



EARTH ENVIRONMENTAL
& GEOTECHNICAL

Phase 1 GeoEnvironmental Desk Study

Sesswick Eels Intake
Wrexham

July 2021

On behalf of
Hafren Dyfrdwy



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1.0 INTRODUCTION

Appointment

- 1.1 Earth Environmental & Geotechnical Ltd (EEG) have been commissioned by Hafren Dyfrdwy (the 'client'), to undertake a Phase I GeoEnvironmental Desk Study for the land associated with the Sesswick Intake (Raw Water Intake), Sesswick, Wrexham (the 'site').
- 1.2 This desktop study is required to provide geo-environmental background information on the site and surrounding area, to inform the optioneering and outline design. No further information has been supplied by the client.

Objective

- 1.3 The purpose of the Desk Study is to collate available geological and environmental data for the site (and its environment) and provide a preliminary geotechnical and geo-environmental appraisal, with a site-specific conceptual site model. This enables a preliminary assessment of geo-environmental risks to be undertaken and, if necessary, provides information for the design of a Phase 2 Ground Investigation.

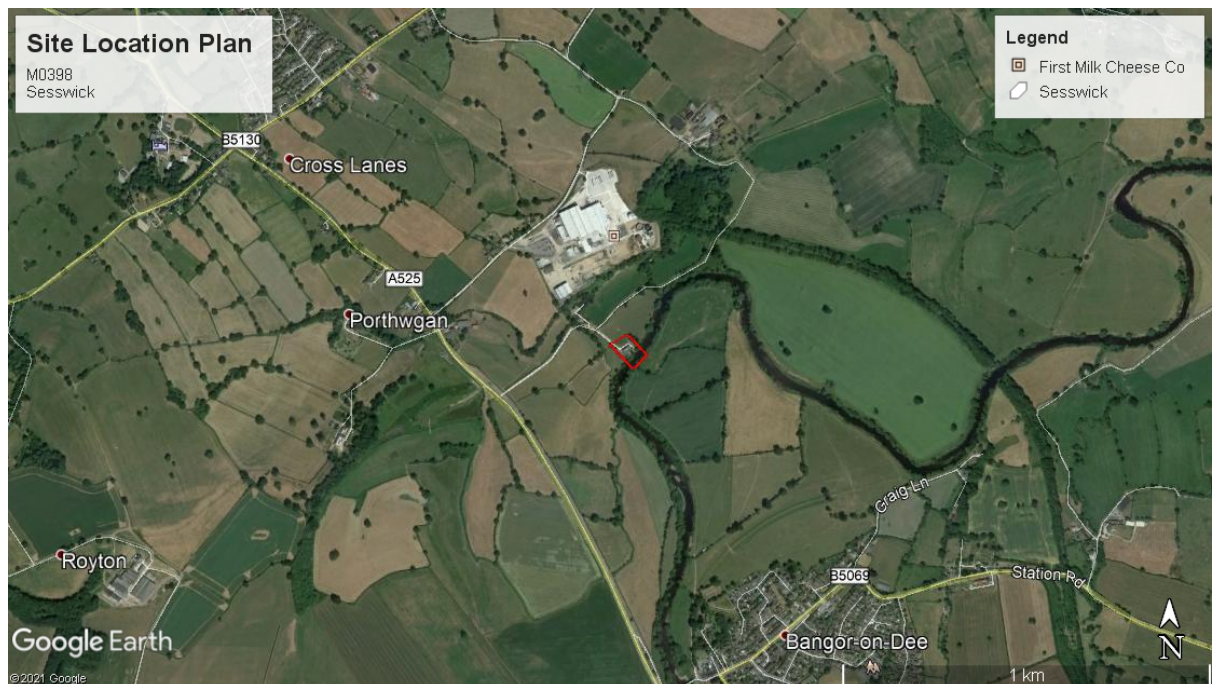
Scope

- 1.4 The Phase I GeoEnvironmental Desk Study comprises a review of the following information sources, some of which was provided by the client.
- British Geological Survey online maps.
 - Google Earth imagery.
 - Environment Agency (EA) online mapping data.
 - Historic Environment Records (HER) obtained from the local authority.
 - A UXO Risk Map supplied by Zetica Ltd
 - Ecological and archaeological and other relevant environmental data by reference to the DEFRA MAGIC website.
 - Historical Ordnance Survey maps provided by Landmark.
 - The site and surrounding areas environmental, geological and mining data presented in the site specific Envirocheck Report provided by Landmark (Appendix 1).
 - Coal Authority Interactive Viewer.

2.0 SITE LOCATION AND DESCRIPTION

- 2.1 The site is located off an unnamed track leading from the A525, approximately 1.25km south-east of Cross Lines village centre, c. 6.5km south-east of Wrexham city centre. The approximate National Grid Reference for the centre of the site is X: 338661 Y: 346360, with the closest postcode being LL13 0UE.
- 2.2 The site is a roughly rectangular shaped parcel of land with maximum dimensions of c. 80m east-west and 100m north-south. The site occupies an area of approximately 0.47 Ha. Site levels are relatively flat, with an elevation ranging between 16m-17m AOD. The River Dee passes through the southeast of the site, with the eastern bank forming the south-eastern boundary. Levels of the river will vary seasonally. The site is part of an active water intake works, containing a large building with associated road infrastructure, along with some small parcels of grassland and trees. The site is accessed in the north-west corner of the site, via an unnamed track. The north-western boundary is defined by a fence line. The southwestern and northeastern boundaries are defined by a fence line, with the exception of a small section in the southeast which appears to be located within fields.
- 2.3 The immediate surrounding area is predominantly farmland and small clusters of trees. A large cheese factory (First Milk Cheese Co) is located c.170m north of site, and is accessed via the same unnamed track. The small village of Porthwgan, Cross Lanes and Bangor-on-Dee are in the surrounding area, all comprising of mainly residential properties. The River Dee runs roughly northeast- southwest and crosses the southern section of the site.
- 2.4 A location plan is shown below as Figure 1.

Figure 1 - Site Location Plan



Site Utility Services

- 2.5 Site service plans have not been obtained for the site on behalf of the client. The status of all services should be checked prior to any development (including site investigation) commencing.

3.0 SITE HISTORY

- 3.1 The historical development of the site has been determined by reference historical plans and Google Earth imagery. The reviewed historical plans comprise only readily available records and may be limited; however, the information available to date indicates that additional searches are unlikely to add to our understanding of the site. The earliest available historical mapping covering the site dates back to 1873. In general, only surrounding historical land uses within 250m of the site and of environmental significance are reported.
- 3.2 The site and significant surrounding land use history is summarised in Table 1, below, followed by selected extracts from maps and aerial photographs.

Table 1: Summary of Site History

Date	On-Site History	Surrounding Land Use History
1873 1:2,500	The site comprises agricultural land immediately northwest of the River Dee. A portion of the river itself is located within the southeast of the site. A footpath, crosses over the northwest corner of the site. A possible flood bund crosses near the centre of the site in southwest/northeast orientation. A possible field drain crosses the north of the site in an approximately west/east orientation.	The site is located within a rural environment, with the site surrounded by agricultural land, including field boundaries defined by trees. A small settlement of Twll is located c. 120m northwest.
1879-81 1:10,560	No significant change.	No significant change.
1899 1:2500 1900 1:10,560	A possible pond encroaches into the northwest boundary.	A possible pond is located immediately northwest of the site, which may extend to the outskirts of Twll.
1914 1:10,560 1912 1:2500	No significant change.	A possible pond is located c. 15m southeast.
1954 1:10,560	An unidentified structure is located within the centre of the site, a linear structure is present within the northwest of the site, and this runs parallel with the western boundary.	Some relatively large buildings have been constructed c. 200m north – possible industrial estate.
1964 1:10,000 1964 1:2500	The footpath crossing the site is no longer shown. A large structure is present within the centre of the site, to the southeast of this, a T-shaped pond is present, with a sluice separating it from the River Dee. In the northwest quarter of the site is a linear	A pond is located c. 80m northwest. The possible industrial estate is shown c. 150m north and labelled Works with associated rail track. It is associated with earthworks, which suggest the land has been raised for their construction. 3No. circular

	structure which is assumed to be watercourse. An access track is located to the west of this. An assumed culverted watercourse enters the site in the north-western boundary, flows in a north-easterly direction across the north of the site, before turning 90degrees to flow in a south-easterly direction, almost parallel with the north-eastern boundary; entering the River Dee at the boundary. The possible flood bund is no longer shown in the southeastern quarter of the site.	structures, possible tanks, are located c. 230m northeast. The pond c.15m south is no longer shown.
1978-88 1:2,500 1979 1:10,000	No significant change.	Works renamed 'creamery'. Possible tanks no longer shown. Numerous tanks located at the 'creamery' site. By 1988, the creamery is extended southeast.
1992 1:1,2500 1992 1:10,000	The possible linear watercourse is no longer shown. The access path to the west is no longer shown. A small building to the southwest of the main building in the centre of the site is no longer shown.	The linear watercourse northwest of the site is no longer shown. Twll is no longer shown. The pond c.80m northwest is no longer shown; an access road which leads up to the boundary of the site crosses over the former pond location and runs parallel with the former linear watercourse.
2000 1:10,000 2020 1:10,000	No significant change.	No significant change.
2021: 1:25,000	A public right of way is shown to cross the site immediately adjacent to and parallel with the River Dee.	A right of way runs immediately adjacent to and parallel with the southwestern boundary.
Google Earth Imagery 2006-2021	No significant change.	A small structure is present c. 25m north of the site.

