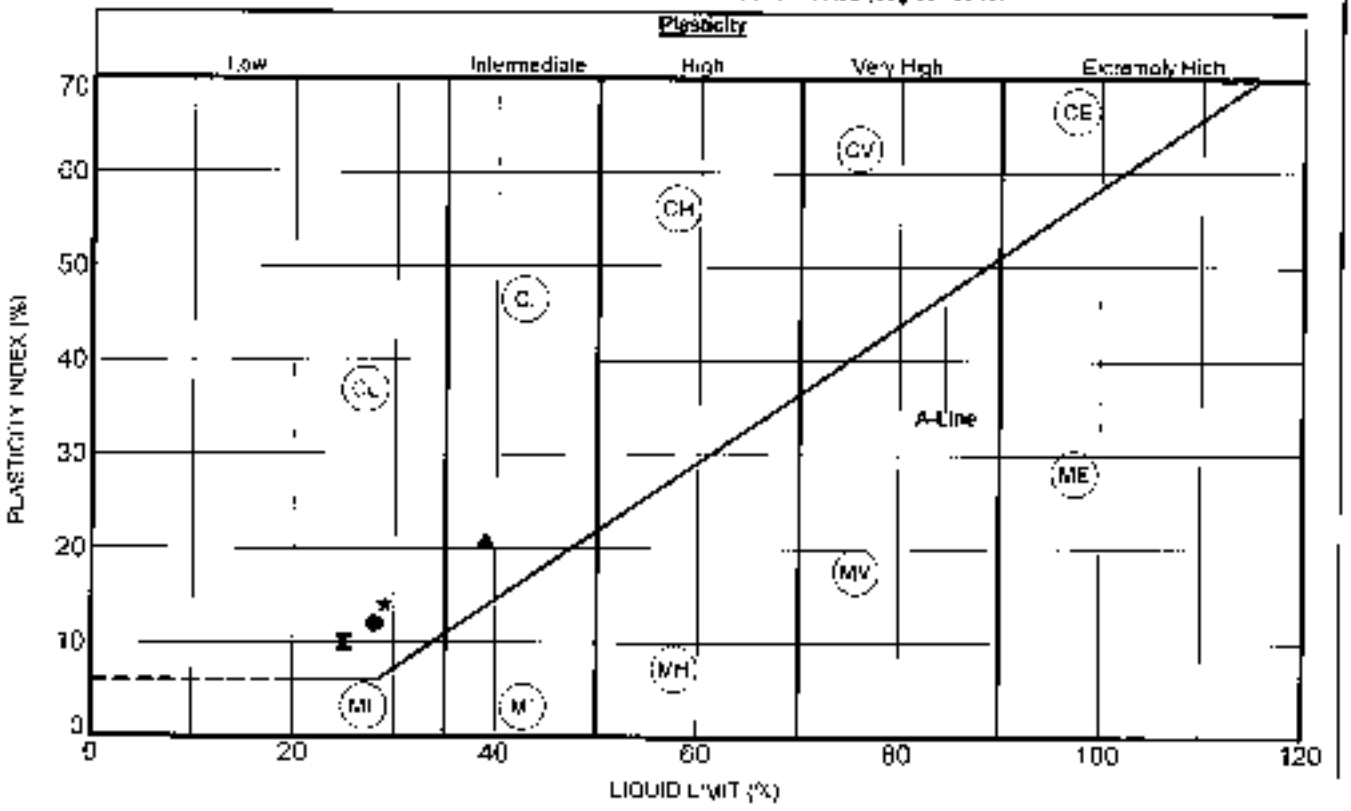
igne

UKAS
1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED t/a IGNE

ATTERBERG LIMITS

BS EN ISO 17892-12 : 2018 : Part 12 - Fall Cone Method (60g/30° cone)



Exploratory Hole No.	Depth (m)	Sample Type/Ref.	Specific Depth (m)	LL	PI
●WS18	1.60	D	1.50	28	12
■WS19	1.60	D	1.60	25	10
▲WS20	1.30	D	1.30	39	21
★WS21	1.90	D	1.90	29	14

Exploratory Hole No.	Depth (m)	Sample Type/Ref.	Specific Depth (m)	LL	PI

For description of sample please refer to the Laboratory Sample Description Sheet.

