

**Site Condition Report
Energy Recovery Facility
EPR Permit Application**

Biomass UK No.2 Ltd

Date:
October 2016

Project Issue Number:
SOL1605BUK201

VERSION CONTROL RECORD			
Contract/Proposal Number:		SOL1605BUK201	
Authors Name:		Sophie Perrin	
Signature:			
Issue	Description of Status	Date	Reviewer Initials
1	First Submission to Natural Resources Wales	October 2016	SMB

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INTRODUCTION

This Application Site Report has been prepared by Sol Environment Ltd on the behalf of Biomass UK No.2 Ltd in support of a Bespoke Permit Application under The Environmental Permitting (England and Wales) Regulations 2013 for the proposed operation of a renewable energy generation facility that incorporates Advanced Thermal Treatment (ATT, gasification) at their site on Woodham Road, Barry.

This document represents the Application Site Condition Report (ASCR) submitted as part of the Application package to Natural Resources Wales (NRW) (Sol Environment Ref. SOL1605BUK201) and has relied on information supplied by the site and various third party information sources (See Section 2) submitted as part of the planning application process.

The Biomass UK No.2 site ('the Site') is located on land at Woodham Road, Barry, CF63 4JE (Grid Reference ST 12610 67683).

The treatment process will be permitted by Natural Resources Wales as a Waste Incineration Activity and will be operated in accordance with the Environmental Permitting Regulations 2014 and Chapter IV of the Industrial Emissions Directive (IED).

This document has been prepared in accordance with the NRW/EA's Guidance Document H5 Site Condition Reports Guidance and Templates (Version 2.0, dated 04/08/08). This report provides baseline information in relation to the site.

1. Site Details

Name of the Applicant:	Biomass UK No.2 Ltd
Activity Address:	Woodham Road, Barry, CF63 4JE
National Grid Reference:	OS X (Eastings) 312610 OS Y (Northings) 167683
Document References:	EP Application Site Condition Report, Biomass UK No.2 Ltd Sol document reference and date: SOL1605BUK201
Annexes:	Annex A: Figures Annex B: Historic Maps Annex C: Groundsure Environmental Data Report Annex D: Groundsure Geology and Stability Report Annex E: Conceptual Model

2. Condition of Land at Permit Issue

2.1 Environmental Setting

2.1.1 Site Location

The location of the subject Site is shown on Figure A1, Annex A, centered at approximate National Grid Reference OS X (Easting) 312610; OS Y (Northings) 167683. The proposed site layout is shown in Figure A2.

The site is located at Woodham Road, Barry, CF63 4JE.

The application site is located within Barry Port at the centre of an industrial and commercial area. The site extends in area to 0.77ha (1.86 acres). It is flat and open with no formal boundary enclosures other than some mounding to prevent vehicular access to the west and south, and steel palisade fencing to the east. There are no buildings present on the site.

Access to the site is gained from a network of industrial estate roads accessed from Millennium Way, a new road to the north of the site serving the docks and new development further west.

The Cardiff to Bridgend railway line is located to the north of that road, and between the road and the site is disused and overgrown land and the dock railway spur line. Immediately adjacent to the site to the west of Woodham Road are a row of Nissen type industrial buildings accessed from Woodham Road that are in active use. To the immediate east of the site is open, unused land and a number of fairly modern warehouse or industrial buildings, a scrap metal yard and a haulage depot. To the south of the site beyond David Davies Road, a railway line and grassed area is located adjacent to the Dock. Across the dock itself are other substantial industrial buildings and open storage of containers and pallets.

The nearest residential development is located on Dock View Road to the north and at a distance of 370m. The road lies at approximately 30m A.O.D at that point, beyond Millennium Way and the railway line.

Table 2.1 below provides information regarding the surrounding site.

Table 2.1 Site Setting

Direction	Description
North	Immediate Vicinity: Unused Land Within 500m: Unused Land, Ffordd Y Mileniwn, Railway Line, Residential Area (Barry) Beyond 500m: Residential Area, A4055, Barry Road, Gibbons Down
North East	Immediate Vicinity: Truck Paring Within 500m: Industrial Buildings, Scrap Metal Yard, Haulage Depot, Unused Land, Entrance Channel (Dock) Beyond 500m: Unused Land, Industrial Works , Residential Areas (Palmerstown, Dinas Powys)
East	Immediate Vicinity: Truck Parking, David Davies Road Within 500m: Entrance Channel (Dock), Industrial Buildings, Unused Land Beyond 500m: Industrial Buildings, Unused Land, the Coast
South East	Immediate Vicinity: David Davies Road, Grassed Area, Railway Within 500m: Entrance Channel (Dock), Industrial Buildings, Unused Land Beyond 500m: Unused Land, the Coast, Bristol Channel
South	Immediate Vicinity: David Davies Road, Grassed Area, Railway Within 500m: Entrance Channel (Dock), Industrial Buildings, Atlantic Way Beyond 500m: Unused Land, the Coast, Bristol Channel
South West	Immediate Vicinity: Woodham Road, Nissen Industrial Buildings Within 500m: Entrance Channel (Docks) Beyond 500m: Barry Island, Jackson Bay, Whitmore Bay, Bristol Channel
West	Immediate Vicinity: Woodham Road, Nissen Industrial Buildings Within 500m: Unused Land, Railway, Cory Way, The Vale Glamorgan Council, Residential Buildings Beyond 500m: Residential Properties, Waterfront Retail Park, Docks, Barry
North West	Immediate Vicinity: Woodham Road, Nissen Industrial Buildings Within 500m: Unused Land, Ffordd Y Mileniwn, Railway Line, Residential Area (Barry) Beyond 500m: Barry

The Natural Resources Wales flood risk map indicates that the site does not lie within an area where there is a risk of flooding from rivers and the sea. The southern boundary of the site lies immediately adjacent to land which has a low risk of flooding. This is land assessed as having a chance of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%).

According to TAN 15: Development and Flood Risk Development Advice Map the site is located in Zone B which is defined as areas known to have been flooded in the past. The site lies just outside of Zone C2 which is defined as land without significant flood defenses.

2.1.2 Geology, Hydrogeology and Surface Waters

Desk-based research of the local geology, hydrogeology and surface waters has been carried out in order to establish the potential for migration of contamination onto or away from the Site, and to assess the surface water and groundwater sensitivity of the Site area. Information was obtained from a number of sources, namely:

- Natural Resources Flood Risk Map;
- Information provided by an environmental database report (Groundsure).
- Geological maps produced by the British Geological Survey (BGS) and the BGS Geology of Britain Viewer (<http://maps.bgs.ac.uk/geologyviewer>).
- MAGIC (<http://magic.defra.gov.uk>)
- BGS Borehole Record Viewer (<http://www.bgs.ac.uk/data/boreholescans/home.html>)

Geology

According to the BGS Geology of Britain Viewer, the site is directly underlain by superficial deposits of Tidal Flat Deposits made up of clay, silt and sand. The superficial deposits are further underlain by the Bedrock Geology of Mercia Mudstone Group.

The BGS Lexicon of Named Rock Units describes the Mercia Mudstone Group as, '*dominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite-bearing units in some basinal areas. Thin beds of gypsum / anhydrite widespread; sandstones are also present.*'

According to data issued by the National Radiological Protection Board (NRPB) in 2002 (now the Health Protection Agency), the site is located in an area that is in a lower probability radon area, as less than 1% of homes are above the action level. No radon protection measures are considered necessary.

The site is located in an area which is not affected by coal mining activity.

Shrink Swell

The maximum shrink swell hazard rating identified on the application site is very low.

Landslides

The maximum landslide hazard rating identified on the application site is very low.

Soluble Rocks

The maximum soluble rock hazard rating identified on the application site is negligible.

Compressible Ground

The maximum compressible ground hazard rating identified on the application site is very low.

Collapsible Rocks

The maximum collapsible rocks hazard rating identified on the application site is negligible.

Running Sands

The maximum running sand hazard rating identified on the application site is very low.

Hydrogeology

The site is not located on an aquifer. The underlying rock layers are Unproductive Strata which is defined as rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

The site is not located in a Groundwater Source Protection Zones (SPZs).

There are six recorded groundwater abstractions within 2km of the Site. The six entries relate to the same abstraction located 1413m to the southwest of the site. The abstraction is operated by an unknown operator (licence number: 21/58/31/0031) for 'General use relating to Secondary Category (Medium Loss)' at Barry Island Pleasure Park.

The site is considered to be situated in an area of low sensitivity with respect to groundwater resources due being located on unproductive strata, the absence of any groundwater abstraction (sensitive or otherwise) within 1.4km of the site and the site not being directly located in a Groundwater Source Protection Zone.

Surface Water

There are no fifteen recorded surface water abstractions within 2km of the Site. The fifteen entries relate to the same abstraction located 651m to the south east of the site. The abstraction is operated by an unknown operator (licence number: 21/58/11/0011) for 'Mineral Washing' from Cadoxton River.

Barry Dock is located approximately 40m to the south of the site.

There are no main rivers located within 500m to the site.

The Natural Resources Wales flood risk map indicates that the site does not lie within an area where there is a risk of flooding from rivers and the sea. The southern boundary of the site lies immediately adjacent to land which has a low risk of flooding. This is land assessed as having a chance of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%).

According to TAN 15: Development and Flood Risk Development Advice Map the site is located in Zone B which is defined as areas known to have been flooded in the past. The site lies just outside of Zone C2 which is defined as land without significant flood defenses.

2.1.3 Designated Sites

Natural Resources Wales H1 and H5 guidance states that the potential impacts of the site should be assessed for the following habitat sites within 10km of the Installation:

- Special Areas of Conservations (SACs) and candidate SACs (cSACs) designated under the EC Habitats Directive;
- Special Protection Areas (SPAs) and potential SPAs designated under the EC Birds Directive; and
- Ramsar Sites designated under the Convention of Wetlands of International Importance.

It is also stated that within 2km of the Source:

- Sites of Special Scientific Interest (SSSI) established by the 1981 Wildlife and Countryside Act;
- National Nature Reserves (NNR);
- Local Nature Reserves (LNR);
- Local Wildlife Sites (LWS), County Wildlife Sites (CWS) and potential wildlife sites (PWS);
- Sites of Importance for Nature Conservation (SINC); and
- Ancient Woodland.

Information from the Multi Agency Geographic Information for the Countryside (MAGIC) website (<http://magic.defra.gov.uk/>) and Groundsure has been used to obtain the above information.

The designated sites relevant to this study are presented in Table 2.3 below:

Table 2.2: Location of Sensitive Habitat Receptors		
ID	Receptor	Status
H1	Cadoxton River SINC	690m east
H2	Cadoxton Wetlands SINC	780m northeast
H3	Fields at Merthyr Dyfan SINC	1.9km northwest
H4	Friars Point SINC	1.98km southwest
H5	Gladstone Road Pond SINC	1.2km west-northwest
H6	Nells Point East SINC	1.1km northeast
H7	North of North Road SINC	1.98km northeast
H8	Cadoxton Ponds Wildlife Trust Reserve	780m northeast
H9	Severn Estuary Ramsar	3.9km east
H10	Severn Estuary SPA	6.2km east

H11	Ancient Woodland (Hayes Lane)	1.1km east
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The site is not located within a surface water Nitrate Vulnerable Zone Area.

The site is not located within an Air Quality Management Area.

The proposed operations has no environmental emissions to land, controlled waters or atmosphere and therefore it is the conclusion of this assessment that there will be no direct or indirect effects on any of the statutory sites described above.

2.2 Pollution History

2.2.1 Environmental Database Records

The following information has been obtained from a search of a publicly available database of environmental information (Enviroinsight Report, produced by Groundsure Ltd).

The database contains records of information from public registers held by environmental regulatory authorities and can be used to assess the site’s sensitivity, the potential for neighbouring activities to pose a risk to the site and to determine whether specific records of pollution relate to the subject site.

Pollution Incidents

There have been no pollution incidents recorded in the National Incidents Recording System List 1 relating to the site or within 250m of the site.

There has been one pollution incidents recorded in the National Incidents Recording System List 2 within 250m of the site. The incident took place on the 16th December 2002 (incident reference: 126244) and involved construction and demolition materials and wastes entering the water. The incident was classified as a Category 3 (Minor).

Potentially Contaminative Industrial Sites

There are twenty one potentially contaminative industrial sites within 250m of the application, the details of which are shown in Table 2.6 below. The closest of these is on site and operated by the applicant.

Table 2.6. Potentially Contaminative Industrial Sites within 250m of the Site

Company	Location	Distance and Direction	Activity	Category
Cars on Gas	4, Woodham Road, Barry, CF63 4JE	60m SW	Vehicle Repair and Servicing	Repair and Servicing

German Specialists	Car	5, Woodham Road, Barry, CF63 4JE	60m SW	Vehicle Repair and Servicing	Repair and Servicing
Welsh Specialist	Caravan	5, Woodham Road, Barry, CF63 4JE	60m SW	Sports and Leisure / Equipment Repair	Repair and Servicing
Ross Garage		3, Woodham Road, Barry, CF63 4JE	62m SW	Vehicle Repair and Servicing	Repair and Servicing
Gym Systems & Servicing		6 – 7, Woodham Road, Barry, CF63 4JE	62m SW	Hobby, Sports and Pastime Products	Consumer Products
Potter		12, Woodham Road, Barry, CF63 4JE	69m W	Vehicle Bodybuilders	Repair and Servicing
Topend Ltd		13, Woodham Road, Barry, CF63 4JE	72m W	Vehicle Repair and Servicing	Repair and Servicing
Electricity Station	Sub	-	101m NE	Electrical Features	Infrastructure and Facilities
Works		-	103m NE	Unspecified Works or Factories	Industrial Features
Works		-	109m NE	Unspecified Works or Factories	Unspecified Works or Factories
Works		-	119m N	Unspecified Works or Factories	Industrial Features
Church Motors		19, Woodham Road, Barry, CF63 4JE	142m W	Vehicle Repair and Servicing	Repair and Servicing
Works		-	144m N	Unspecified Works or Factories	Industrial Features
Vaughan Transport Systems		Dock 2, David Davies Road, Barry, CF63 4AB	170m NE	Distribution and Haulage	Transport, Storage and Delivery
S & K Haulage Ltd		David Davies Road, Barry, CF63 4AB	187m NE	Distribution and Haulage	Transport, Storage and Delivery
Depot		-	209m NE	Container and Storage	Transport, Storage and Delivery
Tank		-	213m NE	Tanks (Generic)	Industrial Features
Travelling Crane		-	220m E	Travelling Cranes and Gantries	Travelling Crane
Cranes		-	228m E	Travelling Cranes and Gantries	Industrial Features
Warehouse		-	230m SE	Container and Storage	Transport, Storage and Delivery
Travelling Cranes		-	231m NW	Travelling Cranes and Gantries	Industrial Features

Discharge Consents

There are no water discharge consents, revoked or current, associated with the site.