Figure 2 OS Map Extract 1899

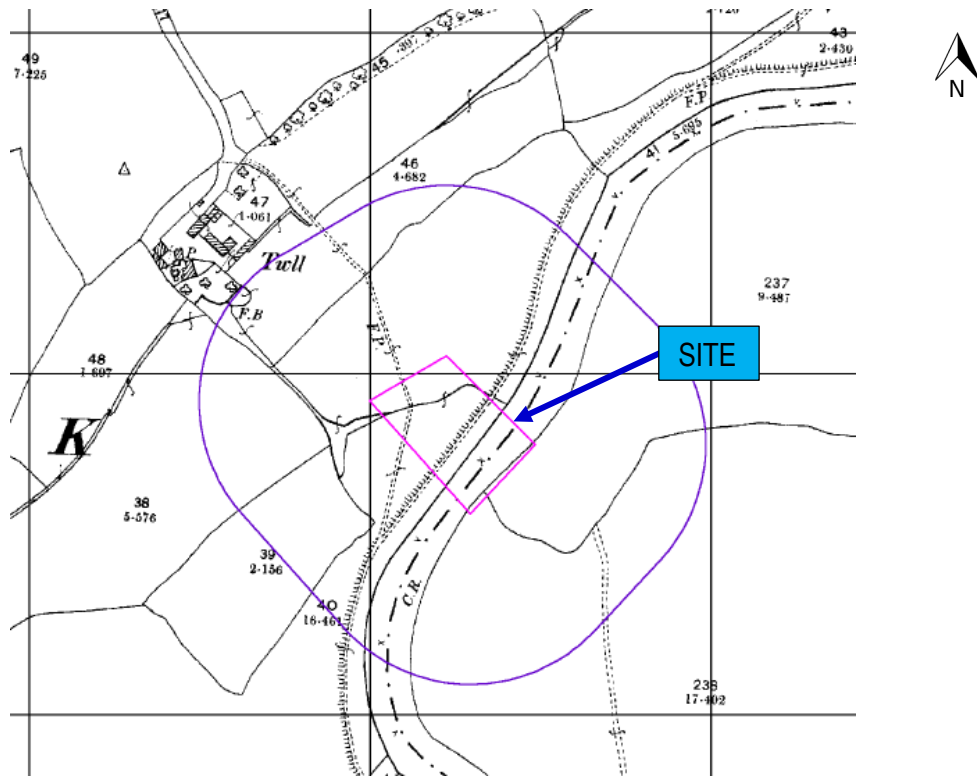


Figure 3 OS Map Extract 1888

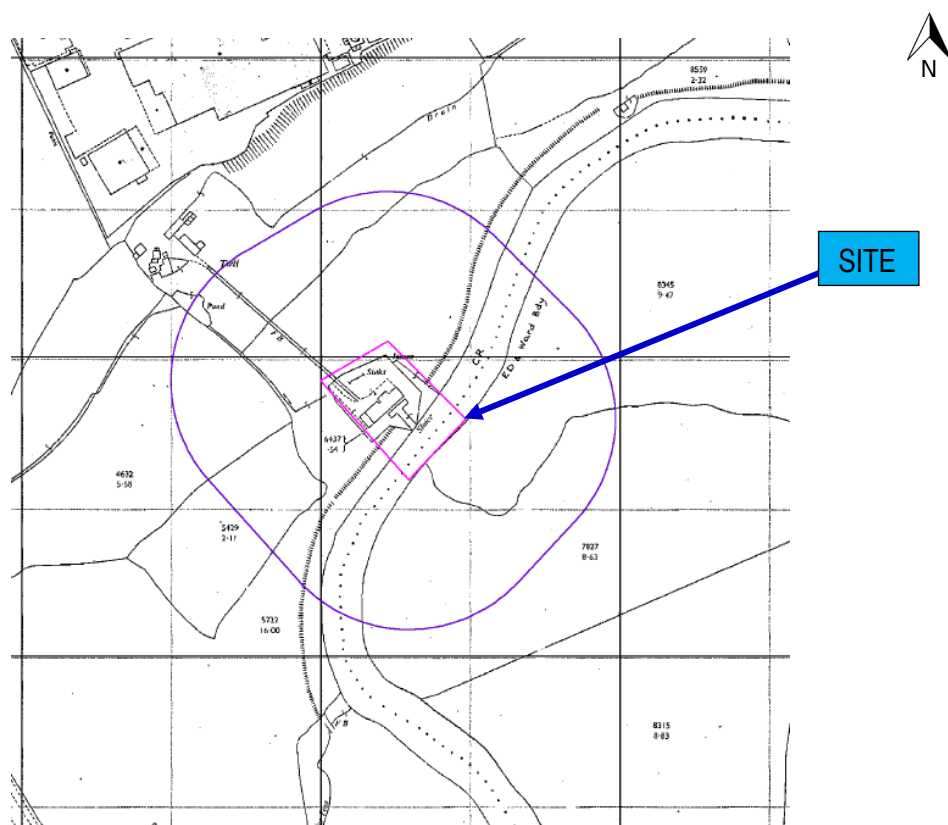


Figure 4 Google Earth Aerial Photograph 2006

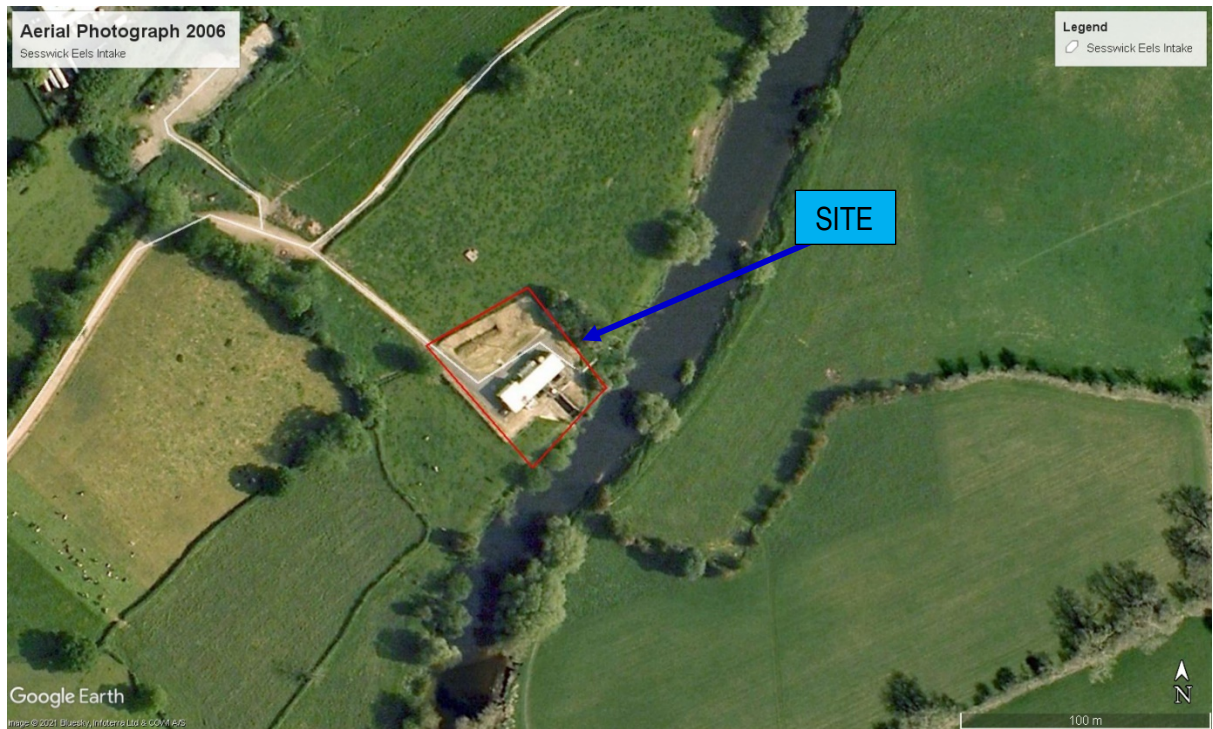
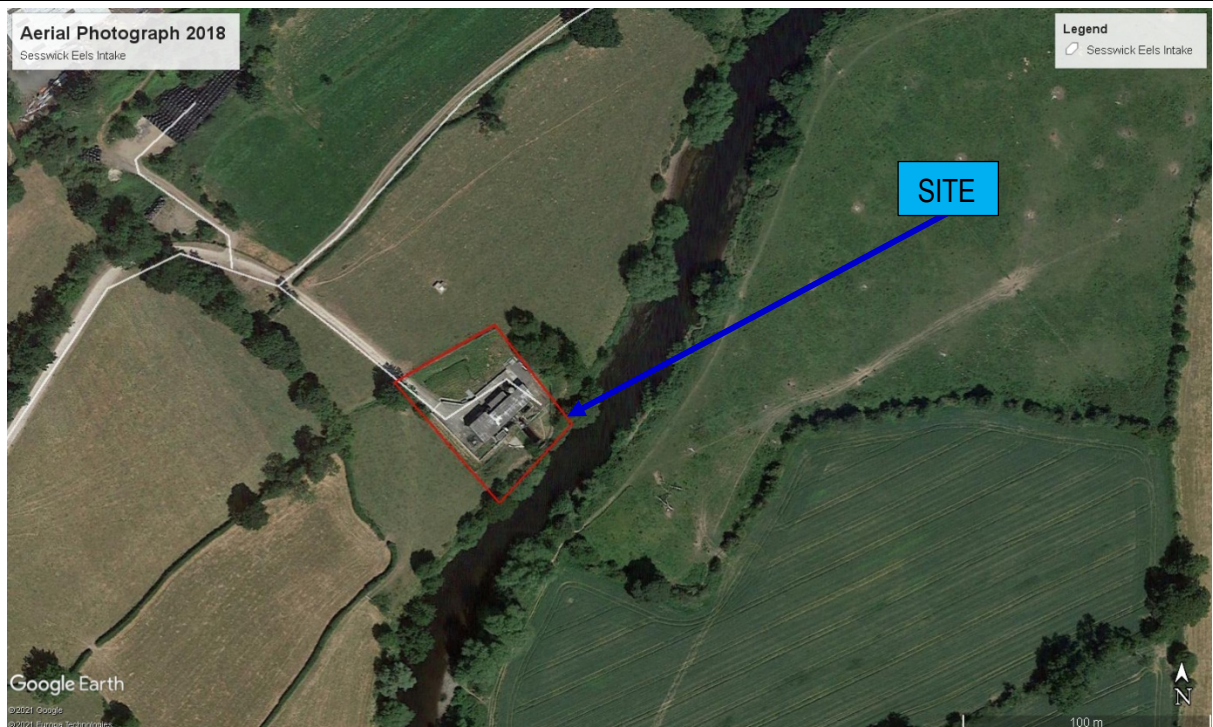


Figure 5 Google Earth Aerial Photograph 2018



4.0 ENVIRONMENTAL SETTING

- 4.1 The geology of the site is covered by British Geological Survey (BGS) online data and the site specific Envirocheck report (Appendix 1).
- 4.2 Environmental conditions are covered by Environment Agency (EA) and British Geological Survey (BGS) online data, and the site specific Envirocheck report (Appendix 1).

Geology

- 4.3 The BGS indicates that the site is not underlain by artificial deposits.
- 4.4 The BGS indicates that the site is underlain by superficial deposits comprising of Alluvium – Clay, Silt, Sand and Gravel. However, the site is also likely to be underlain by River Terrace Deposits of Undifferentiated Sands and Gravels, in turn underlain by Till – Diamicton described by the BGS Lexicon as: *“Clay and silty clay, commonly pebbly and sandy, stiff, possibly interbedded with sand and gravel-rich lenses and rare peat. An unsorted, unstratified deposit of uncertain age; colour variable, generally reflecting nature of source rock material”*.
- 4.5 The Bedrock geology beneath the site comprises of Sandstone of the Kinnerton Sandstone Formation. The BGS Lexicon describes this material as: *“Sandstone, red-brown to yellow, generally pebble-free, fine- to medium-grained, cross-stratified. Dominantly aeolian.”*
- 4.6 The BGS indicate that a fault is not located within 500m of the site.
- 4.7 There are no BGS records of landslides within 500m of the site.
- 4.8 The closest recorded modern and historical seismic event is located c.4.6km north-west of the site, which was a 2.0 magnitude on the Richter scale earthquake occurring in 2009.
- 4.9 There are 2 No. BGS recorded boreholes located within 250m of the site, both located c.250m north-east of the site. They show a sequence of clays, sands and gravels from ground level to a depth of 48.00m bgl. Bedrock was encountered at 48.00mbgl in the form of weathered sandstone, which has been inferred to be the Kinnerton Sandstone Formation.
- 4.10 The site is within an area where there is a no hazard of collapsible ground hazards and a **moderate** risk of compressible ground hazards. There are no hazards in regard to ground dissolution and a very low risk from landslide ground stability hazards present within the site. There is a low risk from running sand ground stability hazards, and very low risk in regard to shrinkage or swelling of clay ground stability hazards.
- 4.11 The **moderate** risk from compressible ground is likely to relate to the possible presence of organic risk soils, peat and granular deposits within the mapped alluvium deposits.