Contract Title : E1383/2 - Wrexham

Client :

Signed : Name : M. SELKIRK

Page 2 of 2

Date of issue : 28/06/2021

Certificate No : PISLS1427E/2

Contract No : SLS1427E

igne

UKAS 1397

ALLIED EXPLORATION & GEOTECHNICS LIMITED t/a IGNE

ATTERBERG LIMITS & WATER CONTENT

BS EN ISO 17892-12 : 2018 Part 12 - Fall Cone Method (60o/30° cone) & BS EN ISO 17892-1 : 2014 Part 1

Sample Details							Liquid Limit Test Details					Test Data					
Exploratory Hole	Depth (m)	Sample Type/ D	Specific Depth (m)	Water Content (%)	Prep. Method	<0.425mm (%)	1 Point / 4 Point Test	1 Point Test Cone Pen (mm)	1 Point Test Water Content (%)	1 Point Test Correlation Factor	Increasing / Decreasing Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Consistency Index	Classification	Date Tested
BH01	0.80	B	0.80	17.8	Wet Sieve	65	1	20.2	35.2	1	N/A	35	18	17	1.01	CL/CI	19/06/2024
BH01	1.80	D	1.80	15.9	Wet Sieve	29	1	20.3	30.2	1	N/A	30	17	13	1.06	CL	19/06/2024
BH03	0.80	B	0.80	18.9	Wet Sieve	73	1	20.2	27	1	N/A	27	15	12	0.68	CL	19/06/2024
BH03	2.70	D	2.70	11.2	Wet Sieve	28	1	23.4	39.4	0.951	N/A	38	14	24	1.12	CI	19/06/2024
BH03	4.80	D	4.80	12.2	Wet Sieve	29	1	21.3	30.8	0.984	N/A	30	17	13	1.37	CL	19/06/2024
WS01	1.50	D	1.50	22.9	Wet Sieve	70	1	20.3	43	1	N/A	43	20	23	0.87	CI	20/06/2024
WS02	1.40	D	1.40	15.7	Wet Sieve	94	1	21.3	41.5	0.994	N/A	41	15	26	0.93	CI	19/06/2024
WS02	3.50	D	3.50	18.1	Wet Sieve	66	1	23.3	27.7	0.951	N/A	27	15	12	0.91	CL	19/06/2024
WS04	1.20	D	1.20	20.0	Wet Sieve	87	1	20.3	42.2	1	N/A	42	20	22	1.00	CI	19/06/2024
WS04	2.50	D	2.50	15.3	Wet Sieve	95	1	20.5	31.3	0.984	N/A	31	16	15	1.01	CL	18/06/2024
WS05	1.40	D	1.40	18.6	Wet Sieve	93	1	20.3	41.8	1	N/A	42	19	23	1.02	CI	19/06/2024
WS05	2.60	D	2.60	12.9	Wet Sieve	85	1	20.3	29.5	1	N/A	30	16	14	1.20	CL	19/06/2024
WS07	1.60	D	1.60	9.5	Wet Sieve	95	1	20.3	26.5	1	N/A	29	17	12	1.63	CL	18/06/2024
WS07	2.40	D	2.40	14.1	Wet Sieve	85	1	22.5	40.6	0.954	N/A	39	18	21	1.19	CI	18/06/2024
WS08	1.80	D	1.80	9.2	Wet Sieve	79	1	20.3	23.2	1	N/A	23	14	9	1.53	CL	18/06/2024

For description of sample please refer to the Laboratory Sample Description Sheet. *1 sample is prepared in the natural state coarse particles were removed by hand-picking to estimate <0.425mm).

Date of Issue :- 26/06/2024 | Certificate No :- PI/SLS1427E/1 | Signed :- | Name :- | Page 1 of 2

Client :- | Contract Title :- E1383/2 - Wrexham | Contract No :- SLS1427E

1367

ALLIED EXPLORATION & GEOTECHNICS LIMITED t/a IGNE

ATTERBERG LIMITS & WATER CONTENT

BS EN ISO 17892-12 : 2018 : Part 12 - Fall Cone Method (80g/30° cone) & BS EN ISO 17892-1 : 2014 Part 1