There are three licenced discharge consents located within a 500m search radius of the Site. The nearest of which is located 48m to the south east of the site and is located at Fisher Constrainers, David Davies Road for the discharge of an unspecified effluent into Barry Docks.

Authorised or Permitted Processes

There are no Environmental Permits to operate a Pollution Prevention and Control (PPC) Part A process at the site or within 1km of the site.

There are nineteen Environmental Permits to operate an Integrated Pollution Prevention and Control (IPPC) Park A process recorded within 1km of the site. The nearest of these is located 436m to the north east and is operated by Rank Hovis Ltd (Permit Number: BP3376IE).

2.2.2 Historical Land Uses

Available historic maps for the site have been obtained and reviewed to determine if there is the potential for contamination to be present on Site associated with the Sites historical uses.

The historical maps are presented within Annex B of this report and a summary of the historical development of the Site and surroundings is included below.

The 1900 map shows the site with elevated railway way lines running along embankments through the site towards the dock. These would have been used to carry coal towards the coal tips located along the dock. There is no other development shown on site.

The 1943 map remains the same as above apart from two small buildings are depicted in the southern area of the site.

The 1971 map shows the buildings in the southern portion of the site labeled as engineering works. To the immediate east of the site, a timber works is now depicted, as well as a row of warehouses to the west of the site. The railway lines are still shown.

By 1996, the railway lines are shown to have been removed and the site remained predominantly undeveloped apart from a builders yard depicted in the southern corner of the site.

By 2007, the builders yard was removed and the site remain predominantly undeveloped apart from three small buildings depicted along the northern boundary of the site.

The only major historical development on site was the construction of railway sidings through the site in the 1900s. These were removed by the 1990s and the site has remained predominantly undeveloped since.

Contaminants associated with railway sidings can include:

- Hydrocarbons: diesel, lubricating oils, paraffin;
- PCBs;
- PAHs;
- Solvents;
- Ethylene Glycol;
- Creosote;
- Ferrous residues;
- Metal fines
- Asbestos;
- Ash and fill; and
- Sulphates.

2.2.3 Site Reconnaissance

Visual/Olfactory Evidence of Existing Contamination

All areas of the site have been subject to a visual inspection at the time of this application by Sol Environment Ltd.

All aspects of the installation boundary have been inspected.

The inspection was carried out in conjunction with the management of Biomass UK for the purposes of inspecting and assessing the following:

- Physical condition of hardstanding (if present);
- Condition and adequacy of containment bunds (if present);
- Condition and adequacy of underground drainage and containment systems (where applicable).

Construction has already begun on site as shown in the photos below.



An area where asbestos has been discovered has been cornered off for removal, as shown in the photo below.



Apart from the above, at the time of the site walkover, there was no sign of any storage tanks, chemical storage or any potentially contaminative uses. The site shows no signs of former built development or on site pollution sources.

2.3 Evidence of Historic Contamination

Previous Site Investigation – Application Site

There are no historical site investigations available for the application and hence no baseline site condition can be provided.

None of the current or historical adjacent site and land uses are considered to give to the potential for significant site contamination or cross boundary pollution issues.

2.4 Supporting Information

- Figures detailing the location, boundary and layouts of the Installation are shown in Annex A.
- Historical Ordnance Survey plans of the site and surrounding area are reproduced in Annex B.
- Information from the Groundsure environmental database (provided by Groundsure) identifying the environmental setting and pollution incidents are reproduced in Annex C.
- Information from the Groundsure environmental database (provided by Groundsure) identifying the geology and sites stability characteristics are reproduced in Annex D.

- A Conceptual Model of the site is show in in Annex E.

3. Permitted Activities

3.1 Proposed Activities Undertaken at the Installation

3.1.1 Description of the New Process

Biomass UK No.2 Ltd is making this application to carry out a Bespoke Permit Application under The Environmental Permitting (England and Wales) Regulations 2013 for the proposed operation of a renewable energy generation facility that incorporates Advanced Thermal Treatment (ATT, gasification) at their site at Woodham Road, Barry.

The proposed development is a renewable energy generation facility which has been designed to recover energy from pre-prepared mixed waste wood feedstocks using gasification. The gasification facility is an Advanced Thermal Treatment (ATT) process that will produce a combustible synthesis gas, which is then used to raise steam and generate electricity, through steam cycle turbine generation.

The Advanced Thermal Treatment (ATT) plant is designed to process shredded mixed waste wood feedstocks to produce heat to raise steam in a convention tube boiler for utilisation in a steam turbine for the production of renewable electricity with an export capacity up to 10MWe.

The Installation has been designed to process approximately 86,400 tonnes of non-hazardous mixed waste wood per annum.

The treatment process will be permitted by the Natural Resources Wales as a Waste Incineration Activity and will be operated in accordance with the Environmental Permitting Regulations 2014 and Chapter IV of the Industrial Emissions Directive (IED).

3.1.2 Substances Used at the Installation

Table 3.1: Chemical and Hazardous Materials Summary

Material	Nature of storage	Location	Fate
Mixed Waste Wood	Fuel used to generate synthesis gas Approx 86,000 tonnes per annum	Stored in reception area of the waste storage building	Thermally converted to ash
Diesel Oil	Used for the start-up burners and for the mechanical loading shovel Stored in a 28m ³ tank	Internal	Used within start-up burners and loading shovel

Lubrication, Hydraulic and Turbine Oils	Internal Bunded oil tanks approx. 5m ³ All tanks will be installed with secondary containment and be designed to comply with the following standards and guidance requirements; - EA PPG2: Above Ground Oil Tanks. - CIRIA C958: Chemical Storage Tank Systems – Good Practice; - CIRIA 164: Design of Containment Systems for the Prevention of Water Pollution from Industrial Sites.	Internal	Used within turbines and hydraulic plant. All oils reprocessed off site
Urea	40% urea Solution Approx. 2,400 tonnes per annum	Internal	Reacts with flue gas and discharged to atmosphere
Limestone	Approx. 140 tonnes per annum	Internal	Reacts with acid gases and discharged as APC residue from bag filter. All APC residue will be transferred off site and reprocessed.
Hydrated Lime	Approx. 540 tonnes per annum	Internal	Reacts with acid gases and discharged as APC residue from bag filter. All APC residue will be transferred off site and reprocessed.
Activated carbon	Stored in FIBC Bulk bags Approx. 30 tonnes per annum	Internal	Discharged from bag filter. All APC residue will be transferred off site and reprocessed.
Water Treatment Chemical	Internal bunded storage tanks 100 liters. Proprietary item	Internal	Used within water treatment plant and ultimately discharged to foul sewer.

Waste

The gasification process will not inherently produce significant quantities of waste. The main solid by-products produced from the operation of the gasification facility will be:

- Bottom Ash – which is recycled through the gasification bed; and
- APC Ash (Air Pollution Control (APC) residues).

The Bottom Ash will be recycled through the gasification bed and rejected from the gasifier as a fine particulate along with the flue ash.

Flue ash is removed from the process within the gas cleaning bag house filter. All flue ash is contained and retained as Air Pollution Control (APC) residues. The residue will be exported off site to a re-processor where it will be used as a gypsum replacement.

3.1.3 Drainage Systems

There will be no direct process effluents discharged to controlled waters from site. All process effluents are discharged to Welsh Water sewer which discharges to Barry Sewage Treatment Works. All emissions from the Sewage Treatment Works ultimately discharge to Sully Brook.

The buildings on site are all provided with both secondary and tertiary containment. Any spillages, leaks or incidents arising within the process areas will be effectively contained and captured within the footprint of the main building.

Roof drainage will be collected through a Syphonic rainwater collection system. Any uncontaminated rainwater runoff and surface water runoff will be discharged to surface water drain via the sites attenuation tank (design to be confirmed). All discharges are via oil separators to discharge to the Welsh Water drainage system.

Foul drainage from the office / administration area will be discharged into a packaged treatment plant before being discharged to sewer.

Any effluent and blow down from the process will be discharged to the sites attenuation tank.

Above ground drainage shall be designed in accordance with BS EN 12056.

All of the site drains have the ability to be isolated in the event of an emergency for the purposes of preventing any off site release of fire water or contamination.

The following has been designed in the event of a fire:

- An actuated penstock to isolate the surface water drainage system in the event of a fire;
- All fire water will enter the drainage system and overflow into the attenuation tank;
- The fire water will be tested to allow discharge to the surface water connection point;
- If not suitable, all fire water is to be pumped and tankered away to a suitable water treatment facility.

All site surface water drainage systems are ultimately connected to the surface water drainage system and equipped with shut off valves to ensure the site can be isolated in the event of a major fire / incident.

Hardstanding

The site will be constructed with impermeable concrete hardstanding which significantly exceeds the load bearing requirements of the materials, buildings and vehicles used at the facility.

Typically, all non-structural concrete areas will comprise of a reinforced concrete hardstanding of at least 200mm thickness. All structural load bearing elements are significantly thicker.

Tanks and Bunds

The storage and management of IBC's and barrels will be in accordance with the following standards and guidance requirements;

- Natural Resources: How to Comply with your Environmental Permit;
- Pollution Prevention Guideline Note 26: Pollution Prevention in the Storage and Handling Drums and Intermediate Bulk Containers (IBC's);
- CIRIA C958: Chemical Storage Tank Systems – Good Practice;
- CIRIA 164: Design of Containment Systems for the Prevention of Water Pollution from Industrial Sites;
- HSG 51: The storage of flammable liquids in containers.

3.1.4 Potential for Fugitive Releases to Soil, Groundwater and Surface Water

The materials and substances used in the new activity are not considered to have significant potential to cause ground or groundwater contamination under general storage or operating procedures.

The following measures have been incorporated into the design of the new activity to protect groundwater and soil from installation substances;

- There will be no internal surface water drains located within the building interiors. Any spillages of waste, processed materials and feedstocks within the main building will be retained within the building and treated accordingly. In the event of a spillage, no materials will be able to escape the process;
- Emergency Spill kits (oils and chemical response) will be provided throughout the site and strategically placed in locations associated with bulk and temporary storage, sites drains and waste liquids;
- All fixed storage and mobile [small volume] tanks will be located away from vehicle maneuvering areas and placed within secondary containment bunds;
- All storage tanks will be equipped with secondary containment bunds that have been designed to comply with Pollution Prevention Guideline Above Ground Oil Storage Tanks PPG 2;
- All storage tanks will be fitted with level gauges, alarms and hardwired into the plant online (SCADA) monitoring system;
- All aspects of the operational facility will be located on impermeable concrete slabs;
- There will be no subsurface infrastructure used for the storage or transfer of hazardous waste; and

- There will be no external storage.

When constructed and operated in the manner described above the proposed operations will not introduce any sub surface or potentially polluting activities to the site.

Due to the protection measures mentioned above, the risk to soil and groundwater from the development is considered to be **LOW**. In the unlikely event that any of the above measures failed, due to all activities being carried out internally and on impermeable hardstanding, there would be no impact to soil, groundwater and surface water.

In addition, the site will operate a comprehensive maintenance and management system which is described in Section 2 of the main application document. The environmental management system will be designed to meet the requirements of the Environmental Permitting Regulations and associated pollution prevention guidance.

The management system includes quarterly visual inspections of:

- All storage areas, hardstanding and storage vessels will be physically inspected to detect any signs of deterioration, leaks or spillage. Any corrective action required is reported to and implemented by the Site Manager; and
- Equipment in all process areas as part of the company's planned/predictive maintenance programme.

Based on this assessment, the potential for the new activity to impact on soil and groundwater underlying the installation is considered to be low.

Non-permitted activities undertaken at the Installation	Not applicable
Plan showing activity layout	Refer to Figure A2, Annex A
Environmental Risk Assessment	See attached Main Application Document SOL1605BUK201.

Annex A – Figures



1. Do not scale off this drawing
2. All dimensions to be confirmed on site
3. This drawing is copyright of Sol Environment Ltd
4. This drawing is to be read in conjunction with relevant consultant drawings and specifications

Rev:	Date:	Desc:
0	OCT 16	Original

Client:	BIOMASS UK NO.2 LTD
Project:	BARRY ENERGY RECOVERY FACILITY
Drawing Title:	SITE LOCATION

Job No:	SOL1605BUK201
Date:	OCT 16
Drawn By:	STEVE BUTLER

Drawing No:	BUK201
Revision:	0
Scale:	NTS



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 4. This drawing is to be read in conjunction with relevant consultant drawings and specifications

Rev:	Date:	Desc:
0	OCT 16	Original

Client: BIOMASS UK NO.2 LTD
Project: BARRY ENERGY RECOVERY FACILITY
Drawing Title: SITE LAYOUT

Job No: SOL1605BUK201
Date: OCT 2016
Drawn By: STEVE BUTLER

Drawing No: BUK202
Revision: 0
Scale: NTS

NOTES

GENERAL

- DO NOT SCALE FROM THIS DRAWING.
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) & ALL LEVELS ARE IN METRES (m) AOD, UNLESS STATED OTHERWISE.
- ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE AND ANY DISCREPANCIES SHOULD BE REPORTED TO GHD LIVIGUNN.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT PROJECT STANDARDS AND SPECIFICATIONS.