Quarrying/Surface Extraction

- 4.12 There are no recorded BGS Mineral sites with, or within 500m of the site.
- 4.13 OS historical mapping does not identify any pits or quarries within 500m of the site.

Mining and Other Underground Workings

- 4.14 Reference to the Coal Authority (CA) Interactive viewer shows the site is not located within an area where CA mining report should be obtained.
- 4.15 The Envirocheck report records the site to lie in an area that might not be affected by coal mining.
- 4.16 On the basis of these findings there are no further investigations or precautions considered necessary with respect to historical coal mining.
- 4.17 There are no known areas of brine extraction, gypsum extraction, tin mining or clay mining within 1km of the site.
- 4.18 There are no known records for non-coal cavities or natural cavities identified within 1km of the site.

Radon Potential

- 4.19 The property is in a lower probability radon area where less than 1% of homes are estimated to be at or above the Action Level. Therefore, no Radon protection measures are necessary in newly constructed properties, or extensions, at the site.

Hydrogeology and Hydrology

- 4.16 The bedrock deposits within the site are designated **Principal Aquifer**. The superficial deposit on the site are designated as **Secondary A Aquifer**.

Principal Aquifers are defined as: *“These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.”*

Secondary A Aquifers defined as; *‘permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers’.*

- 4.20 There are 10 No. records of a surface water, or potable water abstraction licences within 250m of the site; 9No. are located on site; of these, 6No. are operated by Dee Valley Water Plc, and 3No. by Hafren Dyfrdwy Cyfyngedig. 1No. record is located c.245m northeast of the site for river water for Dairy Crest Dairies. There are no recorded groundwater abstraction licences within 250m of the site.
- 4.21 The groundwater vulnerability at the site been classified as Secondary Superficial Aquifer – Medium Vulnerability.
- 4.22 The western edge of the site lies within a Zone 3 (Total Catchment) Source Protection Zone.
- 4.23 There are 7 No. OS water network lines on site and 12 No. located within 250m of the site. All records are in the form of inland rivers, all on the ground surface, or the information was not supplied.

- 4.24 The nearest surface water feature is on site; the River Dee is located within the southeast of the site. There is also an unnamed partially culverted stream which passes through the north of the site, and along the north-eastern boundary. Within the south of the site there is a sluice and associated structure containing a watercourse within the centre southeastern quarter of the site. There is another surface water feature c. 125m north of the site.
- 4.25 There are 1 No. river quality record located within, or within 500m of the site, where the River Dee is classed as River Quality A on the site. However there are no biological or chemical river quality sampling point within 500m of the site.

Landfill, Waste Management Activity & Infilled Ground

- 4.26 There are no recorded Historical, Local Authority, BGS or EA registered landfill sites within, or within 500m of, the site.
- 4.27 There are no records of a licensed waste management facility within, or within 500m of, the site.

Industrial Land Use

- 4.28 There are no contemporary trade entries recorded within 250m of the site. The closest record is for the First Milk Cheese Company located c.275m to the north.
- 4.29 There are no records for current or historical petrol or fuel sites within 250m of the site.
- 4.30 There are no garage services or related records identified within 250m of the site.
- 4.31 There are no National Grid high voltage underground electricity transmission cables recorded within 1km of the site.
- 4.32 There are no National Grid high-pressure gas transmission pipelines within 1km of the site.
- 4.33 There are no currently active, historical, or disused railway lines within 250m of the site.

Environmental Permits, Incidents and Registers

- 4.34 The Envirocheck Report includes records of environmental permits, incidents and registers within 250m of the site, which are summarised in Table 2 overleaf.

Table 2: Environmental Permits, Incidents and Registers within 250m of the Site

Permit/Incident/Register	Number
Contaminated Land Register Entries and Notices	None
Discharge Consents	None
Prosecutions Relating to Controlled Waters	None
Enforcement and Prohibition Notices	None
Integrated Pollution Controls (IPCs)	None
Integrated Pollution Prevention and Controls	None
Local Authority Pollution Prevention and Controls (IPPCs)	None

Local Authority Pollution Prevention and Control Enforcements	None
Pollution Incidents to Controlled Waters	6
Prosecutions Relating to Authorised Processes	None
Registered Radioactive Substances	None
Substantiated Pollution Incident Register Entries	None
Water Industry Act Referrals	None
Dangerous or Hazardous (COMAH and NIHHS) Sites	None
Explosive Sites	None
Planning Hazardous Substance Consents and Enforcements	None

- 4.35 There are 6 No. recorded Discharge Pollution Incidents to Controlled Waters within, or within 250m of, the site, the closest of which is located c.195m north of the site. All these records are located at Dairy Crest or Maelor Creamery. They relate to: farm effluent/slurry as a result of a leaked caused by a blocked sewer – a Category 2 Significant Incident, an unknown pollutant due to poor operational practise by effluent discharge – a Category 3 Minor Incident, milk/creamery wastes due to poor operational practise by direct discharge – a Category 2 Significant Incident, crude sewerage due to poor operational practise by direct discharge – a Category 2 Significant Incident, milk/creamery wastes due to poor operational practise by effluent discharge – a Category 2 Significant Incident and oils - petrol due to accident spillage/leakage caused by a burst – a Category 3 Minor Incident.

Environmentally Sensitive Sites

- 4.36 There is 1 No. Sites of Special Scientific Interest (SSSI) within, or within 1km of the study site. This relates to a biological and geological designation associated with the Afon Dyfrdwy (River Dee) within the site.
- 4.37 There is 1 No. Special Areas of Conservation (SAC) sites within, or within 1km of, the study site. This relates to the River Dee and Bala Lake (Afon Dyfrdwy A Llyn Tegid) and is within the site.
- 4.38 There are no Special Protection Areas within 1km of the study site.
- 4.39 There are No. 3 records of Ancient Woodlands within 1km of the study site. These are located between c.640m and 840m from the site and are related to restored ancient woodlands and ancient and semi-natural woodland.
- 4.40 There are no records of Local Nature Reserves (LNR) within 1km of the study site.
- 4.41 There site is not located within any Nitrate Vulnerable Zones.
- 4.42 There are no records of National Parks (NP) within 1km of the study site.
- 4.43 There are no records of Designated Environmentally Sensitive Areas within 1km of the study site.
- 4.44 There are no records of Greenbelt land within 1km of the study site.

4.45 There are no records of areas of Outstanding Natural Beauty within 1km of the site.

4.46 There are no records of World Heritage Sites within 1km of the site.

Ecology

4.47 A detailed interpretative ecological assessment of the site falls outside the brief of this report, and where considered necessary, advice should be sought from an ecological specialist in this respect. However, a review of the DEFRA MAGIC map website has been undertaken, which reveals there are no records of designated Habitats or Species within 250m of the site.

Archaeology

4.48 A detailed interpretative archaeological assessment of the site falls outside the brief of this report, and where considered necessary, advice should be sought from an archaeological specialist in this respect. However, a review of the DEFRA MAGIC map website and a HER search with Welsh Archaeological Trust has been undertaken. The full HER report is presented as Appendix 3, and it is recommended that this is reviewed in full by a qualified archaeologist. GIS and shape files data can also be supplied upon request.

4.49 According to the MAGIC website there are no listed buildings on site, however, much of the data held on the MAGIC website is for the country of England.

4.50 The HER report highlights that there are several historical features with 500m of the site, but no records historical events. Details of some of those within 500m are provided below;

- A damaged sandstone quay (Bangor Is-y-Coed), 5m long by 0.5m wide is located c. 175m northeast.
- A Cadbury factory axe of the late bronze age was found c.225m north.
- An early medieval enclosure is located c.315m southeast of the site.
- A medieval pond, probably a former marl pit, is located c.500m west of the site.
- A post-medieval pond, probably a former marl pit, is located c.325m southwest, and c.495m southeast of the site.
- A modern Second World War II war memorial, is located c.250m north of the site.
- Pickhall Halt railway station was located c. 425m north of the site.
- Several entries related to Porthwgan post-medieval farm buildings, c.470m west.
- Former Post medieval Twll buildings located c.160m north.

Potential Flood Risks

4.51 Detailed assessment of flood risk is outside the scope of this report. However, the Envirocheck report indicates that the site is at risk from extreme flooding events (Flood Zones 2 and 3).

- 4.52 There are no records of flood defences, areas benefitting from flood defences or areas used for flood storage within 250m of the site.
- 4.53 According to the BGS Flood GFS Data within the Envirocheck report, it states that the site has a potential for groundwater flooding to occur at surface.

Asbestos

- 4.54 An asbestos report has not been provided for the site. The risk is generally considered **moderate** as most of the site has experienced some form of construction including former linear watercourse, culvert, sluice and associated pond, and main building with associated hard standing and it possible that asbestos containing materials (ACMs) were used in the construction of this infrastructure. ACMs may also be present in made ground soils beneath the site.
- 4.55 Prior to any construction works occurring on-site, it is recommended that a refurbishment asbestos survey is undertaken for any structures at the site.