Sample Details							Liquid Limit Test Details					Test Data					
Exploratory Hole	Depth (m)	Sample Type/ID	Specific Depth (m)	Water Content (%)	Prep. Method	<0.425mm (%)	1 Point / 4 Point Test	1 Point Test Cone Pen (mm)	1 Point Test Water Content (%)	1 Point Test Correlation Factor	Increasing / Decreasing Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Consistency Index	Classification	Date Tested
WS09	1.40	D	1.40	10.4	Wet Sieve	51	1	20.4	22.2	1	N/A	22	13	9	1.29	CL	19/06/2024
WS10	1.50	D	1.50	13.4	Wet Sieve	62	1	20.2	26.9	1	N/A	27	17	10	1.30	CL	19/06/2024
WS13	1.50	D	1.50	7.7	Wet Sieve	48	1	20.5	22.3	0.984	N/A	22	13	9	1.56	CL	18/06/2024
WS15	1.50	D	1.50	11.5	Wet Sieve	74	1	21.3	33.3	0.934	N/A	33	14	19	1.16	CL	18/06/2024
WS16	1.40	D	1.40	13.4	Wet Sieve	66	1	20.4	23.8	1	N/A	24	13	11	0.96	CL	18/06/2024
WS18	1.60	D	1.60	13.0	Wet Sieve	72	1	20.4	26	1	N/A	28	16	12	1.25	CL	18/06/2024
WS19	1.60	D	1.60	15.0	Wet Sieve	84	1	20.5	25.8	0.984	N/A	25	15	10	0.94	CL	18/06/2024
WS20	1.30	D	1.30	17.3	Wet Sieve	63	-	21.5	38.6	0.986	N/A	39	18	21	1.03	CI	18/06/2024
WS21	1.90	D	1.90	13.5	Wet Sieve	84	-	22.5	30.3	0.971	N/A	29	15	14	1.11	CI	18/06/2024

For description of sample please refer to the Laboratory Sample Description Sheet. If sample is prepared in the natural state coarse particles were removed by hand-picking to estimate >0.425mm.

Date of issue : 26/06/2024 | Certificate No : PI/SLS1427E/2 | Signed : msone | Name : M. S...

igne | Client : | Contract Title : E1383/2 - Wrexham | Contract No : SLS1427E

UKAS 1387

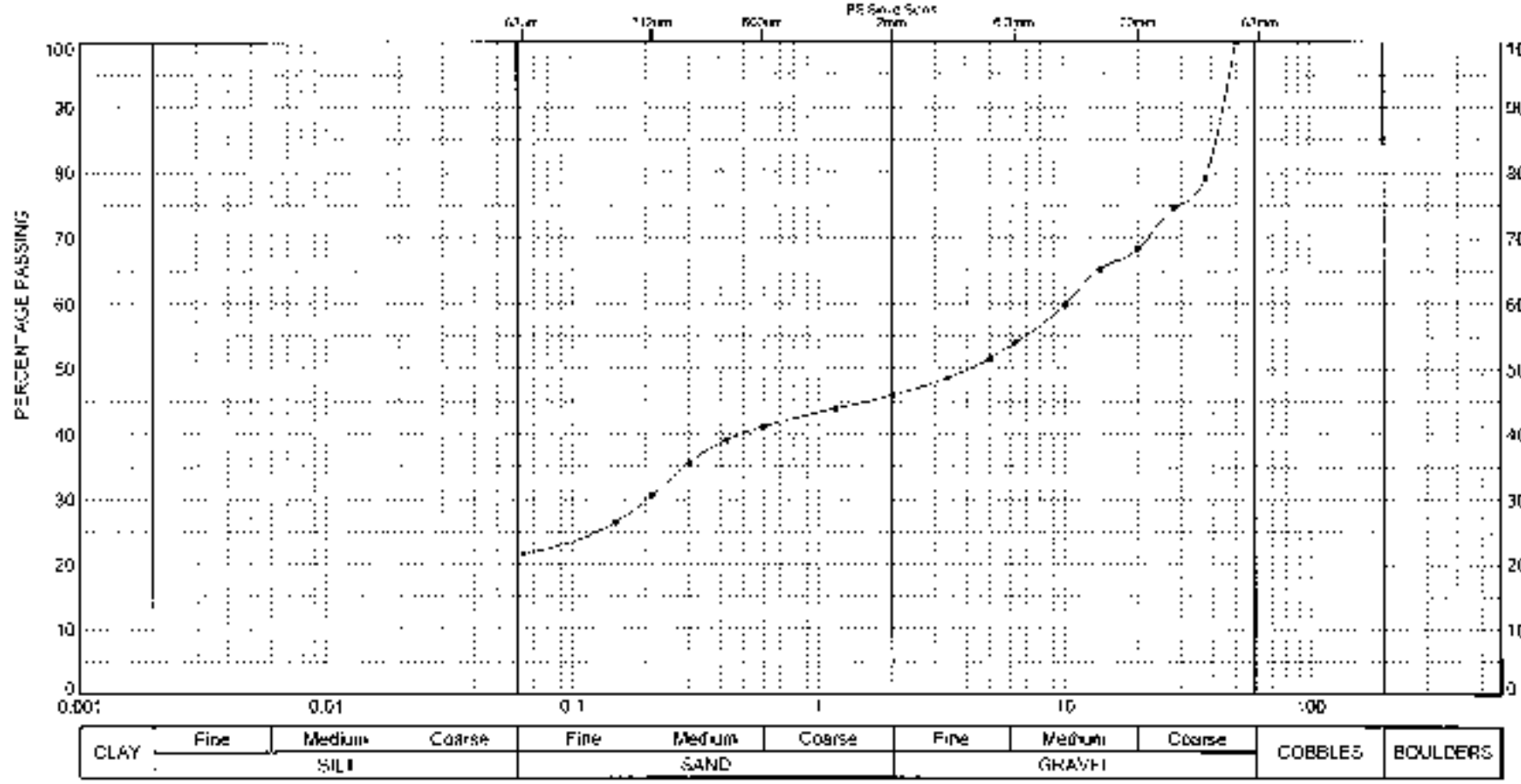
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PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4 : 2016 : Part 4