DRAINAGE:

- ALL DRAINAGE WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CESWI 7TH EDITION
- NEW DRAINS ARE UNDERGROUND PVC-U IN ACCORDANCE WITH BS 4860. PROCESS WATER DRAINS TO BE HATHERNWARE CHEMICAL RESISTANCE - TBC
- PIPE JOINTS IMMEDIATELY ADJACENT TO STRUCTURES AND CHAMBERS ARE FULLY ARTICULATED ROCKER PIPE JOINTS.
- ROCKER PIPES ARE 600mm LONG U.N.O ROCKER PIPES TO BE POSITIONED MINIMUM ACHIEVABLE DISTANCE FROM MANHOLE OR CHAMBER WITH ALLOWANCE FOR INSTALLATION OF FLEXIBLE JOINT
- ALL BURIED PIPES AND DUCTS UNDER STRUCTURE TO BE ENCASED IN MIN 150mm THICK C16/20 MASS CONCRETE. ALSO WHERE GROUND COVER IS LESS THAN 900mm.
- PIPE BEDDING DETAILS SHOWN ON DRAWINGS: BARRY_01_DWG_01_20135 & 20136

LEGEND:

- HYDRANT RING MAIN
- SURFACE WATER DRAIN
- FOUL WATER DRAIN
- PROCESS WATER DRAIN (AS HATHERNWARE THERMACHEM PIPEWORK)
- ELECTRICAL DUCTS
- POTABLE WATER MAIN (AS PURITON BARRIER PIPE OSA)

- SW00 SURFACE WATER MANHOLE
- FW00 FOUL WATER MANHOLE
- DP00 ELECTRICAL DRAWPIT
- RWP RAIN WATER PIPE
- GULLY ROAD GULLY
- HYP HYDRANT POINT (PROPOSED)
- IV ISOLATION VALVE (PROPOSED)
- BD BACK DROP
- FDVK FIRE DELUGE VALVE KIOSK

REFERENCE DRAWINGS:

- BARRY_01_DWG_01_20131 - SITE SERVICES GA SHEET 1 OF 4
- BARRY_01_DWG_01_20132 - SITE SERVICES GA SHEET 2 OF 4
- BARRY_01_DWG_01_20133 - SITE SERVICES GA SHEET 3 OF 4
- BARRY_01_DWG_01_20134 - SITE SERVICES GA SHEET 4 OF 4
- BARRY_01_DWG_01_20135 - SITE SERVICES DETAILS SHEET 1
- BARRY_01_DWG_01_20136 - SITE SERVICES DETAILS SHEET 2

2D EXPORT FROM A 3D MODEL
ALL ALTERATIONS TO BE MADE IN THE MODEL FILE

DRAWING TO BE REPRODUCED IN COLOUR

PRELIMINARY

B	04.10.16	UPDATED FOR ATTENUATION	JW	MS	GB
A	01.06.16	FIRST ISSUE	JW	MS	GB
Rev	Date	Description	By	Chk	App

Revision

The Studio
51 Brookfield Road
Cheadle
SK8 1ES
0161 491 4600
info@ghdlivigunn.com

CLIENT
GallifordTry

PROJECT
BARRY BIOMASS UK NO 2 LIMITED

TITLE
SITE SERVICES. SHEET 1

SCALE
DRAWING SIZE
A1

DWG No. BARRY_01_DWG_01_20131 REV. B

SAFETY, HEALTH & ENVIRONMENTAL (SHE) INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

CONSTRUCTION

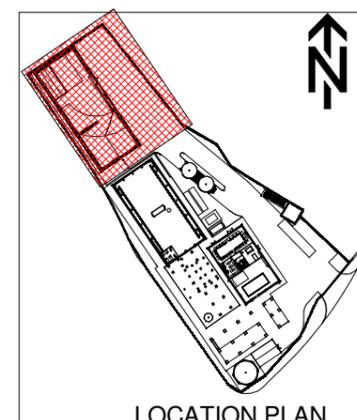
- EXISTING BURIED SERVICES MAY BE PRESENT.
- WATER TABLE LEVEL AT +5.000m AOD (APPROX) REFER TO CCG REPORT CCG-C-15-80605-5

MAINTENANCE / CLEANING

1. MANHOLES ARE A CONFINED SPACE WITHOUT A SAFE MEANS OF ACCESS OR EGRESS. ENTRY PERMIT IS REQUIRED FOR ACCESS AND MAINTENANCE. WITH A SAFE AND SUITABLE MEANS OF ENTRY TO BE PROVIDED

DECOMMISSIONING / DEMOLITION

NO SIGNIFICANT RISK



FOUL AND SURFACE WATER DISCHARGE FLOW RATE RATE AND LOCATION TBC BY GALLIFORD TRY.

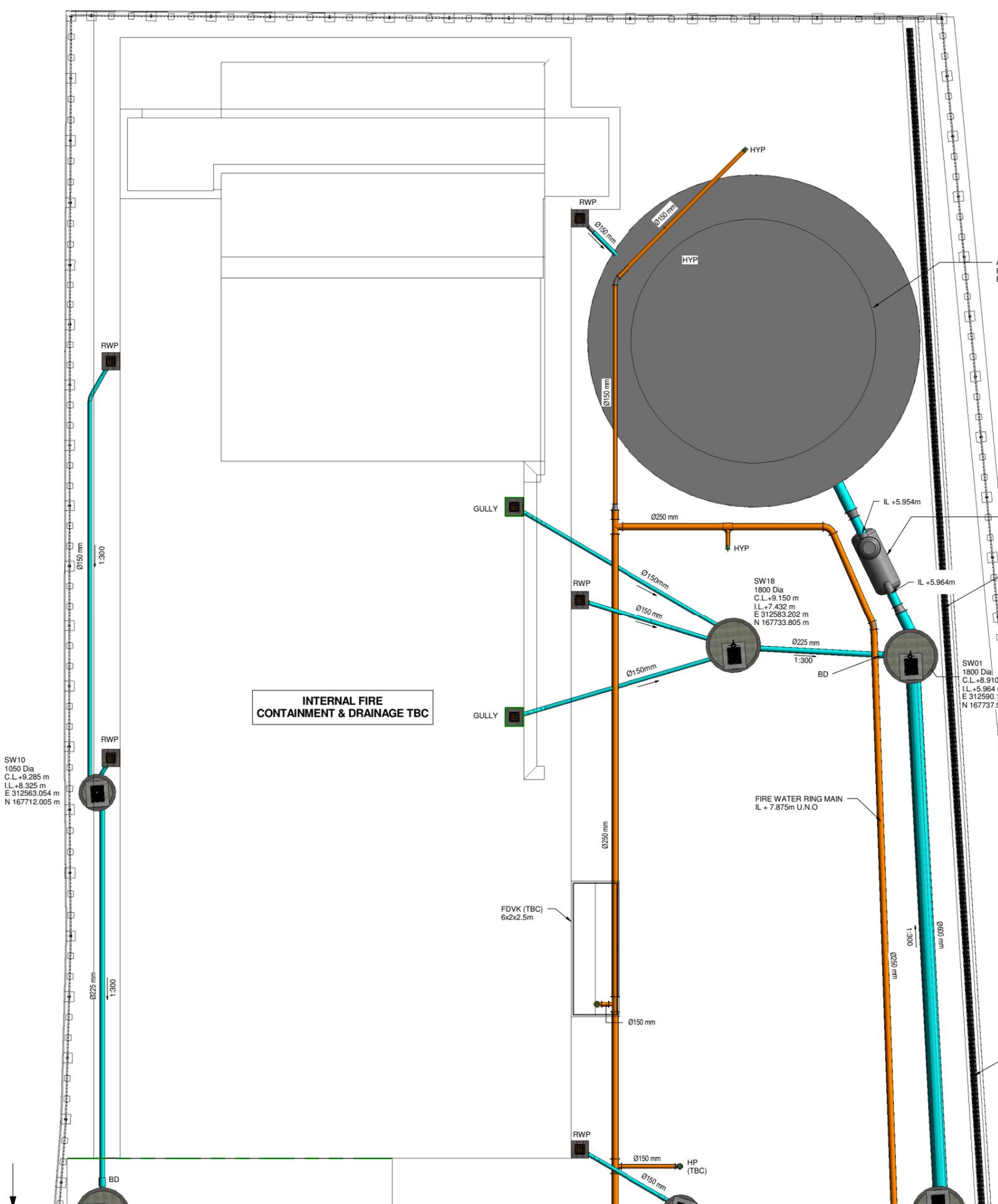
FIRE RING MAIN SIZE AND MATERIAL TBC (ASSUMED PE PIPE)

FIRE HYDRANT POSITIONS TBC

ATTENUATION SIZE & FORM TBC

DUCTING TO INTERCEPTOR AND ATTENUATION TBC

FIRE DELUGE VALVE KIOSK LOCATION, SIZE, DRAINAGE & POWER CONNECTION TBC



CONTINUED ON SITE SERVICES SHEET 2 DRAWING No: BARRY_01_DWG_01_20132

NOTES

GENERAL

- DO NOT SCALE FROM THIS DRAWING.
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) & ALL LEVELS ARE IN METRES (m) AOD, UNLESS STATED OTHERWISE.
- ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE AND ANY DISCREPANCIES SHOULD BE REPORTED TO GHD LIVIGUNN.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT PROJECT STANDARDS AND SPECIFICATIONS.

DRAINAGE

- ALL DRAINAGE WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CESWI 7TH EDITION
- NEW DRAINS ARE UNDERGROUND PVC-U IN ACCORDANCE WITH BS 4660. PROCESS WATER DRAINS TO BE HATHERWARE CHEMICAL RESISTANCE - TBC
- PIPE JOINTS IMMEDIATELY ADJACENT TO STRUCTURES AND CHAMBERS ARE FULLY ARTICULATED ROCKER PIPE JOINTS.
- ROCKER PIPES ARE 600mm LONG U.N.O ROCKER PIPES TO BE POSITIONED MINIMUM ACHIEVABLE DISTANCE FROM MANHOLE OR CHAMBER WITH ALLOWANCE FOR INSTALLATION OF FLEXIBLE JOINT
- ALL BURIED PIPES AND DUCTS UNDER STRUCTURE TO BE ENCASED IN MIN 150mm THICK C16/20 MASS CONCRETE. ALSO WHERE GROUND COVER IS LESS THAN 900mm.
- PIPE BEDDING DETAILS SHOWN ON DRAWINGS: BARRY_01_DWG_01_20135 & 20136

LEGEND

- HYDRANT RING MAIN
- SURFACE WATER DRAIN
- FOUL WATER DRAIN
- PROCESS WATER DRAIN (AS HATHERWARE THERMACHEM PIPEWORK)
- ELECTRICAL DUCTS
- POTABLE WATER MAIN (AS PURITON BARRIER PIPE OSA)

SW00 SURFACE WATER MANHOLE
 FW00 FOUL WATER MANHOLE
 DP00 ELECTRICAL DRAWPIT
 RWP RAIN WATER PIPE
 GU00 ROAD GULLY
 HYP HYDRANT POINT (PROPOSED)
 IV ISOLATION VALVE (PROPOSED)
 BD BACK DROP
 FDVK FIRE DELUGE VALVE KIOSK
 REFERENCE DRAWINGS:

BARRY_01_DWG_01_20131 - SITE SERVICES GA SHEET 1 OF 4
 BARRY_01_DWG_01_20132 - SITE SERVICES GA SHEET 2 OF 4
 BARRY_01_DWG_01_20133 - SITE SERVICES GA SHEET 3 OF 4
 BARRY_01_DWG_01_20134 - SITE SERVICES GA SHEET 4 OF 4
 BARRY_01_DWG_01_20135 - SITE SERVICES DETAILS SHEET 1
 BARRY_01_DWG_01_20136 - SITE SERVICES DETAILS SHEET 2

2D EXPORT FROM A 3D MODEL
 ALL ALTERATIONS TO BE MADE IN THE MODEL FILE

DRAWING TO BE REPRODUCED IN COLOUR

PRELIMINARY

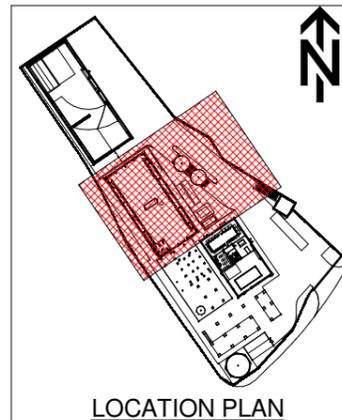
B	04.10.16	UPDATED FOR ATTENUATION	JW	MS	GB
A	24.03.16	FIRST ISSUE	JW	MS	GB
Rev	Date	Description	By	Chk	App
Revision					

GHDLIVIGUNN
 The Studio
 51 Brookfield Road
 Cheadle
 SK8 1ES
 0161 491 4600
 info@ghdlivigunn.com

CLIENT
GallifordTry
 PROJECT
BARRY BIOMASS UK NO 2 LIMITED

TITLE
SITE SERVICES. SHEET 2

SCALE 1:100	DRAWING SIZE A1
DWG No BARRY_01_DWG_01_20132	REV. B



SAFETY, HEALTH & ENVIRONMENTAL (SHE) INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

CONSTRUCTION

- EXISTING BURIED SERVICES MAY BE PRESENT.
- WATER TABLE LEVEL AT +5.000m AOD (APPROX) REFER TO CCG REPORT CCG-C-15-80605-5

MAINTENANCE / CLEANING

- MANHOLES ARE A CONFINED SPACE WITHOUT A SAFE MEANS OF ACCESS OR EGRESS. ENTRY PERMIT IS REQUIRED FOR ACCESS AND MAINTENANCE, WITH A SAFE AND SUITABLE MEANS OF ENTRY TO BE PROVIDED

DECOMMISSIONING / DEMOLITION

NO SIGNIFICANT RISK

FOUL AND SURFACE WATER DISCHARGE FLOW RATE RATE AND LOCATION TBC BY GALIFORD TRY.

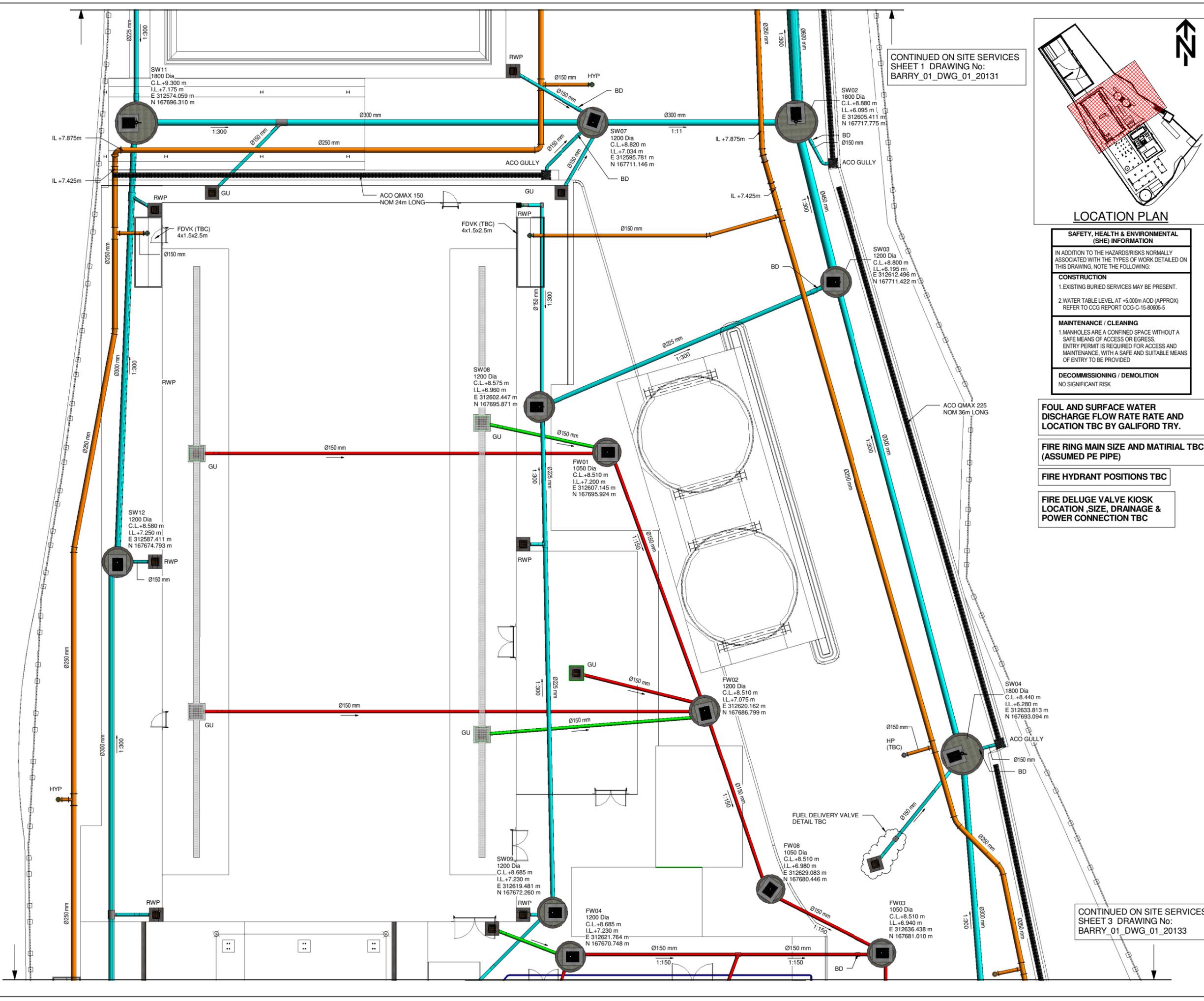
FIRE RING MAIN SIZE AND MATIRIAL TBC (ASSUMED PE PIPE)