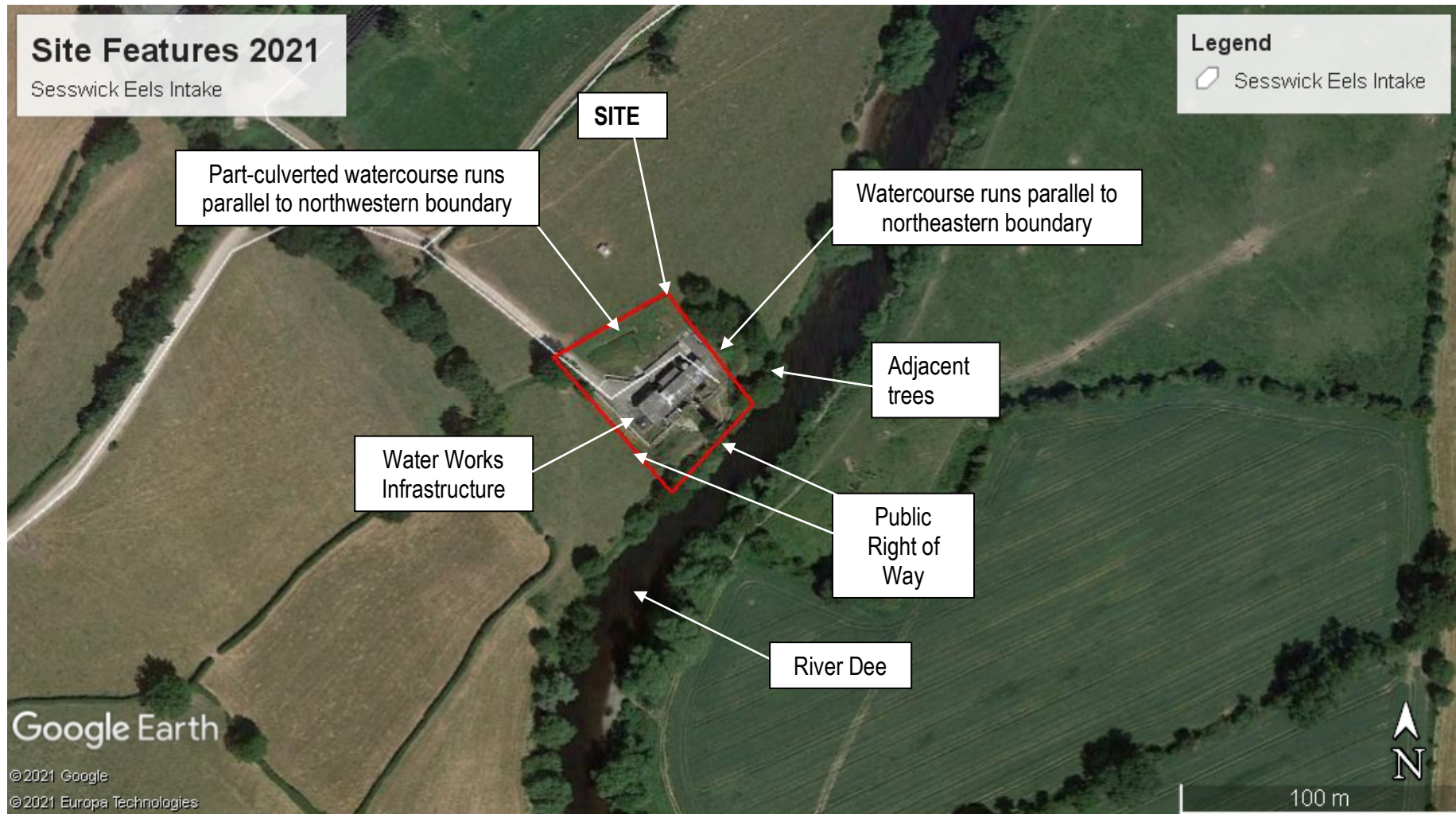
Unexploded Bomb (UXB) Risk

- 4.56 A UXB Risk Map has been obtained from Zetica Ltd. This indicates that the site is in a low risk area with respect to UXB, and no further works is deemed necessary with this regard. The Risk Map is presented as Appendix 2.

Previous Site Investigations

- 4.57 EEG has not been made aware of any previous ground investigation reports for the site.

Figure 6 - Site Features Plan



5.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

Introduction

- 5.1 The following paragraphs outline a Preliminary Risk Assessment (PRA) for the site based on the above desk study information as defined by DEFRA and the EA Model Procedures for the Management of Land Contamination, CLR11⁽²⁰⁰⁴⁾.
- 5.2 Table 5 provides a Preliminary Conceptual Model (PCM) which considers the source-pathway-receptor linkages present alongside the likelihood, severity and risk level as defined within Table 3 and Table 4 overleaf. The assessment of probability, a modified risk table, and certain consequence definitions are based on CIRIA C552 and CLR11.
- 5.3 Table 5 considers whether a pollution linkage is potentially present and provides a preliminary qualitative assessment of risk based on the information currently available. Where a possible linkage is identified, it does not necessarily mean that a significant risk exists but indicates that further information is required through appropriate site investigation to substantiate the conceptual model.
- 5.4 The PCM/PRA is based on a proposed continued end use as a water treatment works with potential upgrading/installation of kiosks and dosing points. It is assumed that no new enclosed and occupied structures are to be constructed and that the development comprises the construction of water pipes only and associated infrastructure. The risk assessment below will reflect this end use.

Table 3: Consequence, Probability and Risk

Probability	Consequence,	Risk
High Likelihood- There is a pollution linkage and an event either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution	Very High – acute risk to the human health likely to result in significant harm. Risk of severe or irreversible effect on ground/surface water quality. Catastrophic damage to buildings / property.	Very High – there is a high potential that the source-pathway-receptor scenarios may give rise to harm to human health or the environment and remedial action is likely to be required.
Likely – there is a pollution linkage and all the elements are present, which means that it is probable an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.	High – Severe or irreversible effect on human health. Temporary severe or irreversible effect on ground/surface water quality. Reduction of water quality rendering groundwater or surface water unfit to drink and/or substantial adverse impact on groundwater dependant environmental receptors.	High – it is likely that the source-pathway-receptor scenarios may give rise to an impact on human health or the environment, which may require remediation and/or control measures to mitigate risks
Low likelihood– there is a pollutant linkage and circumstances are possible for an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term	Moderate – Long term or short term moderate effect on human health. Moderate effect on ground/surface water quality, reversible with time. Reduced reliability of a supply at a groundwater or surface water abstraction source	Moderate – it is possible that the source-pathway-receptor scenarios may give rise to an impact on human health or the environment, however it is either relatively unlikely that such are would be severe, or if any harm were to occur it is more likely that harm would be mild.
Unlikely – there is a pollution linkage but circumstances are such that it is doubtful that an event would occur even in the very long term.	Low – Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.) Slight effect on ground/surface water quality, reversible with time. Marginal reduced reliability of a supply at a groundwater or surface water abstraction source.	Low – it is possible that harm could arise at the source, however it is likely that this would at worst be mild.
		Very Low – it is unlikely that the source-pathway-receptor scenarios will give rise to an impact on human health or the environment.

Table 4: Estimation of Level of Risk by Comparison of Consequence and Probability

		Consequence			
		High	Moderate	Low	Very low
Probability	High Likelihood	Very High	High risk	Moderate risk	Moderate to low risk
	Likely	High risk	Moderate risk	Moderate to low risk	Low risk
	Low Likelihood	Moderate risk	Moderate to low risk	Low risk	Very low risk
	Unlikely	Moderate to low risk	Low risk	Very low risk	Very low risk

Potential Sources

- 5.5 The site historically is considered to have contained a flood bund since before 1873, and a part of a larger pond within the northwest, and a watercourse. It appears the pond was backfilled and the watercourse redirected following development of a raw water intake and potentially a water treatment works facility sometime between 1914 and 1954, although some small areas of agricultural land remained within the site. This comprised of a large central building, sluice and associated water inlet canal, and historically a linear watercourse. The site saw a reconfiguration

sometime between 1988 and 1992 when the linear watercourse is assumed to have been backfilled/culverted or removed and a small building is likely to have been demolished. There is a possibility that soil contamination could be present associated with these works which could include ACMs. The site is in a rural environment and environmental records indicate that no significant sources of contamination are present within proximity to site. Historical maps indicate the presence of possible small backfilled ponds between c.15m and c.80m from the site, and raised earthworks associated with the diary c.150m north of the site. Given the size and distance from the subject site, it is considered unlikely that these constitute a significant source of potential contaminants or gases.

5.6 There is potential for the presence of contamination associated with the following:

- Made Ground associated with development of water intake infrastructure and watercourses.
- Made Ground associated with potential infilling of pond, within the northwest and extending outside the site, and linear watercourse.
- Asbestos containing materials (ACM) from the intake associated buildings/water works infrastructure, including made ground associated with a demolished building.
- Chemicals associated with water treatment.
- Chemicals associated with agriculture.

5.7 Contaminants may therefore include heavy metals, polycyclic aromatic hydrocarbons (PAH), and asbestos.

Potential Receptors

5.8 The following receptors have been considered for the construction and operational stages of the proposed redevelopment.

- Construction workers during site development works;
- Site users;
- General public using Rights of Way;
- River Dee (including SSSI and SAC) and unnamed watercourse
- Groundwater within the underlying aquifer.

Potential Pathways

5.9 The following pathways have been considered for the construction and operational stages of the proposed redevelopment.

- Dermal contact, ingestion, inhalation pathways of potentially contaminated soils;
- Downward vertical migration of leachate/chemicals to groundwater aquifers;
- Lateral migration via drains and watercourses into River Dee;

Table 5: Preliminary Conceptual Model

Source	Pathway	Receptor	Probability	Consequence	Risk	Comment
Made Ground or chemically contaminated Natural Ground (Heavy Metals, PAH)	Dermal contact, ingestion and inhalation of soils dust	Construction Workers	Likely	Moderate	Moderate risk	Construction workers are likely to be exposed to potentially contaminated Made Ground or natural materials and micro-organisms during construction works, however exposure duration will be short-term only. Assuming appropriate health and safety measures are adopted (in line with CDM and other relevant health and safety guidance) a MODERATE risk to construction workers is anticipated, although with appropriate use of PPE/REP this can be lowered to LOW .
		Current Site Users / General Public	Unlikely	Moderate	Low risk	The site is currently a water intake and possibly a water treatment facility and is assumed to be largely unoccupied. Therefore, there is no long term potential for contact between contaminated soils and receptors. The risk is therefore considered to be LOW .
		Future land users	Unlikely	Low Moderate	Low risk	It is understood that the site is to continue being a water intake and possibly a water treatment facility and is largely unoccupied. There is therefore no long term potential for direct contact between contaminated soils and receptors. The risk is therefore considered to be LOW . Should development proposals include full time occupation of the site, then further risk assessment should be undertaken.
	Downward vertical migration of leachate to groundwater	Groundwater within the Underlying Aquifer, and River	Low Likelihood	Moderate	Moderate to Low risk	The majority site is likely to be underlain by a substantial thickness of Secondary A superficial Aquifer over the Principal Aquifer. However, the backfilled pond may serve as a source for mobile contaminants. The risk to groundwater and the River is therefore considered MODERATE TO LOW .
	Vertical or lateral migration of ground gas	Construction Workers	Low Likelihood	Moderate	Moderate to Low risk	The backfilled pond may be a source of ground gas and construction workers may be exposed to ground gas/depleted oxygen conditions in confined spaces and excavations in; however, the duration will be short term. The risk to construction workers from ground gas is considered MODERATE to LOW .

Source	Pathway	Receptor	Probability	Consequence	Risk	Comment
Asbestos in any Made Ground and infrastructure	Dermal contact, ingestion and inhalation of soils dust	Construction Workers	Low Likelihood	High	Moderate risk	Construction workers may be exposed to potential asbestos in soils during the construction phase. The risk is considered MODERATE . A contamination assessment of the existing on-site soils and a pre-construction asbestos survey undertaken of the current infrastructure would be required to determine the level of risk and necessary mitigation measures.
		Current Site Users / General Public	Unlikely	Moderate	Low risk	Asbestos may be present in the Made Ground soils beneath the site and infrastructure. However, asbestos is only harmful when disturbed. The risk to current site users/general public is considered to be LOW .
		Future land users	Unlikely	Moderate	Low risk	Asbestos may be present in the Made Ground soils beneath the site and infrastructure. However, asbestos is only harmful when disturbed. An ACM survey should be undertaken, and recommendations for any mitigation followed. The risk to future site users would therefore be considered to be LOW .