(Test deviated from standard due to insufficient sample mass)

Exploratory Hole No. - BH01	Depth (m) - 5.00	Sample Type & No. - B	Specific Depth (m) - 5.00	Date Tested :- 19/06/2024



Sieve Size (mm)	Passing (%)
50	100
37.5	79
28	75
20	68
14	65
10	60
6.3	54
5	52
3.35	49
2	46
1.18	44
0.6	41
0.425	39
0.3	36
0.212	31
0.15	27
0.063	22

For description of sample classification refer to the Laboratory Sample Description Sheet

Date of Issue :- 28/06/2024	Certificate No :- PSD/SLS1427E/BH01/B/5.00	Signed :-	Name :- M. Stell	Page 1 of 1
Client :-	Contract Title :- E13832 - Wrexham			Contract No :- SLS1427E

Igne

UKAS 1387

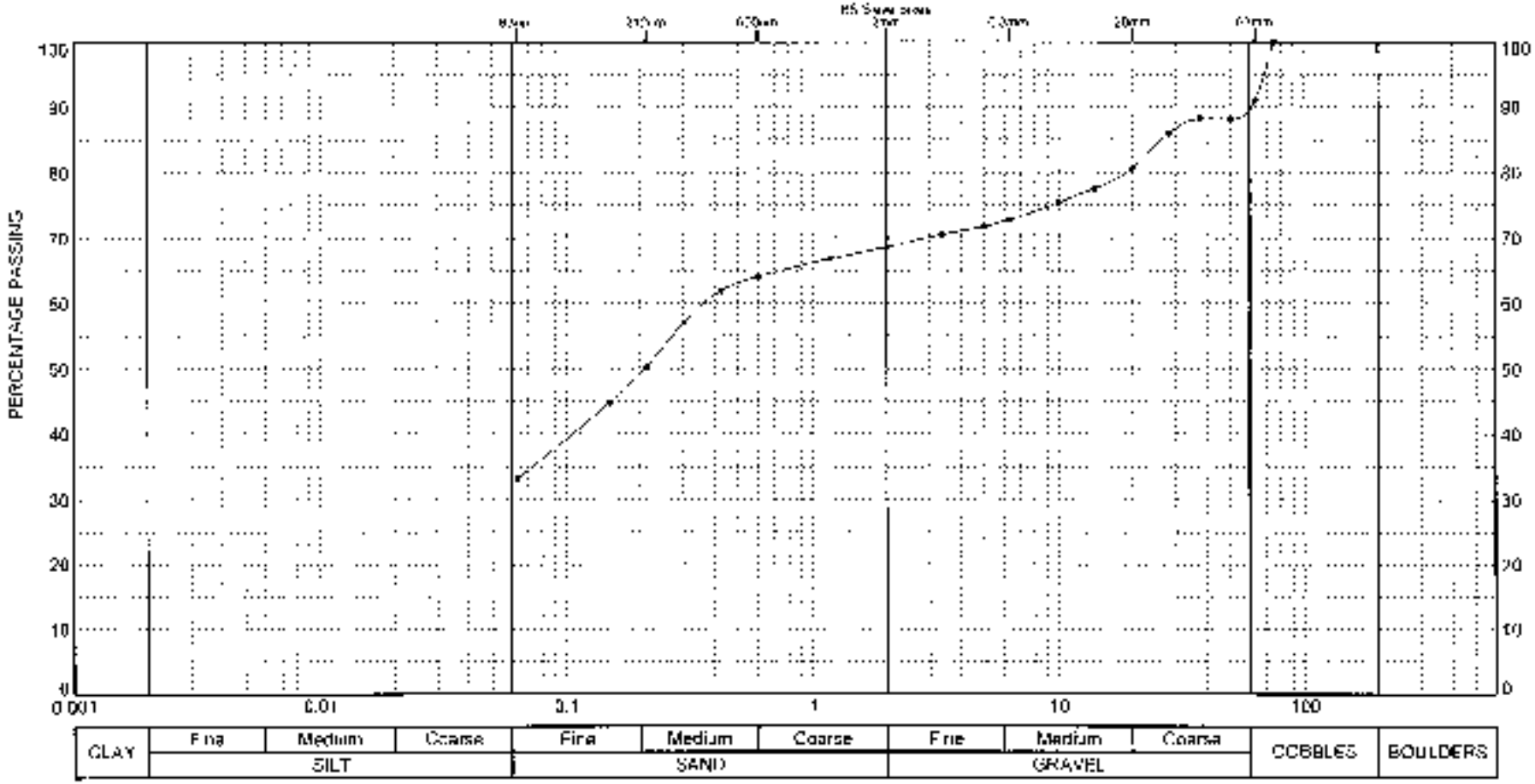
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PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4 : 2016 : Part 4

(Test deviated from standard due to insufficient sample mass)

Exploratory Hole No :- BH02	Depth (m) :- 3.00	Sample Type & No :- B	Specific Depth (m) :- 3.00	Date Tested :- 19/09/2024



Sieve Size (mm)	Passing (%)
75	100
63	91
50	88
37.5	88
28	86
20	81
14	78
10	75
6.3	73
5	72
3.35	71
2	69
1.18	67
0.6	64
0.425	62
0.3	57
0.212	50
0.15	46
0.063	33

For description of sample please refer to the Laboratory Sample Description Sheet

Date of Issue :-	Certificate No	Signed :	Name :