FIRE HYDRANT POSITIONS TBC

FIRE DELUGE VALVE KIOSK LOCATION, SIZE, DRAINAGE & POWER CONNECTION TBC

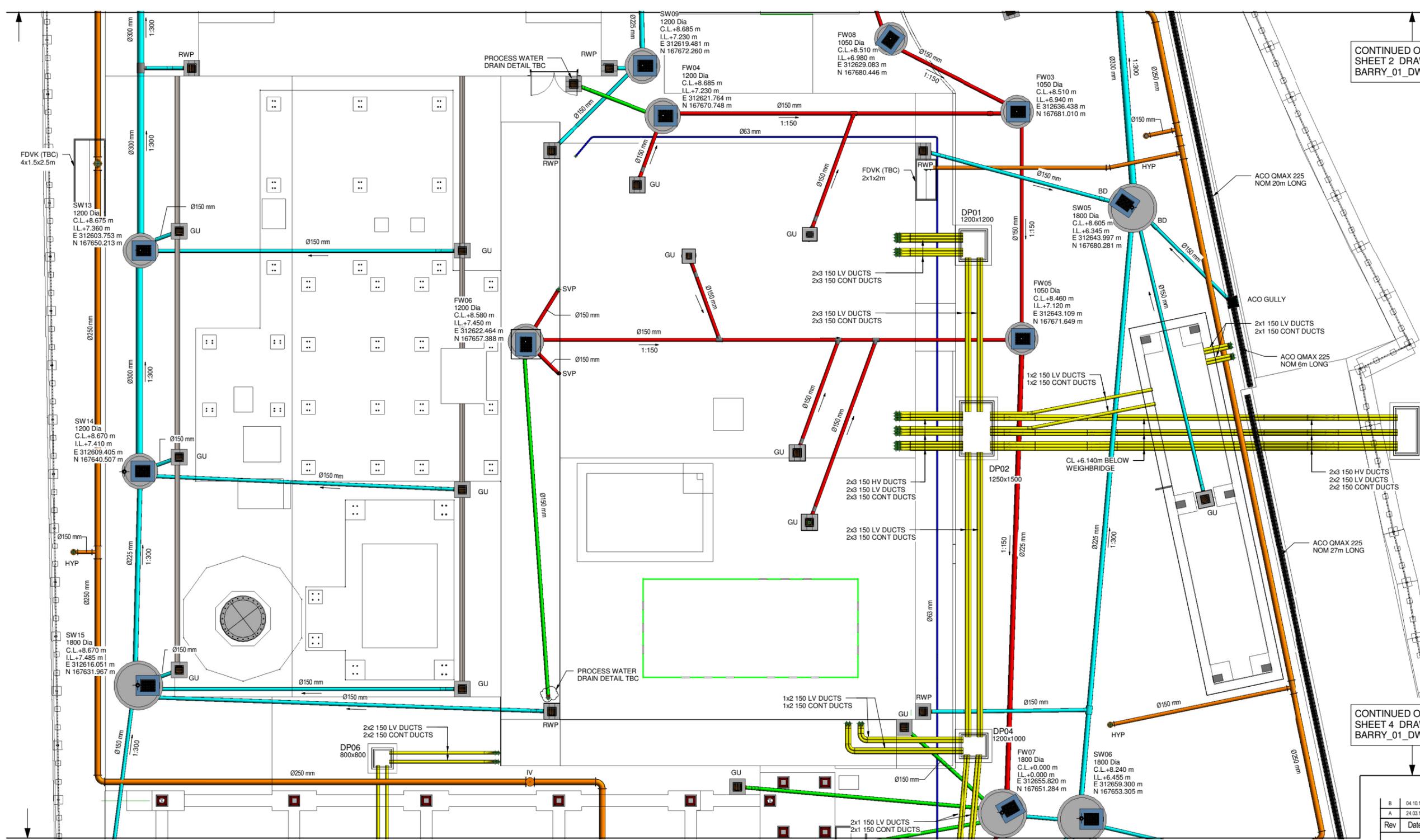
CONTINUED ON SITE SERVICES SHEET 1 DRAWING No: BARRY_01_DWG_01_20131

CONTINUED ON SITE SERVICES SHEET 3 DRAWING No: BARRY_01_DWG_01_20133



CONTINUED ON SITE SERVICES SHEET 2 DRAWING No: BARRY_01_DWG_01_20132

CONTINUED ON SITE SERVICES SHEET 4 DRAWING No: BARRY_01_DWG_01_20134



NOTES

GENERAL

- DO NOT SCALE FROM THIS DRAWING.
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- ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE AND ANY DISCREPANCIES SHOULD BE REPORTED TO GHD LIVIGUNN.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT PROJECT STANDARDS AND SPECIFICATIONS.

REFERENCE DRAWINGS :

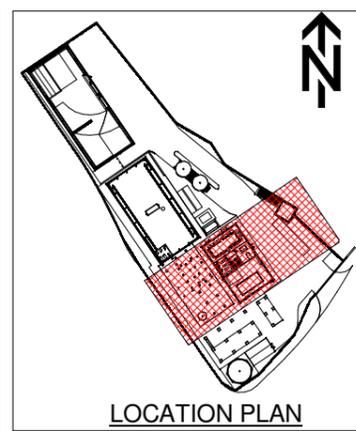
BARRY_01_DWG_01_20131 - SITE SERVICES GA SHEET 1 OF 4
 BARRY_01_DWG_01_20132 - SITE SERVICES GA SHEET 2 OF 4
 BARRY_01_DWG_01_20133 - SITE SERVICES GA SHEET 3 OF 4
 BARRY_01_DWG_01_20134 - SITE SERVICES GA SHEET 4 OF 4
 BARRY_01_DWG_01_20135 - SITE SERVICES DETAILS SHEET 1
 BARRY_01_DWG_01_20136 - SITE SERVICES DETAILS SHEET 2

DRAINAGE:

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- PIPE BEDDING DETAILS SHOWN ON DRAWINGS: BARRY_01_DWG_01_20135 & 20136

LEGEND:

- HYDRANT RING MAIN
- SURFACE WATER DRAIN
- FOUL WATER DRAIN
- PROCESS WATER DRAIN (AS HATHERWARE THERMACHEM PIPEWORK)
- ELECTRICAL DUCTS
- POTABLE WATER MAIN (AS PURITON BARRIER PIPE OSA)
- SURFACE WATER MANHOLE
- FOUL WATER MANHOLE
- ELECTRICAL DRAWPIT
- RAIN WATER PIPE
- ROAD GULLY
- HYDRANT POINT (PROPOSED)
- ISOLATION VALVE (PROPOSED)
- BACK DROP
- FIRE DELUGE VALVE KIOSK



SAFETY, HEALTH & ENVIRONMENTAL (SHE) INFORMATION

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CONSTRUCTION

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MAINTENANCE / CLEANING

- MANHOLES ARE A CONFINED SPACE WITHOUT A SAFE MEANS OF ACCESS OR EGRESS. ENTRY PERMIT IS REQUIRED FOR ACCESS AND MAINTENANCE. WITH A SAFE AND SUITABLE MEANS OF ENTRY TO BE PROVIDED.

DECOMMISSIONING / DEMOLITION

NO SIGNIFICANT RISK

2D EXPORT FROM A 3D MODEL
 ALL ALTERATIONS TO BE MADE IN THE MODEL FILE

DRAWING TO BE REPRODUCED IN COLOUR

PRELIMINARY

FIRE DELUGE VALVE KIOSK LOCATION, SIZE, DRAINAGE & POWER CONNECTION TBC

FOUL AND SURFACE WATER DISCHARGE FLOW RATE RATE AND LOCATION TBC BY GALIFORD TRY.

FIRE RING MAIN SIZE AND MATERIAL TBC (ASSUMED PE PIPE)

FIRE HYDRANT POSITIONS TBC

Rev	Date	Description	By	Chk	App
B	04.10.16	UPDATED FOR ATTENUATION	JW	MS	GB
A	24.03.16	FIRST ISSUE	JW	MS	GB

Revision

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 SK8 1ES
 0161 491 4600
 info@ghdlivigunn.com

CLIENT
GallifordTry

PROJECT
BARRY BIOMASS UK NO 2 LIMITED

TITLE
SITE SERVICES. SHEET 3

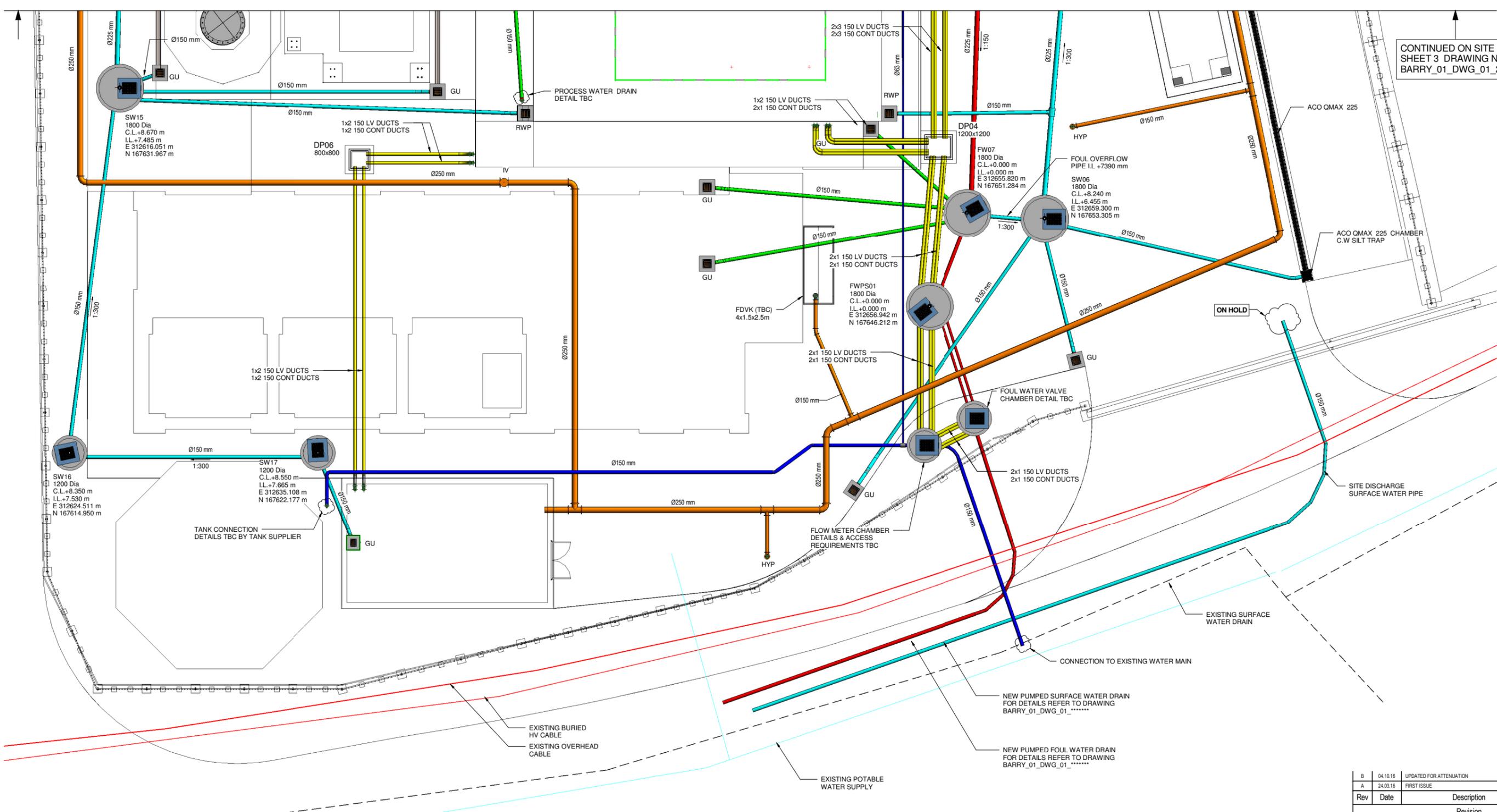
SCALE
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DRAWING SIZE
 A1

DWG No
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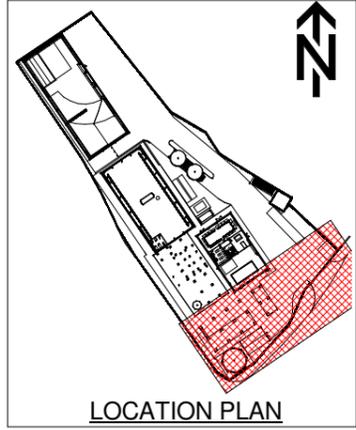
REV.
 B

CONTINUED ON SITE SERVICES SHEET 3 DRAWING No: BARRY_01_DWG_01_20133



NOTES

- GENERAL**
- DO NOT SCALE FROM THIS DRAWING.
 - ALL DIMENSIONS ARE IN MILLIMETRES (mm) & ALL LEVELS ARE IN METRES (m) AOD, UNLESS STATED OTHERWISE.
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- REFERENCE DRAWINGS :**
- BARRY_01_DWG_01_20131 - SITE SERVICES GA SHEET 1 OF 4
 BARRY_01_DWG_01_20132 - SITE SERVICES GA SHEET 2 OF 4
 BARRY_01_DWG_01_20133 - SITE SERVICES GA SHEET 3 OF 4
 BARRY_01_DWG_01_20134 - SITE SERVICES GA SHEET 4 OF 4
 BARRY_01_DWG_01_20135 - SITE SERVICES DETAILS SHEET 1
 BARRY_01_DWG_01_20136 - SITE SERVICES DETAILS SHEET 2
- DRAINAGE:**
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 - ALL BURIED PIPES AND DUCTS UNDER STRUCTURE TO BE ENCASED IN MIN 150mm THICK C16/20 MASS CONCRETE. ALSO WHERE GROUND COVER IS LESS THAN 900mm.
 - PIPE BEDDING DETAILS SHOWN ON DRAWINGS: BARRY_01_DWG_01_20135 & 20136
- LEGEND:**
- HYDRANT RING MAIN
 - SURFACE WATER DRAIN
 - FOUL WATER DRAIN
 - PROCESS WATER DRAIN (AS HATHERNWARE THERMACHEM PIPEWORK)
 - ELECTRICAL DUCTS
 - POTABLE WATER MAIN (AS PURITON BARRIER PIPE OSA)
 - SW00 SURFACE WATER MANHOLE
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 - HYP HYDRANT POINT (PROPOSED)
 - IV ISOLATION VALVE (PROPOSED)
 - BD BACK DROP
 - FDVK FIRE DELUGE VALVE KIOSK



SAFETY, HEALTH & ENVIRONMENTAL (SHE) INFORMATION

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CONSTRUCTION

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MAINTENANCE / CLEANING

1. MANHOLES ARE A CONFINED SPACE WITHOUT A SAFE MEANS OF ACCESS OR EGRESS. ENTRY PERMIT IS REQUIRED FOR ACCESS AND MAINTENANCE. WITH A SAFE AND SUITABLE MEANS OF ENTRY TO BE PROVIDED

DECOMMISSIONING / DEMOLITION

NO SIGNIFICANT RISK

2D EXPORT FROM A 3D MODEL
 ALL ALTERATIONS TO BE MADE IN THE MODEL FILE

DRAWING TO BE REPRODUCED IN COLOUR

PRELIMINARY

FIRE DELUGE VALVE KIOSK LOCATION, SIZE, DRAINAGE & POWER CONNECTION TBC

FOUL AND SURFACE WATER DISCHARGE FLOW RATE RATE AND LOCATION TBC BY GALIFORD TRY.