6.0 CONCLUSIONS & RECOMMENDATIONS

Conclusions

- 6.1 The earliest historical information from the 1870s also indicates parts of the site have remained a flood bund and agricultural land. Historically, the main part of the site appears to have been predominately a water intake/possible water treatment works facility since sometime between 1914 and 1954 with some reconfiguration to the buildings and associated watercourses sometime between the 1980s and 1990s. The site since this time site has largely remained unchanged.
- 6.2 The site is underlain by superficial geology of alluvium a Secondary A Aquifer, this is also likely to be underlain by River Terrace Deposits and Diamicton. The site subsequently underlain by bedrock of Kinnerton Sandstone, a Principal Aquifer.
- 6.3 Given the nature of the development with no occupied structures the risks to end and current users is considered **LOW**.
- 6.4 The overall risk to construction workers is concluded to be a worst case **MODERATE** due to risks posed by soil contamination and possible asbestos within existing infrastructure or contaminants within made ground or where contaminants these may have leached into natural ground or groundwaters.
- 6.5 The risk to controlled waters is concluded to be **MODERATE TO LOW** due to the potentially backfilled watercourses/ponds.
- 6.6 The site is within an area at risk from flooding and extreme flooding.
- 6.7 According to the BGS Flood GFS Data within the Envirocheck report states that most of the site has potential for groundwater flooding to occur at the surface.

Recommendations

Flooding

- 6.8 Although the site is less than 1 hectare in area, it is in an area at risk from flooding, therefore a site-specific flood risk assessment (FRA) is considered recommended for the site for planning purposes.

Mining and Quarrying

- 6.9 The site is not located in a CA coal mining reporting area and is therefore NOT considered at significant risk from coal mining.
- 6.10 There is no recorded evidence of quarrying or clay/sand/gravel pits within or within 250m of the site.

Contamination

- 6.11 It is recommended that a refurbishment asbestos survey be undertaken on all any existing structures which will be disturbed during the development works (if any).

- 6.12 It is recommended that in advance of any future redevelopment of the site, or other activities which could disturb soils and increase the potential for a contaminant linkage, an intrusive ground investigation is undertaken to assess possible presence of soil and groundwater contamination at the site.

Foundations

- 6.13 Made ground may be present on the site associated with the construction of the water intake works and related infrastructure. The composition, depth and distribution of made ground at the site is not known at this stage. Alluvial deposits are also indicated to be located throughout the site.
- 6.14 The made ground and alluvial deposits are unlikely to form a suitable foundation for laying any new structures or pipework. However, it is likely that River Terrace Deposits and/or Diamicton will underlie these, and these are more likely to form a suitable foundation for the laying of any new structures and pipework. It would be prudent to undertake some limited geotechnical ground investigation where new infrastructure is proposed, to confirm ground conditions, and determine if any low strength soils are present which may require more robust construction.

Other Geotechnical Considerations

- 6.15 The stability of the existing river and flood bund must be considered in any design details and during the associated ground works. It is recommended a suitably qualified civil engineer is consulted at an early stage, and if deemed necessary geotechnical stability assessment undertaken prior to/during/post development works.
- 6.16 The risk of hazards associated with landslide hazards is listed as very low.
- 6.17 The risk of hazards associated with compressible ground stability is **MODERATE**, likely to relate to the possible presence of organic soils or peat within the mapped alluvium deposits. There may also be granular soils present which if groundwater is shallow, may give rise to running sands. As previously mentioned, suitable ground investigation should be undertaken where new infrastructure is proposed.
- 6.18 An earthquake has been recorded historically c. 4.6km from the site, however significant seismic events where significant damage occurs to structures are highly unlikely in the UK, and the risk is negligible.
- 6.19 The site is likely to be underlain by a significant depth of variable superficial deposits. There appears to be an absence of steep slopes, although the locally the banks of the river may be steep, and this should be considered in any future design. Should there be any specific concerns with regards to slope stability, then further advice should be sought.

Utilities

- 6.20 There are no high pressure gas distribution underground pipelines or high voltage electric distribution cable within 250m of the site.

Hazardous Ground Gases

- 6.21 It is understood that the development will not include any occupied structures and therefore there is no significant risk from ground gas other than to construction workers who should use appropriate PPE/PRE when working in enclosed spaces or excavations. Should development proposals include full time occupation of the site or enclosed structures, and if deep made is encountered, then further ground gas risk assessment should be undertaken.
- 6.22 The property is located in a lower probability radon area where less than 1% of homes are estimated to be at or above the Action Level. Therefore, no Radon protection measures are necessary in newly constructed properties, or extensions, at the site.

Ecology and Invasive and Protected Species

- 6.23 The site is located within a Site of Special Scientific Interest (SSSI) and Special Areas of Conservation both relate to the River Dee.
- 6.24 There are no records of designated Habitats or Species within, or within 250m of, the site.
- 6.25 An ecological survey is outside the scope of work for this Preliminary Appraisal. It is recommended that an ecological survey is carried out by an appropriately qualified specialist to advise on the significance of the above and determine the presence, or otherwise, of any invasive, protected or sensitive species or habitats within the site.

Soakaways

- 6.26 It is considered that soakaways are unlikely to be necessary for a water intake site of this nature, and in any case would not be suitable into the likely saturated alluvial deposits or variable permeability.

Archaeology

- 6.27 MAGIC maps does not indicate any listed buildings within 500m of the site.
- 6.28 The HER search shows some historical features and events within 500m of the site.
- 6.29 It is recommended that further advice is sought from an archaeological specialist to determine the significance of the above.

Unexploded Bombs

- 6.30 The Zetica Ltd UXB Risk Map indicates that the site UXB risk is low.

Recommended Outline Scope of Intrusive Ground Investigation

- 6.31 The finalised scope of an intrusive ground investigation should be determined following confirmation of the nature of the development works. However, at this stage, it is considered likely that the following would be required:
- Window sampling and/or trial pitting to investigate shallow ground conditions, undertake in situ geotechnical testing and obtain soil samples for laboratory analysis;

- Possible deeper cable percussive boreholes should the river embankment stability assessment be required, or if substantial thicknesses of soft deposits are identified. This may include monitoring (such as with inclinometers/standpipes) during/following site works.
- Laboratory analysis of soil samples for geotechnical parameters, e.g., plastic/liquid limits, undrained shear strength and compressibility characteristics;
- Laboratory analysis of soil, and if necessary, groundwater and surface water, samples for heavy metals, pH, sulphates, organic contaminants, and asbestos;
- Soakaway tests (if soakaways are to be considered);
- Production of a Phase 2 GeoEnvironmental report.

APPENDIX 1

ENVIROCHECK REPORT AND HISTORICAL OS MAPS

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

281204992_1_1

Customer Reference:

M0398

National Grid Reference:

338650, 346370

Slice:

A

Site Area (Ha):

0.44

Search Buffer (m):

1000

Site Details:

Sesswick - Sesswick Intake

Sesswick

WREXHAM

LL13 0UE

Client Details:

Mr N Waterhouse

Earth Environmental & Geotechnical Ltd

The Wilton Centre

Redcar

TS10 4RF

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	26
Hazardous Substances	-
Geological	27
Industrial Land Use	28
Sensitive Land Use	29
Data Currency	30
Data Suppliers	37
Useful Contacts	38

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

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 1			7	12
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 6			3	
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature		Yes			
Pollution Incidents to Controlled Waters	pg 7		6	4	13
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 11	1			
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points	pg 11				1
Substantiated Pollution Incident Register	pg 11				4
Water Abstractions	pg 12	9	1	1	(*5)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 16	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 16	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 16	Yes	n/a	n/a	n/a
Source Protection Zones	pg 16	1			1
Extreme Flooding from Rivers or Sea without Defences	pg 16	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 16	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 17	7	12	18	36

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 26				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 26	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 26				1
Registered Waste Transfer Sites					
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					
Geological					
BGS 1:625,000 Solid Geology	pg 27	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 27				1
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 27		Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 27	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 27	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 27	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 27	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 28			2	6
Fuel Station Entries					
Gas Pipelines					
Underground Electrical Cables					
Sensitive Land Use					
Ancient Woodland	pg 29				3
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 29	1			
Special Areas of Conservation	pg 29	1			
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (SE)	0	1	338649 346366
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	147	1	338600 346550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	153	1	338500 346500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	164	1	338450 346450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	194	1	338500 346550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (W)	259	1	338350 346450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	322	1	338300 346500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	455	1	338150 346450
1	Discharge Consents Operator: The First Milk Cheese Company Limited Property Type: Preparation Of Milk & Milk Products Location: The First Milk Cheese Factory Ltd, Pickhill Lane, Cross Lanes, Wrexham, Clwyd, L1130ue Authority: Natural Resources Wales Catchment Area: River Dee Reference: Eprap3429xk Permit Version: 1 Effective Date: 3rd August 2010 Issued Date: 3rd August 2010 Revocation Date: Not Supplied Discharge Type: Sewage And Trade Combined - Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: River Dee Status: New issued under EPR 2010 Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	311	2	338918 346577
1	Discharge Consents Operator: Dairy Crest Ltd Property Type: Preparation Of Milk & Milk Products Location: Maelor Creamery Marchweil Nr Wrexh, Marchweil, Nr Wrexham, Wales, L113 0ue Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0078801 Permit Version: 1 Effective Date: 26th June 1985 Issued Date: 26th June 1974 Revocation Date: 5th January 1995 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: River Dee Status: Authorisation revoked Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	315	2	338900 346600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consents Operator: Maelor Foods Limited Property Type: Water Treatment Works Location: Ptp @ Maelor Foods Limited, Pickhill Lane, Cross Lanes, Wrexham, North Wales, LI13 0ue Authority: Natural Resources Wales Catchment Area: DEE - CHESTER WEIR TO CEIRIOG Reference: Wb3990ht Permit Version: 2 Effective Date: 28th June 2018 Issued Date: 28th June 2018 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Trib Of River Dee Status: Effective Positional Accuracy: Located by supplier to within 10m	A18SE (N)	325	2	338754 346716
2	Discharge Consents Operator: Maelor Poultry Limited Property Type: Livestock Production, Food Production Location: Ptp @ Maelor Poultry Limited, Pickhill Lane, Cross Lanes, Wrexham, North Wales, LI13 0ue Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Eprwb3990ht Permit Version: 1 Effective Date: 1st February 2016 Issued Date: 15th December 2015 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Trib Of River Dee Status: New issued under EPR 2010 Positional Accuracy: Located by supplier to within 10m	A18SE (N)	325	2	338754 346716
2	Discharge Consents Operator: Maelor Poultry Limited Property Type: Not Supplied Location: Ptp @ Maelor Poultry Limited, Pickhill Lane, Cross Lanes, Wrexham, North Wales, LI13 0ue Authority: Natural Resources Wales Catchment Area: DEE - CHESTER WEIR TO CEIRIOG Reference: Wb3990ht Permit Version: 1 Effective Date: 1st February 2016 Issued Date: 15th December 2015 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Trib Of River Dee Status: Effective Positional Accuracy: Located by supplier to within 10m	A18SE (N)	325	2	338754 346716
3	Discharge Consents Operator: The First Milk Cheese Co Ltd Property Type: Preparation Of Milk & Milk Products Location: Maelor Creamery Marchweil Nr Wrexh, Marchweil, Nr Wrexham, Wales, LI13 0ue Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0078801 Permit Version: 3 Effective Date: 20th August 2002 Issued Date: 19th August 2002 Revocation Date: 16th March 2009 Discharge Type: Sewage And Trade Combined - Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: River Dee Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	367	2	338993 346575