26/09/2024	PSD/SLS1427E/BH02/B/3.00		M. SELKIRK

Page 1 of 1

Client :-	Contract Title :-	Contract No :-
igne	E13537 - Wrexham	SLS1427E

UKAS 1067

APPENDIX 5

UCS Test Results
(3 pages)

Isotest Ltd
8, Hood Road,
Daventry,
Northamptonshire
NN11 4JS
Email: info@isotest.org.uk

TEST REPORT

COMPRESSIVE STRENGTH OF A CONCRETE CORE

BS EN 12504-1:2019

Client: Igne

Report No: 22135/24/01

Client Address: Moor Lane, Witton, Birmingham, B6 7HG

Our Ref: E341-01

Site: Wrexham

Sample Details

Client Reference:	C1	**Date Received:**	27/06/2024
Location:	WS19	**Cast Date:**	Not Known
Mix Details:	Not Known	**Cored By:**	Client
Drilling Angle:	Vertical	**Maximum Aggregate Size (mm):**	20
Average Diameter (mm):	150	**Date Cored:**	Not Known
Max Length as received (mm)	195	**Age At Test (days):**	Not Known
Min Length as received (mm):	193	**Insitu Density (kg/m³)**	2370
Condition On Receipt:	Satisfactory	**Visual Inspection:**	Satisfactory
Specimen Storage Conditions:	Sealed Container	**Method of Preparation:**	Sulphur
Excess Voidage (%):	1.0	**Surface Moisture at Test**	Wet
Capped Length (mm)	150.0	**Length/Diameter Ratio (At Test)**	1.04
Diameter of Reinforcement (mm)		**Distance from Nearest End (mm)**	
Max Load (kN):	734.5	**Type of Facture:**	**Normal**
Core Compressive Strength (N/mm²):	41.6		