FIRE RING MAIN SIZE AND MATERIAL TBC (ASSUMED PE PIPE)

FIRE HYDRANT POSITIONS TBC

B	04.10.16	UPDATED FOR ATTENUATION	JW	MS	GB
A	24.03.16	FIRST ISSUE	JW	MS	GB
Rev	Date	Description	By	Chk	App

Revision

The Studio
 51 Brookfield Road
 Cheshire
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 0161 491 4600
 info@ghdlivigunn.com

CLIENT
GallifordTry

PROJECT
BARRY BIOMASS UK NO 2 LIMITED

TITLE
SITE SERVICES. SHEET 4

SCALE 1:100	DRAWING SIZE A1
DWG No. BARRY_01_DWG_01_20134	REV. B

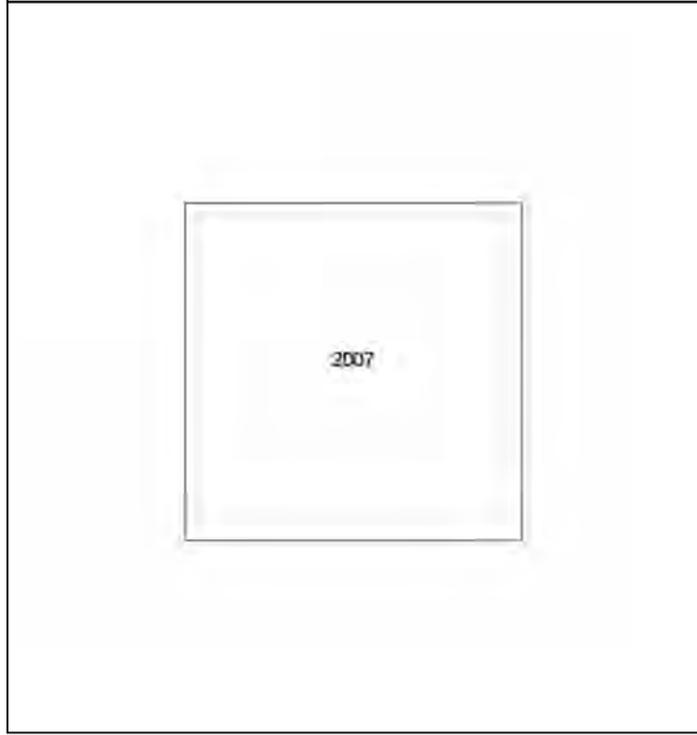
Annex B – Historical Maps

Site Details:
 WOODHAM ROAD, DOCKS,
 BARRY, CF62

Document
SRB-F

Client Ref: Barry
Report Ref: HMD-188-62959
Grid Ref: 312620, 167670

Map Name: MasterMap
Map date: 2007
Scale: 1:2,500
Printed at: 1:2,500



 **Ordnance Survey**
 Licensed Partner

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 Tel: 01273 819500
 Email: maps&data@groundsure.com

Site Details:

WOODHAM ROAD, DOCKS,
BARRY, CF62

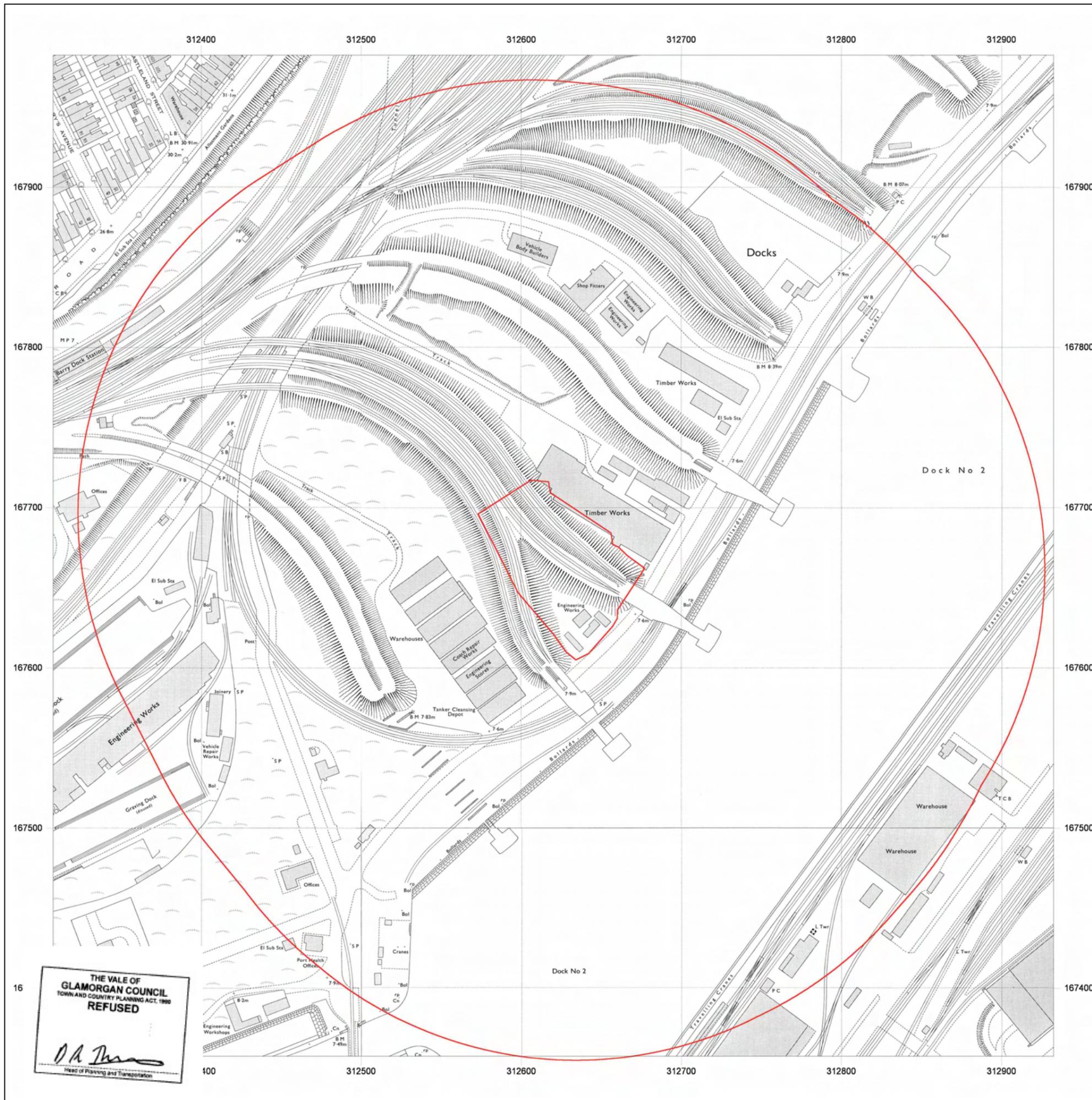
Client Ref: Barry
Report Ref: HMD-188-62959
Grid Ref: 312620, 167670

Map Name: National Grid

Map date: 1971

Scale: 1:1,250

Printed at: 1:2,500



<p>Surveyed 1954 Revised 1971 Edition NA Copyright 1971 Levelled 1961</p>	<p>Surveyed 1955 Revised 1971 Edition NA Copyright 1971 Levelled 1961</p>
<p>Surveyed 1954 Revised 1971 Edition NA Copyright 1971 Levelled 1961</p>	<p>Surveyed 1955 Revised 1971 Edition NA Copyright 1971 Levelled 1961</p>

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Email: maps&data@groundsurre.com

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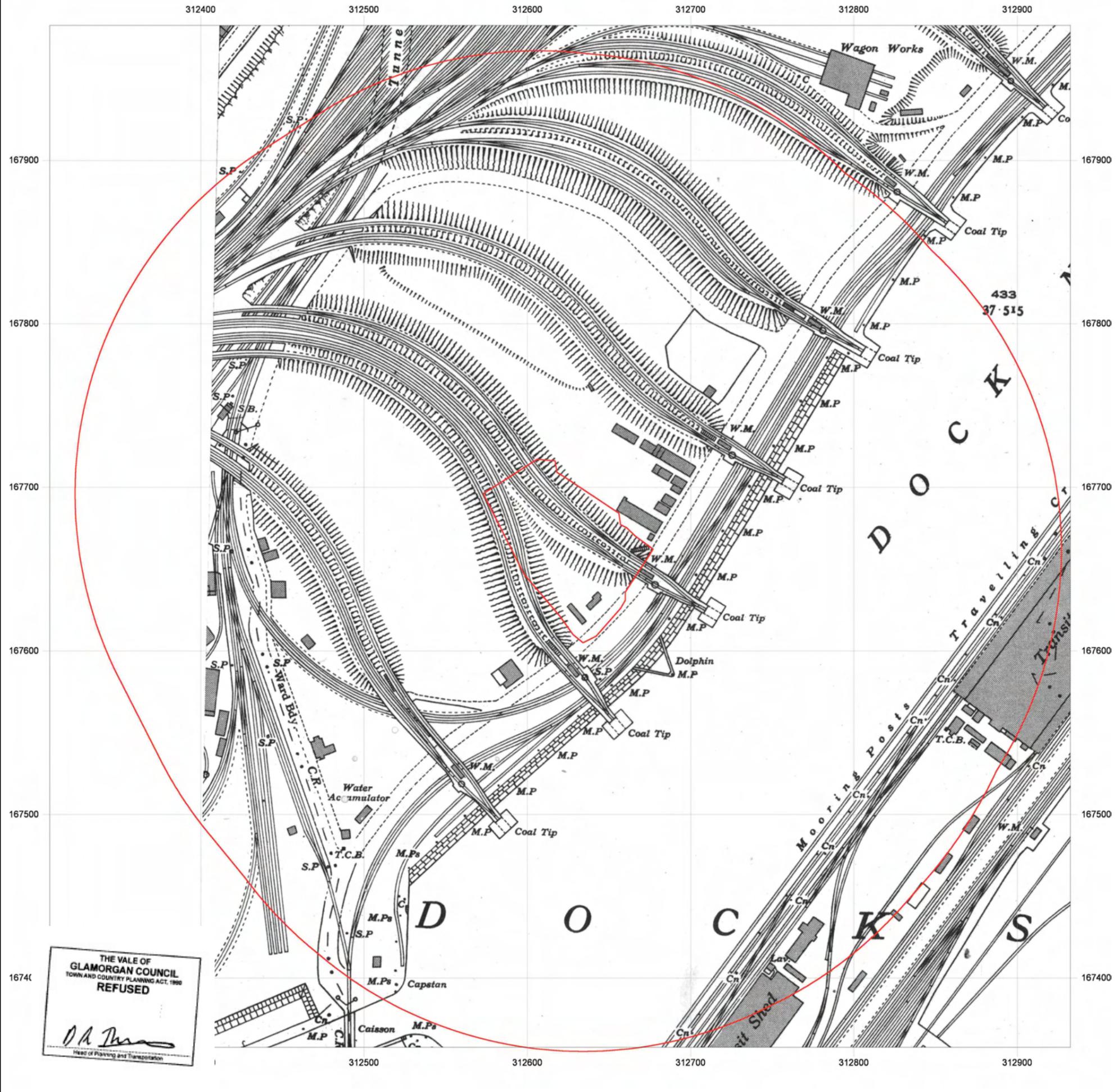
THE VALE OF
GLAMORGAN COUNCIL
TOWN AND COUNTRY PLANNING ACT, 1960
REFUSED

D.A. Jones
Head of Planning and Transportation

Site Details:
 WOODHAM ROAD, DOCKS,
 BARRY, CF62

Client Ref: Barry
Report Ref: HMD-188-62959
Grid Ref: 312620, 167670

Map Name: County Series
Map date: 1943
Scale: 1:2,500
Printed at: 1:2,500



Surveyed 1943
 Revised 1943
 Edition NA
 Copyright NA
 Levelled NA

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THE VALE OF
 GLAMORGAN COUNCIL
 TOWN AND COUNTRY PLANNING ACT, 1990
REFUSED

D.A. Jones
 Head of Planning and Transportation

Site Details:

WOODHAM ROAD, DOCKS,
BARRY, CF62

Client Ref: Barry
Report Ref: HMD-188-62959
Grid Ref: 312620, 167670

Map Name: County Series

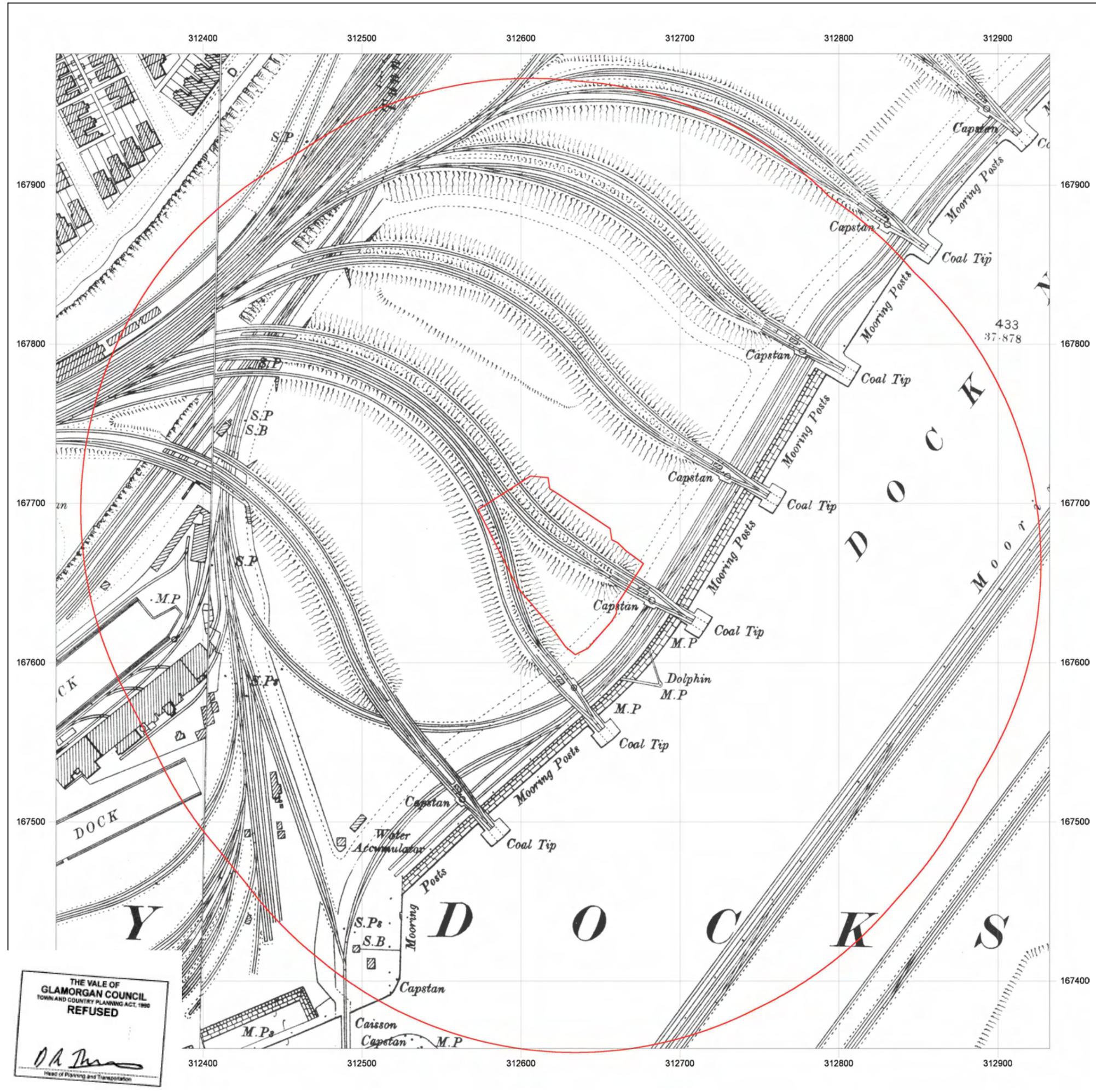
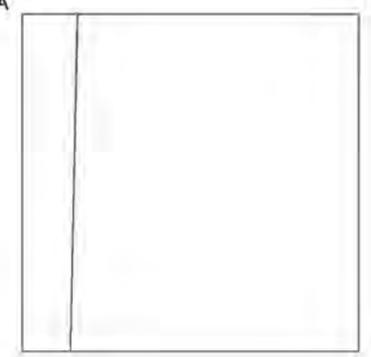
Map date: 1900

Scale: 1:2,500

Printed at: 1:2,500

Surveyed 1900
Revised 1900
Edition NA
Copyright NA
Levelled NA

Surveyed 1900
Revised 1900
Edition NA
Copyright NA
Levelled NA



THE VALE OF
GLAMORGAN COUNCIL
TOWN AND COUNTRY PLANNING ACT, 1990
REFUSED

D.A. Thomas
Head of Planning and Transportation

 Ordnance Survey
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Produced by GroundSure Ltd.
Tel: 01273 819500
Email:
maps&data@groundsurre.com

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Production date: 07 March 2008

Annex C – Groundsure Environmental Data Report

Document SRB-H



Oaktree Environmental
Unit 5 Oasis Park, Road 1,
Winsford Industrial Estate, Winsford,
CW7 3PP

GroundSure Reference: HMD-188-62960
Your Reference: Barry
Report Date: Mar 6, 2008
Report Delivery Method: **xml**
Client Email: marco@oaktree-environmental.co.uk

GroundSure Environmental Data Report

Address: WOODHAM ROAD, DOCKS, BARRY, CF62

Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the **GroundSure Environmental Data Report** as requested.

If you need any further assistance, please do not hesitate to contact our maps and data helpline on 01273 819700 or email maps&data@groundsure.com quoting the above GroundSure reference number.

Yours faithfully,

A handwritten signature in black ink, appearing to read "P. Alford".

Managing Director
Groundsure Limited

Enc.
GroundSure Environmental Data Report

GroundSure Environmental Data Report

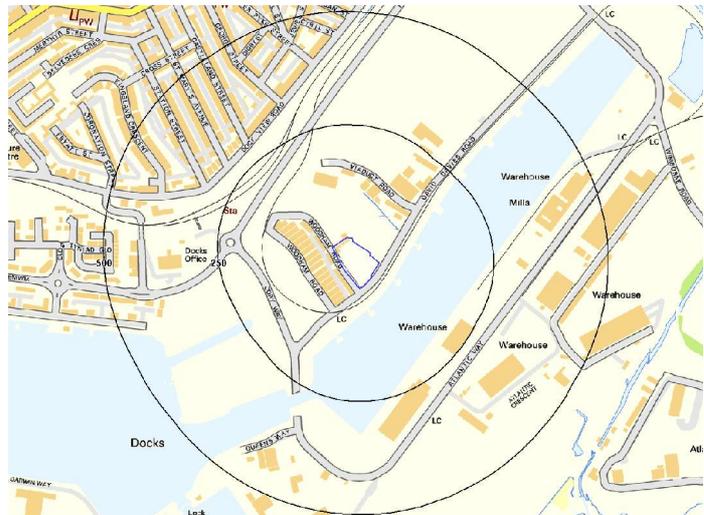
Address: WOODHAM ROAD, DOCKS, BARRY, CF62

Date: Mar 6, 2008

GroundSure Reference: HMD-188-62960

Your Reference: Barry

Client: Oaktree Environmental



Brought to you by GroundSure

Aerial Photograph of Study Site



Aerial photography supplied by Getmapping PLC.
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Site Name: WOODHAM ROAD, DOCKS, BARRY, CF62
Grid Reference: 312620,167670

Overview of Findings

For further details on each dataset, please refer to each individual section in the main Report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Report Section	Number of records found within (X) m of the study site boundary					
	on-site	0-50	51-250	251-500	501-1000	1000-1500
1. Authorisations, Incidents and Registers						
1.1 Industrial Sites Holding Licenses and/or Authorisations						
Records of IPC Authorisations	0	0	0	0	0	-
Records of IPPC Authorisations	0	0	0	7	12	-
Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0	-	-
Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0	-	-
Records of List 1 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of List 2 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of LAPPC (LAPC) Authorisations	0	0	0	2	-	-
Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0	-	-
Records of Licensed Discharge Consents	0	1	1	1	-	-
1.2 Records of COMAH and NIHHS sites	0	0	0	0	-	-
1.3 Environment Agency Recorded Pollution Incidents						
National Incidents Recording System, List 2	0	0	2	-	-	-
National Incidents Recording System, List 1	0	0	0	-	-	-
1.4 Sites Determined as Contaminated Land under Part IIA EPA 1990	0	0	0	0	-	-
2. Landfill and Other Waste Sites						
2.1 Landfill Sites						
Environment Agency Registered landfill Sites	0	0	0	0	1	0
Landfill Data – Operational Landfill Sites	0	0	0	0	1	0
Environment Agency Historic Landfill Sites	0	0	1	3	3	2
Landfill Data – Non-Operational Landfill Sites	0	0	0	1	2	2
BGS/DoE Landfill Site Survey	0	0	0	0	0	0
GroundSure Local Authority Landfill Sites Data	0	0	0	1	0	0
2.2 Landfill and Other Waste Sites Findings						
Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Environment Agency (REGIS) Waste Sites	0	0	0	9	15	16
3. Current Land Uses						
3.1 Current Industrial Sites Data						
3.2 Records of Petrol and Fuel Sites	0	0	0	0	-	-
3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0	-	-

4. Geology	Description
4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site? *	Yes
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
4.3 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section. Source: Scale: 1:50,000 BGS Sheet 263	

* This includes an automatically generated 50m buffer zone around the site.

5. Hydrogeology and Hydrology	on-site	0-50	51-250	251-500	501-1000	1001-2000*
5.1 Environment Agency Groundwater Vulnerability and Soil Classification						
Minor Aquifer (within 200m)	No	No	Yes	-	-	-
Major Aquifer (within 200m)	No	No	No	-	-	-
Soil Classification (within 200m)	No	No	Yes	-	-	-
5.2 Groundwater Abstraction Licences (within 2000m of the study site).	0	0	0	0	0	6
5.3 Surface Water Abstraction Licences (within 1000m of the study site).	0	0	0	0	15	-
5.4 Source Protection Zones						
Source Protection Zones within 500m of the study site.	0	0	0	0	-	-
5.5 Potable Water Abstraction Licences (within 2000m of the study site).	0	0	0	0	0	0
5.6 River Quality						
Is there any Environment Agency information on river quality within 500m of the study site?	No	No	No	No	-	-
5.7 Main Rivers						
Main Rivers within 500m of the study site.	0	0	0	0	-	-

6. Flooding	Description
6.1 Are there any Environment Agency indicative Zone 2 floodplains within 250m of the study site?	Yes
6.2 Are there any Environment Agency indicative Zone 3 floodplains within 250m of the study site?	Yes
6.3 Are there any Areas benefiting from Flood Defences within 250m of the study site?	No
6.4 Are there any Areas used for Flood Storage within 250m of the study site?	No
6.5 What is the maximum BGS groundwater flooding susceptibility within 50m of the study site?	High
6.6 What is the BGS confidence rating for the groundwater flooding susceptibility areas?	Moderate

7. Ecological Designated Sites	on-site	0-50	51-250	251-500	501-1000	1001-1500
7.1 Records of Sites of Special Scientific Interest (SSSI):	0	0	0	0	1	-
7.2 Records of National Nature Reserves (NNR) :	0	0	0	0	0	-
7.3 Records of Local Nature Reserves (LNR):	0	0	0	0	0	-
7.4 Records of Special Areas of Conservation (SAC):	0	0	0	0	0	-
7.5 Records of Special Protection Areas (SPA):	0	0	0	0	0	-
7.6 Records of Ramsar sites:	0	0	0	0	0	-
7.7 Records of World Heritage Sites:	0	0	0	0	0	-

8. Natural Hazards

8.1 What is the maximum risk of natural ground subsidence? Very Low

9. Mining

9.1 Are there any coal mining areas within 75m of the study site? No

9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site? Negligible

Using this Report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between GroundSure and the Client. The document contains the following sections:

1. Authorisations, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by the Environment Agency, and sites determined as Contaminated Land. This search is conducted using radii up to 1000m.

2. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

3. Current Land Uses

Provides information on artificial and superficial deposits and bedrock beneath the study site. These searches are conducted on site and includes a 50m buffer zone.

4. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site. These searches are conducted using radii of up to 250m and includes a 50m buffer zone.

5. Hydrogeology and Hydrology

Provides information on groundwater vulnerability, soil leaching potential, abstraction licenses, Source Protection Zones (SPZ) and river quality. These searches are conducted using radii of up to 2000m.

6. Flooding

Provides information on surface water flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

7. Ecological Designated Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR) and World Heritage Sites. These searches are conducted using radii of up to 1000m.

8. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These searches are conducted using radii of up to 75m.

9. Mining

Provides information on areas of coal and shallow mining. These searches are conducted using radii of up to 150m.

10. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, GroundSure provide a free Technical Helpline (01273 819700) for further information and guidance.

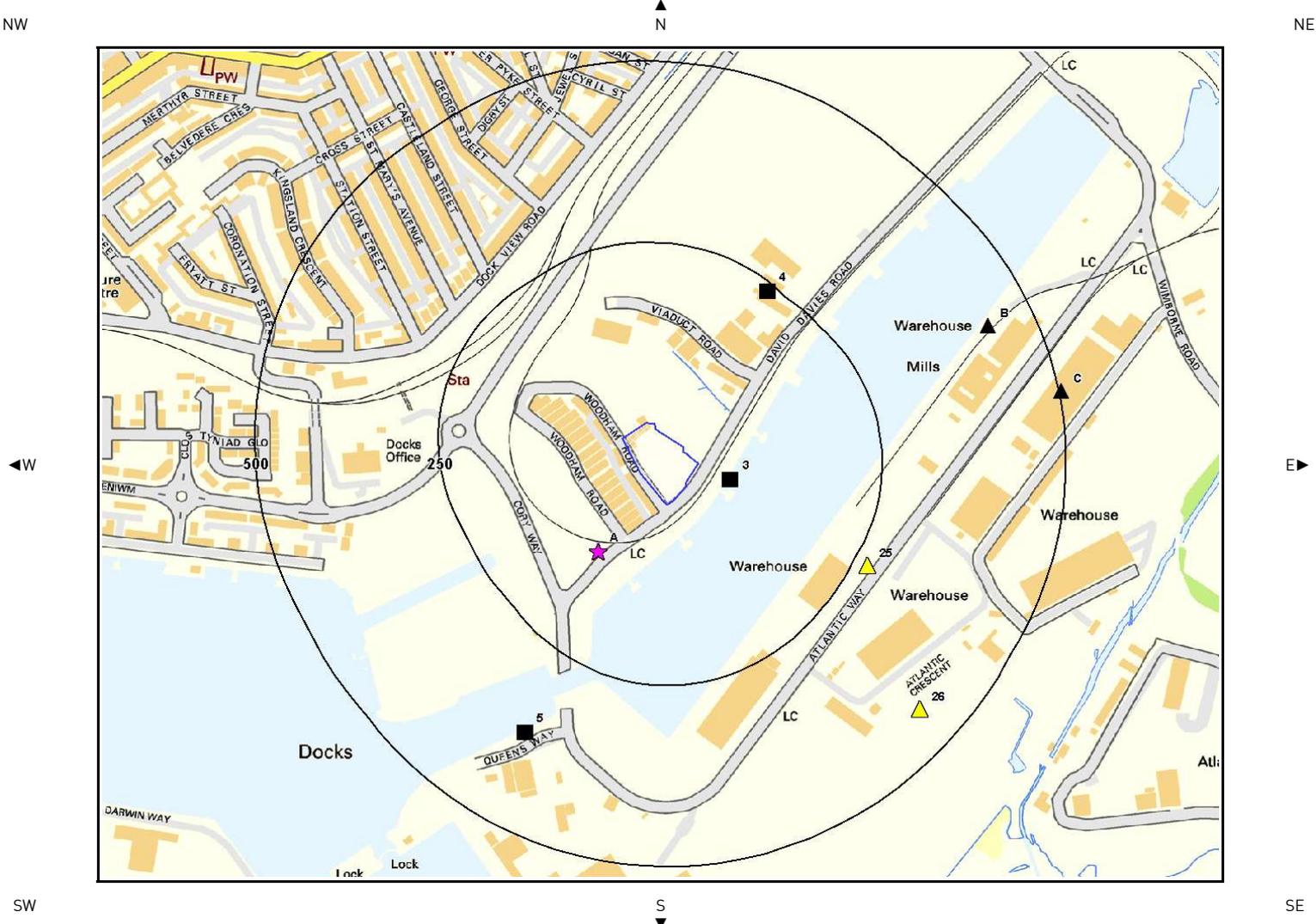
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Authorisations, Incidents and Registers Map



Incidents and Registers Legend

- | | | | | | |
|---|--------------------|---|-------------------------------|--|---------------------------------------|
|  | Site Outline |  | Recorded Pollution Incident |  | RAS 3 & 4 Authorisations |
|  | Search Buffers (m) |  | Dangerous Substances (List 1) |  | IPPC & IPC Authorisations |
|  | 250 |  | Dangerous Substances (List 2) |  | LAPPC Authorisations |
|  | 500 |  | Water Industry Referrals |  | COMAH / NIHS Sites |
| | |  | Licensed Discharge Consents |  | Sites Determined as Contaminated Land |
| | |  | Red List Discharge Consents | | |

 Mapping sourced from 

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1. Authorisations, Incidents and Registers

1.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

Records of Part A Licences (IPC Processes) within 1000m of the study site:

0

Database searched and no data found.