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: Dairy Crest Ltd Property Type: Preparation Of Milk & Milk Products Location: Maelor Creamery Marchweil Nr Wrexha, Marchweil, Nr Wrexham, Wales, LI13 0ue Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0078801 Permit Version: 2 Effective Date: 6th January 1995 Issued Date: 6th January 1995 Revocation Date: 19th August 2002 Discharge Type: Trade Effluent Discharge: Not Supplied Environment: Receiving Water: River Dee Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A14NW (NE)	367	2	338993 346575
4	Discharge Consents Operator: Mr & Ms Henry Oliver & Sarah Ormrod Property Type: Domestic Property (Single) Location: Pickhill Old Hall Marchweil Wrexha, Marchweil Wrexham Authority: Natural Resources Wales Catchment Area: River Dee Reference: CG0328901 Permit Version: 1 Effective Date: 30th April 1992 Issued Date: 30th April 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Land/Soakaway Environment: Receiving Water: Into Land Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A18SE (N)	576	2	338870 346940
5	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Settled Storm Overflow At Bangor-On-Dee Wastewater Treatment Works, Track Past 'Graig Cottage', Graig Lane, Bangor Is Y Coed, LI13 0ad Authority: Natural Resources Wales Catchment Area: DEE - CHESTER WEIR TO CEIRIOG Reference: Cm0060702 Permit Version: 2 Effective Date: 15th March 2021 Issued Date: 15th March 2021 Revocation Date: Not Supplied Discharge Type: Not Supplied Discharge: Freshwater Stream/River Environment: Receiving Water: River Dee Status: Effective Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	837	2	339456 346008
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: DEE - CHESTER WEIR TO CEIRIOG Reference: Cm0060701 Permit Version: 6 Effective Date: 1st January 2010 Issued Date: 26th June 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Dee Status: Effective Positional Accuracy: Located by supplier to within 10m	A14SE (E)	865	2	339500 346040

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: DEE - CHESTER WEIR TO CEIRIOG Reference: Cm0060701 Permit Version: 6 Effective Date: 1st January 2010 Issued Date: 26th June 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Dee Status: Effective Positional Accuracy: Located by supplier to within 10m	A14SE (E)	865	2	339500 346040
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0060701 Permit Version: 5 Effective Date: 31st December 2005 Issued Date: 31st December 2005 Revocation Date: 31st December 2009 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Dee Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m	A14SE (E)	865	2	339500 346040
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: River Dee Reference: CM0060701 Permit Version: 4 Effective Date: 18th July 1995 Issued Date: 17th July 1995 Revocation Date: 30th December 2005 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Not Supplied Environment: Receiving Water: River Dee Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m	A14SE (E)	865	2	339500 346040
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0060701 Permit Version: 3 Effective Date: 5th November 1993 Issued Date: 5th November 1993 Revocation Date: 17th July 1995 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Not Supplied Environment: Receiving Water: River Dee Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m	A14SE (E)	865	2	339500 346040

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: DEE - CHESTER WEIR TO CEIRIOG Reference: CM0060702 Permit Version: 1 Effective Date: 5th November 1993 Issued Date: 5th November 1993 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Dee Status: Effective Positional Accuracy: Located by supplier to within 10m	A14SE (E)	865	2	339500 346040
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: DEE - CHESTER WEIR TO CEIRIOG Reference: Cm0060702 Permit Version: 1 Effective Date: 5th November 1993 Issued Date: 5th November 1993 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Dee Status: Effective Positional Accuracy: Located by supplier to within 10m	A14SE (E)	865	2	339500 346040
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0060701 Permit Version: 2 Effective Date: 30th January 1985 Issued Date: 30th January 1985 Revocation Date: 4th November 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Not Supplied Environment: Receiving Water: River Dee Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m	A14SE (E)	905	2	339540 346030
6	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Bangor On Dee Stw, (Bangor Is Y Coed) Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0060701 Permit Version: 1 Effective Date: 29th August 1981 Issued Date: 29th August 1981 Revocation Date: 29th January 1985 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Not Supplied Environment: Receiving Water: River Dee Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m	A14SE (E)	905	2	339540 346030

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Discharge Consents Operator: Maelor R D C Property Type: Undefined Or Other Location: Bangor Isycoed Stw Authority: Natural Resources Wales Catchment Area: River Dee Reference: Cm0013101 Permit Version: 1 Effective Date: 6th November 1967 Issued Date: 6th November 1967 Revocation Date: 14th March 1986 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Dee Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A8SE (S)	929	2	338800 345400
8	Integrated Pollution Prevention And Control Name: The First Milk Cheese Company Ltd Location: Sdi Plant, The First Milk Cheese Company Ltd, Sdi Plant, Pickhill Lane, Cross Lanes,, Wrexham, LL13 0UE Authority: Natural Resources Wales Permit Reference: VP3837FV Original Permit Ref: Up3031lw Effective Date: 9th February 2012 Status: Surrender Effective Application Type: Surrender App. Sub Type: Whole Positional Accuracy: Automatically positioned to the address Activity Code: 6.8 A(1) (D) (I) Activity Description: Animal Vegetable & Food; Treating Etc Animal Raw Materials (Not Milk) For Food >75T/D Primary Activity: Y Activity Code: 5.3 A(1) (C) (I) Activity Description: Other Waste Disposal; Non-Hazardous Waste >50T/D By Biological Treatment Primary Activity: N	A13NW (N)	276	2	338612 346684
8	Integrated Pollution Prevention And Control Name: The First Milk Cheese Company Ltd Location: Maelor Creamery, Pickhill Lane, Cross Lanes, Wrexham, Clwyd, LL13 0UE Authority: Natural Resources Wales Permit Reference: UP3031LW Original Permit Ref: Up3031lw Effective Date: 10th January 2008 Status: Superseded By Variation Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 5.3 A(1) (C) (I) Activity Description: Other Waste Disposal; Non-Hazardous Waste >50T/D By Biological Treatment Primary Activity: N Activity Code: 6.8 A(1) (D) (I) Activity Description: Animal Vegetable & Food; Treating Etc Animal Raw Materials (Not Milk) For Food >75T/D Primary Activity: Y	A13NW (N)	276	2	338612 346684
9	Integrated Pollution Prevention And Control Name: Maelor Foods Limited Location: Maelor Foods Limited, Pickhill Lane, Cross Lanes, Wrexham, Wrexham, LL13 0UE Authority: Natural Resources Wales Permit Reference: AB3591ZQ Original Permit Ref: Not Supplied Effective Date: 22nd April 2020 Status: Effective Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Located by supplier to within 10m Activity Code: 5.4 PART A (1) A) (I) Activity Description: Not Supplied Primary Activity: N Activity Code: 6.8 A(1) (B) Activity Description: Not Supplied Primary Activity: Y Activity Code: 6.8 PART A (1) D) (I) Activity Description: Not Supplied Primary Activity: N	A18SW (N)	313	2	338542 346706

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Nearest Surface Water Feature	A13SW (SW)	0	-	338646 346364
10	Pollution Incidents to Controlled Waters Property Type: Process Location: Dairy Crest Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Blocked Sewer Incident Date: 27th June 1992 Incident Reference: 4374 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13NW (N)	195	3	338600 346600
11	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Maelor Creamery, Bangor On Dee Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Poor Operational Practise Incident Date: 1st May 1991 Incident Reference: 2715 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	213	3	338750 346595
11	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dairy Crest Authority: Environment Agency, Welsh Region Pollutant: Milk/Creamery Wastes Note: Poor Operational Practise Incident Date: 18th April 1991 Incident Reference: 2712 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	215	3	338755 346595
11	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Maelor Creamery, Bangor On Dee Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Poor Operational Practise Incident Date: 18th April 1991 Incident Reference: 2712 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	217	3	338750 346600
11	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dairy Crest Authority: Environment Agency, Welsh Region Pollutant: Milk/Creamery Wastes Note: Poor Operational Practise Incident Date: 1st May 1991 Incident Reference: 2715 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	220	3	338755 346600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dairy Crest, Pick Hill, MARCHWIEL Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Accidental Spillage/Leakage Incident Date: 13th October 1991 Incident Reference: 2080 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Burst Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NW (NW)	237	3	338500 346600
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Coal Solids Note: Mechanical Failure Incident Date: 24th April 1991 Incident Reference: 2674 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Bypass Of Treatment Facilities Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13NW (N)	253	3	338550 346645
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Dairy Crest Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Organic Note: Mechanical Failure Incident Date: 1st May 1991 Incident Reference: 2927 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Bypass Of Treatment Facilities Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13NW (N)	258	3	338550 346650
14	Pollution Incidents to Controlled Waters Property Type: Waste Handling Facilities Location: Creamery Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Mechanical Failure Incident Date: 22nd January 1992 Incident Reference: 3401 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18SE (N)	404	3	338750 346800
15	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Down Stream Of Dairy Crest, Sw Drain Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Poor Operational Practise Incident Date: 27th June 1992 Incident Reference: 4580 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	441	3	338850 346800
16	Pollution Incidents to Controlled Waters Property Type: Warehouses Location: Pickhill Old, Hall Farndown Stream Of, Dairy Crest Authority: Environment Agency, Welsh Region Pollutant: Agricultural: Carcasses Note: Not Supplied Incident Date: 23rd May 1992 Incident Reference: 4059 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	552	3	338900 346900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	Pollution Incidents to Controlled Waters Property Type: Waste Handling Facilities Location: Bangor-On-Dee, Down Stream, Of Old Dee Bridge Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Deliberate Act Incident Date: 11th April 1996 Incident Reference: 27888 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (S)	586	3	338800 345750
17	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Downstream Of Maescanner Roadbridge, Bangor On Dee Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Deliberate Act Incident Date: 11th April 1996 Incident Reference: 27888 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (S)	590	3	338800 345745
18	Pollution Incidents to Controlled Waters Property Type: Waste Handling Facilities Location: Maelor Creamery Authority: Environment Agency, Welsh Region Pollutant: Agricultural: Carcasses Note: Poor Operational Practise Incident Date: 12th September 1991 Incident Reference: 1976 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Bypass Of Treatment Facilities Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	641	3	338990 346950
19	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bangor On Dee Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 3rd April 1996 Incident Reference: 30898 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	819	3	338700 345500
20	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bangor Bridge Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 5th April 1995 Incident Reference: 23515 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	830	3	338800 345500
20	Pollution Incidents to Controlled Waters Property Type: Road (Lost Load) Location: Old Bangor Bridge Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 6th December 1991 Incident Reference: 1018 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	835	3	338800 345495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Graig Lane, Bangor On Dee Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 3rd May 1991 Incident Reference: 2652 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	844	3	339500 346100
22	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewerage Location: Station Road, Bangor On Dee Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Not Supplied Incident Date: 22nd June 1991 Incident Reference: 2836 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Burst Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	856	3	339250 345700
22	Pollution Incidents to Controlled Waters Property Type: Road (Lost Load) Location: Station Road, Bangor On Dee Authority: Environment Agency, Welsh Region Pollutant: Sewage Debris/Litter Note: Accidental Spillage/Leakage Incident Date: 12th September 1995 Incident Reference: 25903 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	A9NW (SE)	891	3	339300 345700
23	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bangor On, Dee Gypsy Camp Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Not Supplied Incident Date: 16th November 1994 Incident Reference: 21703 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	A8SE (S)	873	3	338750 345450
23	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bangor On Dee Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 31st July 1996 Incident Reference: 30762 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	A8SE (S)	880	3	338800 345450
24	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Bangor On Dee, At Old Railway Crossing Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Inadequate Design/Capacity Incident Date: 10th October 1994 Incident Reference: 21386 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	A14SE (E)	954	3	339650 346350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Dee GQA Grade: River Quality A Reach: Conf. Clwedog - Conf. Overton Drain Estimated Distance (km): 16.8 Flow Rate: Flow less than 40 cumecs Flow Type: River Year: 2000	A13SE (SE)	0	3	338692 346347
25	River Quality Chemistry Sampling Points Name: Dee Reach: Confluence River Clwedog To Confluence Overton Drain Estimated Distance: 16.80 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: Not Supplied Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A8SE (S)	909	3	338800 345420
26	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 18th August 2008 Incident Reference: 614312 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Organic Chemicals/Products: Other Organic Chemical Or Product	A8SE (S)	815	2	338756 345509