Density Determined by water displacement
Certified that core examination and testing was carried out in accordance with BS EN 12504-1:2019

01/7/2024

Signed:_____ [✓]S.Hudspeth - Director

This test report shall not be reproduced, except in full, without the written approval of Isotest Limited. These results relate only to the items tested.

Isotest Ltd
8, Hood Road,
Daventry,
Northamptonshire
NN11 4JS
Email: info@isotest.org.uk

TEST REPORT

COMPRESSIVE STRENGTH OF A CONCRETE CORE

BS EN 12504-1:2019

Client: Igne

Report No: 22135/24/02

Client Address: Moor Lane, Witton, Birmingham, B6 7HG

Our Ref: E341-02

Site: Wrexham

Sample Details

Client Reference:	C2	**Date Received:**	27/06/2024
Location:	WS20	**Cast Date:**	Not Known
Mix Details:	Not Known	**Cored By:**	Client
Drilling Angle:	Vertical	**Maximum Aggregate Size (mm):**	20
Average Diameter (mm):	150	**Date Cored:**	Not Known
Max Length as received (mm)	186	**Age At Test (days):**	Not Known
Min Length as received (mm):	184	**Insitu Density (kg/m³)**	2380
Condition On Receipt:	Satisfactory	**Visual Inspection:**	Satisfactory
Specimen Storage Conditions:	Sealed Container	**Method of Preparation:**	Sulphur
Excess Voidage (%):	1.0	**Surface Moisture at Test**	Wet
Capped Length (mm)	150.0	**Length/Diameter Ratio (At Test)**	1.04
Diameter of Reinforcement (mm)		**Distance from Nearest End (mm)**	
Max Load (kN):	808.4	**Type of Facture:**	**Normal**
Core Compressive Strength (N/mm²):	45.7		

Density Determined by water displacement
Certified that core examination and testing was carried out in accordance with BS EN 12504-1:2019

01/7/2024

Signed:_____ [✓]S.Hudspeth - Director

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Isotest Ltd
8, Hood Road,
Daventry,
Northamptonshire
NN11 4JS
Email: info@isotest.org.uk

TEST REPORT

COMPRESSIVE STRENGTH OF A CONCRETE CORE

BS EN 12504-1:2019

Client: Igne

Report No: 22135/24/03

Client Address: Moor Lane, Witton, Birmingham, B6 7HG

Our Ref: E341-03

Site: Wrexham

Sample Details

Client Reference:	C3	**Date Received:**	27/06/2024
Location:	WS21	**Cast Date:**	Not Known
Mix Details:	Not Known	**Cored By:**	Client
Drilling Angle:	Vertical	**Maximum Aggregate Size (mm):**	20
Average Diameter (mm):	150	**Date Cored:**	Not Known
Max Length as received (mm)	182	**Age At Test (days):**	Not Known
Min Length as received (mm):	179	**Insitu Density (kg/m³)**	2380
Condition On Receipt:	Satisfactory	**Visual Inspection:**	Satisfactory
Specimen Storage Conditions:	Sealed Container	**Method of Preparation:**	Sulphur
Excess Voidage (%):	1.0	**Surface Moisture at Test**	Wet
Capped Length (mm)	150.0	**Length/Diameter Ratio (At Test)**	1.04
Diameter of Reinforcement (mm)		**Distance from Nearest End (mm)**	
Max Load (kN):	815.9	**Type of Facture:**	**Normal**
Core Compressive Strength (N/mm²):	46.2		

Density Determined by water displacement
Certified that core examination and testing was carried out in accordance with BS EN 12504-1:2019

01/7/2024

Signed:_____ [✓]S.Hudspeth - Director

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