Records of Part A Licences (IPPC Processes) within 1000m of the study site:

19

The following Part A Licences (IPPC Processes) are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details
6B	436.0	NE	313070,167850	Operator: Rank Hovis Limited Installation Name: Barry Flour Mill Status: Effective Permit Number: BP3376IE Original Permit Number: BP3376IE Issue Date: 17/08/2005 Effective Date: 17/08/2005
7B	436.0	NE	313070,167850	Operator: Rank Hovis Limited Installation Name: Barry Flour Mill Status: Effective Permit Number: BP3376IE Original Permit Number: BP3376IE Issue Date: 17/08/2005 Effective Date: 17/08/2005
8B	436.0	NE	313070,167850	Operator: Rank Hovis Ltd Installation Name: Rank Hovis Ltd Barry Status: Determination Permit Number: BP3376IE Original Permit Number: BP3376IE Issue Date: - Effective Date: -
9B	436.0	NE	313070,167850	Operator: Rank Hovis Ltd Installation Name: Barry Flour Mill Status: Effective Permit Number: BP3376IE Original Permit Number: BP3376IE Issue Date: 17/08/2005 Effective Date: 17/08/2005
10B	436.0	NE	313070,167850	Operator: Rank Hovis Ltd Installation Name: Barry Flour Mill Status: Effective Permit Number: BP3376IE Original Permit Number: BP3376IE Issue Date: 17/08/2005 Effective Date: 17/08/2005
11B	436.0	NE	313070,167850	Operator: Rank Hovis Limited Installation Name: Barry Flour Mill Status: Effective Permit Number: BP3376IE Original Permit Number: BP3376IE Issue Date: 20050817 Effective Date: 20050817
12B	436.0	NE	313070,167850	Operator: Rank Hovis Limited Installation Name: Barry Flour Mill Status: Effective Permit Number: BP3376IE Original Permit Number: BP3376IE Issue Date: 20050817 Effective Date: 20050817
13C	503.0	E	313170,167760	Operator: Alembic Manufacturing Ltd. Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 07/11/2005 Effective Date: 07/11/2005
14C	503.0	E	313170,167760	Operator: Alembic Manufacturing Ltd Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 07/11/2005 Effective Date: 07/11/2005
15C	503.0	E	313170,167760	Operator: Alembic Manufacturing Ltd Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 07/11/2005 Effective Date: 07/11/2005
16C	503.0	E	313170,167760	Operator: Alembic Manufacturing Ltd. Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 07/11/2005 Effective Date: 07/11/2005
17C	503.0	E	313170,167760	Operator: Alembic Manufacturing Ltd Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 20051107 Effective Date: 20051107
18C	503.0	E	313170,167760	Operator: Alembic Manufacturing Ltd Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 20051107 Effective Date: 20051107

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19C	503.0	E	313170,167760	Operator: Alembic Manufacturing Ltd Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective	Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 20051107 Effective Date: 20051107
20C	503.0	E	313170,167760	Operator: Alembic Manufacturing Ltd Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective	Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 20051107 Effective Date: 20051107
Not shown	991.0	SE	313170,166770	Operator: Alembic Manufacturing Ltd. Installation Name: Barry Aluminium Chlorohydrate Plant Status: Determination	Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: - Effective Date: -
Not shown	991.0	SE	313170,166770	Operator: Alembic Manufacturing Ltd. Installation Name: Barry Aluminium Chlorohydrate Plant Status: Determination	Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: - Effective Date: -
Not shown	991.0	SE	313170,166770	Operator: Alembic Manufacturing Ltd. Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective	Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 07/11/2005 Effective Date: 07/11/2005
Not shown	991.0	SE	313170,166770	Operator: Alembic Manufacturing Ltd. Installation Name: Barry Aluminium Chlorohydrate Plant Status: Effective	Permit Number: MP3431SP Original Permit Number: MP3431SP Issue Date: 07/11/2005 Effective Date: 07/11/2005

Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site: 0

Database searched and no data found.

Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site: 0

Database searched and no data found.

Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site: 0

Database searched and no data found.

Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site: 0

Database searched and no data found.

Records of LAPPC (LAPC) Authorisations within 500m of the study site: 2

The following LAPPC (LAPC) Authorisations are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details
25	270.0	SE	312906.0,167519.0	Address: Hanson Building Material Europe Limited, Atlantic Trading Estate, Wimborne Road, Barry Docks, Barry Process: Cement Batching Status: 20040401
26	443.0	SE	312978.0,167320.0	Address: Apex Coal Ltd., Coal Yard, No. 2 Dock, Off Atlantic Way, Barry Docks, Barry, Process: Coal Handling Status: Current Date: 2004

Records of Category 3 or 4 Radioactive Substance Licences within 500m of the study site: 0

Database searched and no data found.

Records of Licenced Discharge Consents within 500m of the study site: 3

The following Licenced Discharge Consents records are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details	
3	48.0	SE	312720,167640	Address: Fisher Containers David Davies Road, Fisher Containers David Davies R, David Davies Road Barry Dock Bar, Barry Dock Barry ,, Barry , Effluent Type: Unspecified Permit Number: AN0033206 Permit Version: 2	Receiving Water: Barry Docks Status: Lapsed Under Schedule 23 Environment Act 1995 Issue date: 00//1/10/7 Effective Date: - Revocation Date: -
4	239.0	NE	312770,167900	Address: Factory At David Davies Road Barry, Factory At David Davies Road, Barry Docks, Barry, Vale Of Glamorgan Effluent Type: Unspecified Permit Number: AN0238001 Permit Version: 1	Receiving Water: Barry Docks Status: New Consent, By Application (wra 91, Section 88) Issue date: 00/0//27/1 Effective Date: - Revocation Date: -
5	370.0	SW	312440,167290	Address: Brt International Ltd, No3 Dock, Barry Docks, CF63 3RA Effluent Type: Unspecified Permit Number: AN0033237 Permit Version: 2	Receiving Water: Barry Docks Status: Modified - (wra 91 Sched 10 - As Amended By Env Act 1995) Issue date: 00/19/9/7/ Effective Date: - Revocation Date: -

1.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

1.3 Environment Agency Recorded Pollution Incidents

Records of National Incidents Recording System, List 2 within 250m of the study site:

2

The following NIRS List 2 records are represented as points on the Authorisations, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details	
1A	112.0	SW	312540,167540	Incident Date: 16-Dec-2002 Incident Identification: 126244 Pollutant: - Pollutant Description: -	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2A	112.0	SW	312540,167540	Incident Date: 16-Dec-2002 Incident Identification: 126244 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

Records of National Incidents Recording System, List 1 within 250m of the study site:

0

Database searched and no data found.

1.4 Sites Determined as Contaminated Land under Part IIA EPA 1990¹

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

0

Database searched and no data found.

¹Further information on sites that have been determined under the Contaminated Land Regime is maintained by Local Authorities under Section 78R of the Environmental Protection Act 1990. Information should be available on both sites currently determined as Contaminated Land and Special Sites.

2. Landfill and Other Waste Sites Map

NW

N

NE

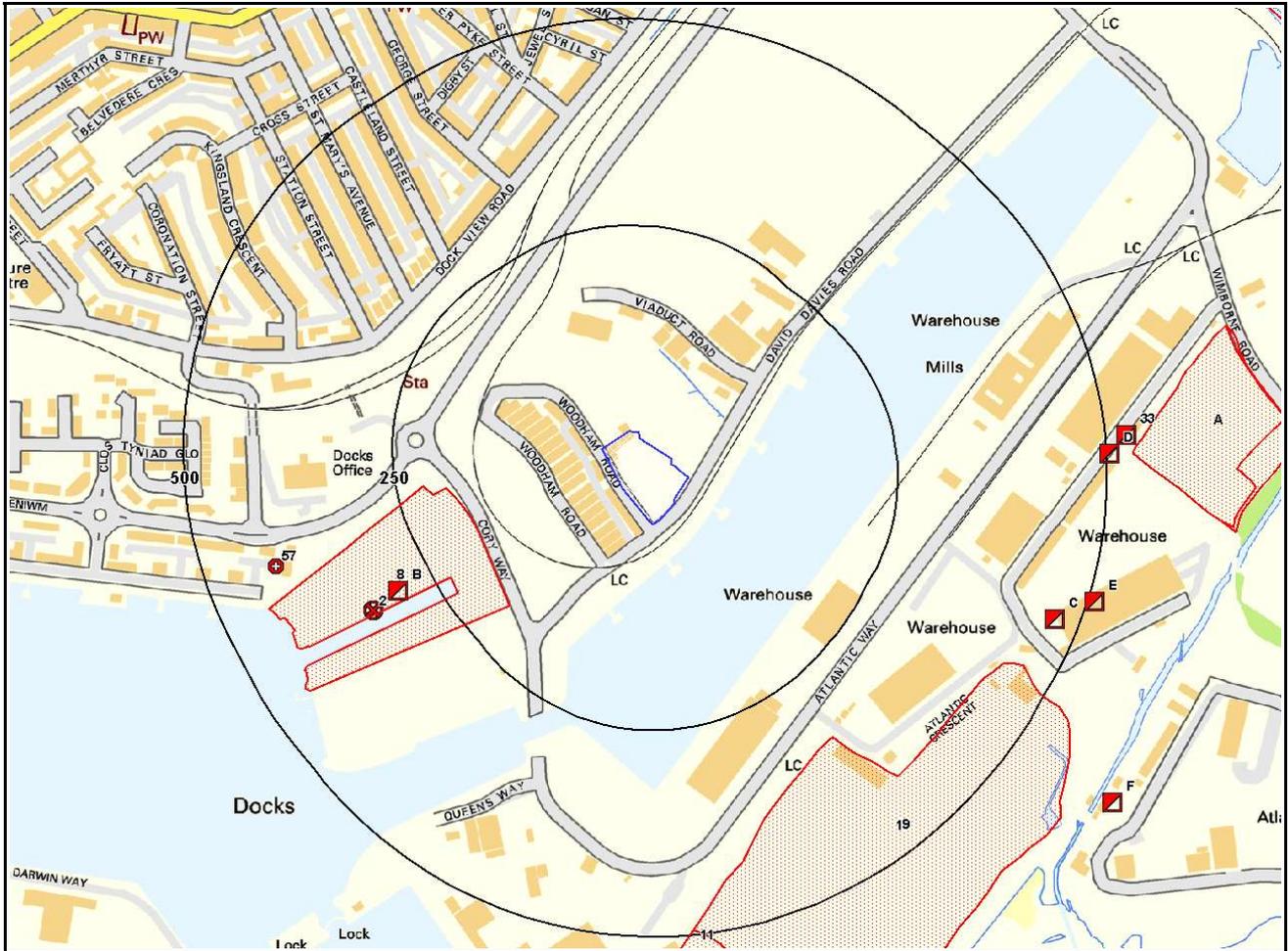
W

E

SW

S

SE



Landfill & Other Waste Sites Legend


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- | | | | |
|---|---------------------------------------|---|-------------------------------------|
|  | Site Outline |  | Operational Waste Treatment Licence |
|  | 250 |  | Closed Waste Treatment Licence |
|  | 500 |  | REGIS Waste Licence |
|  | E.A. Active Landfill |  | Operational Landfill |
|  | E.A. Historic Landfill (Area Data) |  | Closed Landfill |
|  | E.A. Historic Landfill (Point Data) | | |
|  | BGS / DoE Survey Landfill | | |
|  | Local Authority Landfill (Area Data) | | |
|  | Local Authority Landfill (Point Data) | | |

2. Landfill and Other Waste Sites

2.1 Landfill Sites¹

Records from Environment Agency landfill data within 1000m of the study site:

1

The following Environment Agency landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance	Direction	NGR	Details	
Not shown	897.0	NE	313462.0,168356.0	Address: Dow Corning Landfill, Cardiff Road, Barry, Vale Of Glam, CF63 2YL Landfill Reference: 30043.0 Regis Reference: DOW001 Landfill Type: A7 - Industrial Waste Landfill (Factory curtilage)	Operator: Dow Corning Ltd Status: Licence issued IPPC Reference:

Records of operational landfill sites sourced from Landmark within 1500m of the study site:

1

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance	Direction	NGR	Details	
Not shown	964.0	NE	313400.0,168300.0	Site Address: Dow Corning Factory, East No 2 Dock, BARRY, South Glamorgan, Agency Reference: EAWML30043 Waste Type: Difficult Waste Description: Difficult Landfill Known Restrictions: Waste produced/controlled by licence holder	Record Date: 01-Apr-1991 Transfer Date: Modification Date: 01-Mar-1999 Status: Operational as far as is known Category: LANDFILL Regulator: EA - Welsh Region - South East Area (Cardiff) Size: Undefined

Records of Environment Agency historic landfill sites within 1500m of the study site:

9

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance	Direction	NGR	Details	
8	177.0	SW	312300,167500	Site Address: Barry Graving Dock, Off Cory Way, Barry, Vale Of Glamorgan Waste Licence: Yes Site Reference: 61 Waste Type: Industrial, Household, Special Regis Reference: WU1/L/ASS001	Data Type: Polygon Licence Issue: 11-Oct-1994 Licence Surrendered: 16-Jan-2006 Licence Hold Address: 150 Holborn, London Operator: Associated British Ports
9	334.0	SE	312900,167200	Site Address: Barry Docks Area A, Atlantic Trading Estate, Atlantic Crescent, Barry, South Glamorgan Waste Licence: Yes Site Reference: 4 Waste Type: Industrial, Special, Liquid sludge Regis Reference: -	Data Type: Polygon Licence Issue: 26-Oct-1977 Licence Surrendered: 31-Dec-1978 Licence Hold Address: - Operator: BP Chemicals Limited

¹This information is gathered from a wide range of sources including, the Environment Agency (Agency), The British Geological Survey (BGS) and under licence from Landmark Information Group Limited®. Data supplied by Landmark Information Group Limited® and the Agency refers to waste management licences required (under either the Control of Pollution Act 1974 and/or the Environmental Protection Act 1990) by anyone involved in waste disposal. A survey by the BGS undertaken in 1972/3 provides data on some older landfill sites that were not subject to legislation. Environment Agency data on historic waste / landfill sites is still being updated by the Agency as part of an ongoing project. GroundSure use this data because more accurate data is not yet publicly available and will use enhanced Environment Agency data when it is released.