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 19th January 2003 Incident Reference: 132142 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Organic Chemicals/Products: Phenols And Creosote	A8SE (S)	880	2	338800 345450
27	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 14th December 2020 Incident Reference: 2008665 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Pollutant Not Identified: Not Identified	A8SE (S)	896	2	338768 345429
28	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 10th January 2010 Incident Reference: 744672 Water Impact: Category 2 - Significant Incident Air Impact: Category 3 - Minor Incident Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Oils - Diesel (Including Agricultural)	A7NW (SW)	947	2	337781 345908
29	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0221 Permit Version: 2 Location: River Dee At Twll, Bangor Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 18th February 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	0	2	338650 346350
29	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0220 Permit Version: 2 Location: River Dee At Twll, Bangor Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Dee At Sesswick Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 18th February 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	0	2	338650 346350
29	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0221 Permit Version: 1 Location: River Dee At Twll, Bangor Authority: Environment Agency, Welsh Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th July 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	0	3	338650 346350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0220 Permit Version: 1 Location: River Dee At Twll, Bangor Authority: Environment Agency, Welsh Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Dee At Sesswick Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th July 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	0	3	338650 346350
29	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0182 Permit Version: 100 Location: River Dee At Twll, Bangor Authority: Environment Agency, Welsh Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Dee At Bangor Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 6th October 1975 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (W)	0	3	338630 346360
29	Water Abstractions Operator: Dee Valley Water Plc Licence Number: 24/67/7/0005 Permit Version: 100 Location: River Dee At Twll, Bangor Authority: Environment Agency, Welsh Region Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Dee At Twll; Bangor Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th January 1974 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	0	3	338630 346355
29	Water Abstractions Operator: Hafren Dyfrdwy Cyfyngedig Licence Number: 24/67/7/0220 Permit Version: Not Supplied Location: Abstraction From The River Dee At Twll Near Bangor-On-Dee - 'Off-Peak', Caia Park, Cross Lanes, LL13 0tn Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	0	2	338650 346350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	Water Abstractions Operator: Hafren Dyfrdwy Cyfyngedig Licence Number: 24/67/7/0220 Permit Version: Not Supplied Location: Abstraction From The River Dee At Twll Near Bangor-On-Dee - 'Off-Peak', Caia Park, Cross Lanes, LI13 0tn Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	0	2	338650 346350
29	Water Abstractions Operator: Hafren Dyfrdwy Cyfyngedig Licence Number: Wa/067/0007/0016 Permit Version: Not Supplied Location: Abstraction From The River Dee At Twll Near Bangor-On-Dee, Pumping Station, Whitchurch Road, Bangor On Dee, Wrexham, LI13 0ue Authority: Natural Resources Wales Abstraction: Public Water Supply: Potable Water Supply - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SE (S)	0	2	338650 346350
30	Water Abstractions Operator: Dairy Crest Dairies Licence Number: 24/67/7/0199 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: River Daily Rate (m3): 8092 Yearly Rate (m3): 1136500 Details: River Dee Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	245	3	338800 346600
31	Water Abstractions Operator: Maelor Foods Limited Licence Number: Wa/067/0007/0015 Permit Version: Not Supplied Location: Maelor Poultry, Pickhill Lane, Cross Lanes, Bangor On Dee, Wrexham Cbc, LI13 0ue Authority: Natural Resources Wales Abstraction: Slaughtering: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A18SE (N)	328	2	338673 346737

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Bangor On Dee Races Ltd Licence Number: 24/67/7/0180 Permit Version: Not Supplied Location: Riverdee Authority: Environment Agency, Welsh Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 1800 Yearly Rate (m3): 68000 Details: Licenced from 01-Jan to 31-Dec Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	1317	3	338050 345150
	Water Abstractions Operator: Mr D Owen Licence Number: 24/67/7/0129 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 8 Yearly Rate (m3): 2912 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A10NW (SE)	1327	3	339900 345800
	Water Abstractions Operator: Mr J C Suckley Licence Number: Wa/067/0007/003 Permit Version: 1 Location: Reach Of The River Dee Authority: Environment Agency, Welsh Region 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: Not Supplied Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 2nd August 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A2NE (SW)	1335	3	338050 345130
	Water Abstractions Operator: Elliot (Agriculture) Ltd Licence Number: Wa/067/0007/0019 Permit Version: Not Supplied Location: Black Rock Farm, Bedwell Road, Cross Lanes, Wrexham, LI13 0tr Authority: Natural Resources Wales Abstraction: General Agriculture: Heat Pump Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A16NE (NW)	1506	2	337452 347358

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Mr A Parry Licence Number: 24/67/7/0130 Permit Version: 100 Location: Well Authority: Environment Agency, Welsh Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 24th September 1980 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1654	3	340340 346540
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Intergranular Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A13NE (SE)	0	2	338649 346366
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A13NE (SE)	0	2	338649 346366
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (SE)	0	2	338649 346366
32	Source Protection Zones Name: Not Supplied Source: Natural Resources Wales Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A13NW (W)	0	2	338611 346372
33	Source Protection Zones Name: Not Supplied Source: Natural Resources Wales Reference: Not Supplied Type: Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	A17SE (NW)	769	2	338022 346891
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models and Fluvial Events Boundary Accuracy: As Supplied	A13NE (SE)	0	2	338649 346366
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A13NW (NW)	118	2	338539 346489
	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	A13NW (N)	130	2	338600 346532
	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	A13NE (SE)	0	2	338649 346366
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Defences None				
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 196.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Dyfrdwy Catchment Name: Dee Primacy: 1	A13SE (SE)	0	4	338671 346347
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 92.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NE (NE)	0	4	338668 346388
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (N)	0	4	338648 346368
37	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: 1	A13NE (NE)	0	4	338652 346369
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NE (NE)	0	4	338652 346369
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 31.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Dyfrdwy Catchment Name: Dee Primacy: 1	A13SE (SE)	0	4	338672 346348
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (NW)	0	4	338613 346385
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 101.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (W)	3	4	338600 346379
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1148.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Dyfrdwy Catchment Name: Dee Primacy: 1	A13NE (E)	6	4	338691 346373

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 191.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (NW)	86	4	338525 346425
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 472.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (NW)	110	4	338570 346494
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (NW)	110	4	338569 346494
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (NW)	111	4	338567 346493
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 361.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13NW (NW)	119	4	338557 346497
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Foss Catchment Name: Dee Primacy: 1	A13SW (S)	144	4	338633 346177
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 214.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Dyfrdwy Catchment Name: Dee Primacy: 1	A13SW (S)	144	4	338633 346177
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 20.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Foss Catchment Name: Dee Primacy: 1	A13SW (S)	161	4	338624 346161
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 360.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Foss Catchment Name: Dee Primacy: 1	A13SW (S)	178	4	338610 346147

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 212.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (W)	240	4	338371 346310
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 135.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Dyfrdwy Catchment Name: Dee Primacy: 2	A8NE (S)	316	4	338778 346025
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 132.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Dyfrdwy Catchment Name: Dee Primacy: 1	A8NE (S)	316	4	338778 346025
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 155.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (SW)	337	4	338340 346168
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (SW)	363	4	338409 346055
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 232.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A13SW (SW)	364	4	338410 346053
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 227.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18SE (N)	374	4	338704 346779
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 219.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	394	4	338223 346269
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 39.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12NE (W)	401	4	338201 346431

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12NE (W)	416	4	338184 346398
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12NE (W)	423	4	338177 346386
63	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 579.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Foss Catchment Name: Dee Primacy: 1	A12SE (SW)	428	4	338234 346161
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 159.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12NE (W)	432	4	338168 346371
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1337.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Dyfrdwy Catchment Name: Dee Primacy: 1	A8NE (S)	444	4	338806 345900
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 50.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18SE (NE)	470	4	338913 346796
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18SE (NE)	472	4	338917 346795
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NW (S)	489	4	338522 345849
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 106.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NW (S)	492	4	338523 345846

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 540.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Foss Catchment Name: Dee Primacy: 1	A8NE (S)	499	4	338653 345820
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.9 Watercourse Level: Underground Permanent: True Watercourse Name: The Foss Catchment Name: Dee Primacy: 1	A12SE (W)	553	4	338096 346156
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Foss Catchment Name: Dee Primacy: 1	A12SE (W)	562	4	338088 346154
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18SE (NE)	576	4	338963 346890
74	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NW (S)	576	4	338569 345750
75	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 525.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: The Foss Catchment Name: Dee Primacy: 1	A12SE (W)	579	4	338070 346151
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	579	4	338070 346151
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 331.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A18SE (NE)	583	4	338968 346895
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12SE (W)	584	4	338054 346175

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 314.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A8NW (S)	588	4	338575 345737
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 180.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12NE (W)	590	4	338011 346394
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 84.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SW (NE)	645	4	339002 346947
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A7NE (SW)	656	4	338276 345786
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 457.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12NW (W)	734	4	337874 346495
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 33.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A12NW (W)	734	4	337874 346495
85	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 76.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	749	4	339311 345930
86	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 106.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NW (SE)	771	4	339244 345815
87	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SW (NE)	774	4	339107 347030

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 170.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SE (NE)	813	4	339416 346737
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 44.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NE (SE)	829	4	339455 346024
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 749.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Dyfrdwy Catchment Name: Dee Primacy: 1	A9NE (SE)	829	4	339455 346024
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 183.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NE (SE)	848	4	339455 345980
92	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 109.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (E)	857	4	339537 346523
93	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (E)	873	4	339543 346570
94	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (E)	876	4	339545 346573
95	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SW (NE)	878	4	339263 347034
96	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 152.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SW (NE)	881	4	339266 347035

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 149.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A9NE (SE)	905	4	339428 345825
98	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19NW (NE)	937	4	339236 347137
99	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SE (E)	944	4	339574 346706
100	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 30.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19SE (E)	947	4	339578 346703
101	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 17.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (E)	948	4	339592 346669
102	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)	951	4	339131 347228
103	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 33.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A14NE (E)	962	4	339601 346683
104	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 134.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19NE (NE)	987	4	339401 347050
105	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 168.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19NE (NE)	987	4	339401 347050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 65.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Dee Primacy: 1	A19NW (NE)	990	4	339291 347160

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
107	Historical Landfill Sites Licence Holder: Mr Bryan Griffiths Location: School Farm, Wrexham, Cross Lanes Name: Cross Lanes Landfill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14769 First Input Date: 31st December 1980 Last Input Date: 1st October 1981 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6955/0064 BGS Ref: Not Supplied Other Ref: WMBC L/31	A17SE (NW)	708	2	338195 346965
	Local Authority Landfill Coverage Name: Wrexham County Borough Council - Has supplied landfill data		0	5	338649 346366
108	Registered Landfill Sites Licence Holder: B Griffiths Licence Reference: L31 Site Location: School Farm, Cross Lane, Marchwiel, Wrexham, Clwyd Licence Easting: 338050 Licence Northing: 347100 Operator Location: As Site Address Authority: Environment Agency Wales, North Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st December 1980 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Hardcore, Concrete, Builders Rubble Soil, Clay	A17NE (NW)	903	3	338050 347100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Permian Rocks (Undifferentiated)	A13NE (SE)	0	1	338649 346366
109	BGS Recorded Mineral Sites Site Name: The Graig Location: Bangor On Dee, Wrexham, Denbighshire Source: British Geological Survey, National Geoscience Information Service Reference: 105620 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: River Terrace Deposits Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	971	1	339542 345882
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	338649 346366
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	77	1	338564 346456
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	338649 346366
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	77	1	338564 346456
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	338649 346366
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	338649 346366
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	338649 346366
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	77	1	338564 346456
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	338649 346366
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	77	1	338564 346456
	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	A13NE (SE)	0	1	338649 346366
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	338649 346366

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
110	Contemporary Trade Directory Entries Name: First Milk Cheese Co Location: Maelor Creamery, Pickhill Lane, Cross Lanes, Wrexham, Clwyd, LL13 0UE Classification: Dairies Status: Inactive Positional Accuracy: Automatically positioned to the address	A13NW (N)	276	-	338612 346684
111	Contemporary Trade Directory Entries Name: Lloyd Frazer Ltd Location: Pickhill Lane, Cross Lanes, Wrexham, Clwyd, LL13 0UE Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address	A18SW (N)	405	-	338545 346803
112	Contemporary Trade Directory Entries Name: Dutton Horse Feeds Location: Cross Lanes, Wrexham, Clwyd, LL13 0TP Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A12NE (W)	527	-	338076 346442
113	Contemporary Trade Directory Entries Name: Action Litho Printers Location: 10, Willow Court, Bangor-on-Dee, Wrexham, Clwyd, LL13 0BT Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	779	-	339193 345752
114	Contemporary Trade Directory Entries Name: D R G Rennie & Son Location: 1, SCHOOL MEWS, BANGOR-ON-DEE, BANGOR ON DEE, WREXHAM, LL13 0HD Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address	A8SE (S)	816	-	338886 345535
115	Contemporary Trade Directory Entries Name: T Parry Ltd Location: Hendy, High Street, Bangor Isycoed, Wrexham, Clwyd, LL13 0AU Classification: Stairlifts - Manufacturers & Installers Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	842	-	338948 345527
116	Contemporary Trade Directory Entries Name: River Dee Machinery Location: The Old Telephone Exchange, Whitchurch Road, Bangor-on-Dee, Wrexham, LL13 0AY Classification: Saw Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	873	-	339047 345536
117	Contemporary Trade Directory Entries Name: E P Furber & Son Location: 1, Overton Road, Bangor-on-Dee, Wrexham, Clwyd, LL13 0BY Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8SE (S)	917	-	338921 345439

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
118	Ancient Woodland Name: Not Supplied Reference: 37143 Area(m²): 3020.1 Type: Restored Ancient Woodland Site	A12SE (W)	641	2	337976 346239
119	Ancient Woodland Name: Not Supplied Reference: 30622 Area(m²): 6968.29 Type: Ancient and Semi-Natural Woodland	A12SW (W)	693	2	337929 346211
120	Ancient Woodland Name: Not Supplied Reference: 37142 Area(m²): 3828.35 Type: Restored Ancient Woodland Site	A7NW (SW)	843	2	337836 346025
121	Sites of Special Scientific Interest Name: Afon Dyfrdwy (River Dee) Multiple Areas: Y Total Area (m2): 14914217.92 Source: Natural Resources Wales Reference: 255431wdw Designation Details: Mixed Biological And Geological Designation Date: 30th November 1995 Date Type: Notified	A13SE (SE)	0	2	338658 346356
122	Special Areas of Conservation Name: River Dee And Bala Lake / Afon Dyfrdwy A Llyn Tegid (Wales) Multiple Areas: Y Total Area (m2): 11498849.64 Source: Natural Resources Wales Reference: UK0030252 Status: Designated	A13SE (SE)	0	2	338658 346356

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

Agency & Hydrological	Version	Update Cycle
Prosecutions Relating to Authorised Processes Environment Agency - Midlands Region Environment Agency - North West Region Environment Agency - Welsh Region Natural Resources Wales	July 2015 March 2013 March 2013 March 2013	
Prosecutions Relating to Controlled Waters Environment Agency - Midlands Region Environment Agency - North West Region Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013 March 2013 March 2013	
Registered Radioactive Substances Natural Resources Wales Environment Agency - Midlands Region Environment Agency - North West Region Environment Agency - Welsh Region	January 2015 June 2016 June 2016 June 2016	Annually Annually Annually Annually
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - Midlands Region - Upper Severn Area Environment Agency - Midlands Region - West Area Environment Agency - North West Region - South Area Natural Resources Wales Environment Agency Wales - North Area	April 2021 April 2021 April 2021 April 2021 January 2021	Quarterly Quarterly Quarterly Quarterly Quarterly
Water Abstractions Environment Agency - Welsh Region Natural Resources Wales	April 2021 April 2021	Quarterly Quarterly
Water Industry Act Referrals Natural Resources Wales Environment Agency - Midlands Region Environment Agency - North West Region Environment Agency - Welsh Region	April 2021 October 2017 October 2017 October 2017	Quarterly Quarterly Quarterly Quarterly
Groundwater Vulnerability Map Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations Natural Resources Wales	January 2018	Annually
Source Protection Zones Natural Resources Wales	November 2016	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	August 2018	Quarterly
Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas Natural Resources Wales	August 2019	Quarterly
Flood Defences Natural Resources Wales	November 2019	Quarterly

Agency & Hydrological	Version	Update Cycle
OS Water Network Lines Ordnance Survey	June 2021	Quarterly
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Natural Resources Wales	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Midlands Region Environment Agency - North West Region Environment Agency - Welsh Region	October 2008 October 2008 October 2008	Not Applicable Not Applicable Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Midlands Region - Upper Severn Area Environment Agency - Midlands Region - West Area Environment Agency - North West Region - South Area Environment Agency Wales - North Area Natural Resources Wales	April 2021 April 2021 April 2021 January 2021 January 2021	Quarterly Quarterly Quarterly Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Midlands Region - Upper Severn Area Environment Agency - Midlands Region - West Area Environment Agency - North West Region - South Area Environment Agency Wales - North Area Natural Resources Wales	April 2021 April 2021 April 2021 April 2021 April 2021	Quarterly Quarterly Quarterly Quarterly Quarterly
Local Authority Landfill Coverage Cheshire County Council (now part of Cheshire East Council) - Environmental Planning Department Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department North Shropshire District Council (now part of Shropshire Council) Shropshire County Council (now part of Shropshire Council) - Shropshire Records And Research Centre Wrexham County Borough Council	May 2000 May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Cheshire County Council (now part of Cheshire East Council) - Environmental Planning Department Wrexham County Borough Council Chester City Council (now part of Cheshire West and Chester Council) - Environmental Health Department North Shropshire District Council (now part of Shropshire Council) Shropshire County Council (now part of Shropshire Council) - Shropshire Records And Research Centre	February 2005 June 2003 May 2000 May 2000 May 2000	
Registered Landfill Sites Environment Agency - Midlands Region - Upper Severn Area Environment Agency - Midlands Region - West Area Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003 March 2003 March 2003	Not Applicable Not Applicable Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - Midlands Region - Upper Severn Area Environment Agency - Midlands Region - West Area Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003 March 2003 March 2003	
Registered Waste Treatment or Disposal Sites Environment Agency - Midlands Region - Upper Severn Area Environment Agency - Midlands Region - West Area Environment Agency - North West Region - South Area Environment Agency Wales - North Area	March 2003 March 2003 March 2003 March 2003	

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHS) Health and Safety Executive	November 2000	
Planning Hazardous Substance Enforcements Cheshire West and Chester Council - Planning Department North Shropshire District Council (now part of Shropshire Council) Shropshire Council - Planning Department Wrexham County Borough Council - Planning Department Cheshire County Council (now part of Cheshire East Council) - Planning Department Shropshire County Council (now part of Shropshire Council) Chester City Council (now part of Cheshire West and Chester Council)	April 2016 February 2009 February 2016 February 2016 July 2008 March 2009 October 2008	Variable Not Applicable Variable Variable Annual Rolling Update Annual Rolling Update Not Applicable
Planning Hazardous Substance Consents Cheshire West and Chester Council - Planning Department North Shropshire District Council (now part of Shropshire Council) Shropshire Council - Planning Department Wrexham County Borough Council - Planning Department Cheshire County Council (now part of Cheshire East Council) - Planning Department Shropshire County Council (now part of Shropshire Council) Chester City Council (now part of Cheshire West and Chester Council)	April 2016 February 2009 February 2016 February 2016 July 2008 March 2009 October 2008	Variable Not Applicable Variable Variable Annual Rolling Update Annual Rolling Update Not Applicable
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2021	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	April 2021	Quarterly
Fuel Station Entries Catalist Ltd - Experian	June 2021	Quarterly
Gas Pipelines National Grid	May 2021	Annually
Underground Electrical Cables National Grid	May 2021	Annually

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

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	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Natural Resources Wales Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	Wrexham County Borough Council Lampet Street, Guildhall, Wrexham, Clwyd, LL11 1WL	Telephone: 01978 292000 Fax: 01978 292502 Website: www.wrexham.gov.uk
6	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
-	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.