GroundSure Environmental Data Report Reference: HMD-188-62960

10	334.0	SE	312800,167100	Site Address: Barry Docks Area A and B, Atlantic Trading Estate, Atlantic Crescent, Barry, South Glamorgan Waste Licence: Yes Site Reference: 16 Waste Type: Inert, Industrial, Commercial, Household, Special Regis Reference: -	Data Type: Polygon Licence Issue: 15-Mar-1979 Licence Surrendered: Licence Hold Address: - Operator: BP Chemicals Limited
11	494.0	S	312700,166900	Site Address: Barry Docks Area B, Atlantic Trading Estate, Atlantic Crescent, Barry, South Glamorgan Waste Licence: Yes Site Reference: 8 Waste Type: Industrial Regis Reference: -	Data Type: Polygon Licence Issue: 27-Feb-1978 Licence Surrendered: 31-Dec-1978 Licence Hold Address: - Operator: BP Chemicals Limited
12A	531.0	E	313300,167700	Site Address: Atlantic Trading Estate, Barry Dock No 2, Wimbourne Road, Barry, South Glamorgan Waste Licence: - Site Reference: 6950/0060 Waste Type: Inert, Industrial, Household, Special Regis Reference: -	Data Type: Polygon Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Penarth Contractor
13A	531.0	E	313300,167700	Site Address: Barry Dock No.1, Atlantic Trading Estate, Wimbourne Road, Barry, South Glamorgan Waste Licence: Yes Site Reference: 6, 6950/0025 Waste Type: Inert, Industrial, Household Regis Reference: -	Data Type: Polygon Licence Issue: 02-Nov-1977 Licence Surrendered: 31-Dec-1978 Licence Hold Address: - Operator: F J H Brackett
14	793.0	NE	313500,168200	Site Address: Barry Factory Salt Water Pond, Wimbourne Road, Barry, South Glamorgan Waste Licence: Yes Site Reference: 22A Waste Type: Inert, Industrial, Household, Special, Liquid sludge Regis Reference: -	Data Type: Polygon Licence Issue: 19-Dec-1980 Licence Surrendered: Licence Hold Address: - Operator: Dow Corning Limited
Not shown	1097.0	NE	313700,168300	Site Address: Barry Factory Ponds A, B and C, Wimbourne Road, Barry, South Glamorgan Waste Licence: Yes Site Reference: 9 Waste Type: Industrial Regis Reference: -	Data Type: Polygon Licence Issue: 06-Apr-1978 Licence Surrendered: Licence Hold Address: - Operator: Dow Corning Limited
Not shown	1438.0	W	311100,167000	Site Address: West Pond, Barry, South Glamorgan Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Household, Special Regis Reference: -	Data Type: Polygon Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -

Records of non-operational landfill sites sourced from Landmark within 1500m of the study site:
5

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance	Direction	NGR	Details
2	332.0	SW	312300.0,167500.0	Site Address: Graving Docks 1 & 2 and Barry No.1 Dock, off Cory Way, BARRY, South Glamorgan, Landfill Licence: W7BABWAL Agency Reference: EAWML30147 Waste Type: Difficult Waste Description: Difficult Landfill Known Restrictions: Only waste produced on site Record Date: 01-Oct-1994 Transfer Date: Modification Date: 01-Nov-1999 Status: Site closed Category: LANDFILL Regulator: EA - Welsh Region - South East Area (Cardiff) Size: Large (< 250,000 tonnes/year)

GroundSure Environmental Data Report Reference: HMD-188-62960

Not shown	708.0	S	312700.0,166900.0	Site Address: Atlantic Trading Estate, Barry Dock, BARRY, South Glamorgan, Landfill Licence: W7BAATAL Agency Reference: Waste Type: Putrescible Waste Description: Putrescible Landfill Known Restrictions: No known restriction on source of waste	Record Date: 01-Mar-1979 Transfer Date: Modification Date: Status: Licence lapsed/cancelled/defunct/not applicable/surrendered Category: LANDFILL Regulator: EA - Welsh Region - South East Area (Cardiff) Size: Undefined
Not shown	964.0	NE	313400.0,168300.0	Site Address: Dow Corning Factory, East No 2 Dock, BARRY, South Glamorgan, Landfill Licence: W7BAAAAL Agency Reference: Waste Type: Difficult Waste Description: Difficult Landfill Known Restrictions: Only waste produced on site	Record Date: 01-Dec-1980 Transfer Date: Modification Date: Status: Record superseded Category: LANDFILL Regulator: EA - Welsh Region - South East Area (Cardiff) Size: Very Small (<=10,000 tonnes/year)
Not shown	1078.0	W	311500.0,167795.0	Site Address: Barry Docks, BARRY, South Glamorgan, Landfill Licence: W7BAALAL Agency Reference: Waste Type: Difficult Waste Description: Difficult Landfill Known Restrictions: No known restriction on source of waste	Record Date: 01-Jun-1985 Transfer Date: Modification Date: Status: Licence lapsed/cancelled/defunct/not applicable/surrendered Category: LANDFILL Regulator: EA - Welsh Region - South East Area (Cardiff) Size: Undefined
Not shown	1078.0	W	311500.0,167800.0	Site Address: Barry Docks, BARRY, South Glamorgan, Landfill Licence: W7BAAEAL Agency Reference: Waste Type: Difficult Waste Description: Difficult Landfill Known Restrictions: No known restriction on source of waste	Record Date: 01-Mar-1979 Transfer Date: Modification Date: Status: Record superseded Category: LANDFILL Regulator: EA - Welsh Region - South East Area (Cardiff) Size: Small (<=25,000 tonnes/year)

Records of BGS/DoEnon-operational landfill sites within 1500m of the study site: 0

Database searched and no data found.

Records of Local Authority landfill sites within 1500m of the study site: 1

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance	Direction	Site Address	Source	Data Type
57	415.0	W	Barry Graving Dock, The Waterfront, Barry	Vale of Glamorgan Council	Point

2.2 Other Waste Sites¹

Records of operational waste treatment, transfer or disposal sites within 500m of the study site: 0

Database searched and no data found.

Records of non-operational waste treatment, transfer or disposal sites within 500m of the study site: 0

Database searched and no data found.

¹This information is gathered from a wide range of sources including, the Environment Agency (Agency), The British Geological Survey (BGS) and under licence from Landmark Information Group Limited®. Data supplied by Landmark Information Group Limited® and the Agency refers to waste management licences required (under either the Control of Pollution Act 1974 and/or the Environmental Protection Act 1990) by anyone involved in waste disposal. A survey by the BGS undertaken in 1972/3 provides data on some older landfill sites that were not subject to legislation. Environment Agency data on historic waste / landfill sites is still being updated by the Agency as part of an ongoing project. GroundSure use this data because more accurate data is not yet publicly available and will use enhanced Environment Agency data when it is released.

Records of Environment Agency (REGIS) waste sites within 1500m of the study site:
40

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance	Direction	NGR	Details
17B	295.0	SW	312329,167525	Site Address: Graving Docks Landfill, 1 & 2 Dock, Off Cory Way, Barry Docks, Barry, Vale Of Glam, CF1 7QB Type: Other landfill sites taking special waste Size: →= 75000 tonnes Regis Licence Number: ASS001 Operator: Associated British Ports Surrendered Date: - Waste Management licence No: 30147 Annual Tonnage: 0.0 Issue Date: 11/10/1994 Expiry Date: - Effective Date: - Status: Closure Modified: - Site Name: Graving Dock Cancelled Date: - Correspondence Address: 150, Holborn Road, London, , EC1 2LR
18B	295.0	SW	312329,167525	Site Address: Graving Docks Landfill, 1 & 2 Dock, Off Cory Way, Barry Docks, Barry, Vale Of Glam, CF1 7QB Type: - Size: 1 Regis Licence Number: - Operator: Associated British Ports Surrendered Date: - Waste Management licence No: 30147 Annual Tonnage: 0.0 Issue Date: - Expiry Date: - Effective Date: - Status: - Modified: - Site Name: Graving Dock Cancelled Date: - Correspondence Address: , ,
19B	295.0	SW	312329,167525	Site Address: Graving Docks Landfill, 1 & 2 Dock, Off Cory Way, Barry Docks, Barry, Vale Of Glam, CF1 7QB Type: Other landfill sites taking special waste Size: ← 25000 tonnes Regis Licence Number: ASS001 Operator: Associated British Ports Surrendered Date: 16/1/2006 Waste Management licence No: 30147 Annual Tonnage: 300000.0 Issue Date: 11/10/1994 Expiry Date: - Effective Date: - Status: Surrendered Modified: - Site Name: Graving Dock Cancelled Date: 0 Correspondence Address: Arup, 4, Pierhead Street, Capital Waterside, Cardiff, CF10 4QP
20B	295.0	SW	312329,167525	Site Address: Graving Docks Landfill, 1 & 2 Dock, Off Cory Way, Barry Docks, Barry, Vale Of Glam, CF1 7QB Type: Other landfill sites taking special waste Size: →= 75000 tonnes Regis Licence Number: ASS001 Operator: Associated British Ports Surrendered Date: - Waste Management licence No: 30147 Annual Tonnage: 0.0 Issue Date: 11/10/1994 Expiry Date: - Effective Date: - Status: Closure Modified: - Site Name: Graving Dock Cancelled Date: - Correspondence Address: Alan Stark, 150, Holborn Road, , London, , EC1 2LR
21B	295.0	SW	312329,167525	Site Address: Graving Docks Landfill, 1 & 2 Dock, Off Cory Way, Barry Docks, Barry, Vale Of Glam, CF1 7QB Type: Other landfill sites taking special waste Size: →= 75000 tonnes Regis Licence Number: ASS001 Operator: Associated British Ports Surrendered Date: - Waste Management licence No: 30147 Annual Tonnage: 0.0 Issue Date: 11/10/1994 Expiry Date: - Effective Date: - Status: Closure Modified: - Site Name: Graving Dock Cancelled Date: - Correspondence Address: Arup, 4, Pierhead Street, Capital Waterside, Cardiff, CF10 4QP
22C	470.0	E	313114,167490	Site Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, South Glam, CF63 3RF Type: End of Life Vehicles Size: ← 25000 tonnes Regis Licence Number: LEV001 Operator: Levics Len Surrendered Date: - Waste Management licence No: 30362 Annual Tonnage: 2499.0 Issue Date: 14/6/2005 Expiry Date: - Effective Date: - Status: Issued Modified: - Site Name: Levics Vehicle Dismantlers Cancelled Date: - Correspondence Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, South Glam, CF63 3RF

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23C	470.0	E	313114,167490	<p>Site Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, Vale Of Glam, CF63 3RG</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: LEV001</p> <p>Operator: Levics Len</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30362</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 14/6/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Levics Vehicle Dismantlers</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, Vale Of Glam, CF63 3RF</p>
24C	470.0	E	313114,167490	<p>Site Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, Vale Of Glam, CF63 3RG</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: LEV001</p> <p>Operator: Levics Len</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30362</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 14/6/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Levics Vehicle Dismantlers</p> <p>Cancelled Date: 0</p> <p>Correspondence Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, Vale Of Glam, CF63 3RF</p>
25C	470.0	E	313114,167490	<p>Site Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, Vale Of Glam, CF63 3RG</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: LEV001</p> <p>Operator: Levics Len</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30362</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 14/6/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Levics Vehicle Dismantlers</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, Vale Of Glam, CF63 3RF</p>
26D	504.0	E	313180,167691	<p>Site Address: Atlantic Salvage Company, 22, Atlantic Business Park, Barry Docks, Barry, Vale Of Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: COM003</p> <p>Operator: Comerford David John</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30354</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 29/9/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Atlantic Salvage Company</p> <p>Cancelled Date: -</p> <p>Correspondence Address: 22, Barry Docks, Atlantic Business Park, Barry, Vale Of Glam, CF63 3RF</p>
27D	504.0	E	313180,167691	<p>Site Address: Atlantic Salvage Company, 22, Atlantic Business Park, Barry Docks, Barry, Vale Of Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: COM003</p> <p>Operator: Comerford David John</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30354</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 29/9/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Atlantic Salvage Company</p> <p>Cancelled Date: -</p> <p>Correspondence Address: 22, Barry Docks, Atlantic Business Park, Barry, Vale Of Glam, CF63 3RF</p>
28D	504.0	E	313180,167691	<p>Site Address: Atlantic Salvage Company, 22, Atlantic Business Park, Barry Docks, Barry, Vale Of Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: COM003</p> <p>Operator: Comerford David John</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30354</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 29/9/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Atlantic Salvage Company</p> <p>Cancelled Date: 0</p> <p>Correspondence Address: 22, Barry Docks, Atlantic Business Park, Barry, Vale Of Glam, CF63 3RF</p>
29D	504.0	E	313180,167691	<p>Site Address: 22, Atlantic Business Park, Barry Docks, Barry, Vale Of Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: COM003</p> <p>Operator: Comerford David John</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30354</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 29/9/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Atlantic Salvage Company</p> <p>Cancelled Date: -</p> <p>Correspondence Address: 22 Atlantic Business Park, Barry Docks, , Barry, Vale Of Glam, CF63 3RF</p>

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30D	504.0	E	313180,167691	<p>Site Address: Atlantic Salvage Company, 22, Atlantic Business Park, Barry Docks, Barry, South Glamorgan, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: COM003</p> <p>Operator: Comerford David John</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30354</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 29/9/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Atlantic Salvage Company</p> <p>Cancelled Date: -</p> <p>Correspondence Address: 22, Barry Docks, Atlantic Business Park, Barry, South Glamorgan, CF63 3RF</p>
31E	508.0	E	313162,167511	<p>Site Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, South Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: LEV001</p> <p>Operator: Levics Len</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30362</p> <p>Annual Tonnage: 0.0</p>	<p>Issue Date: 14/6/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Levics Vehicle Dismantlers</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, South Glam, CF63 3RF</p>
32E	508.0	E	313162,167511	<p>Site Address: Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, South Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: LEV001</p> <p>Operator: Levics Len</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30362</p> <p>Annual Tonnage: 0.0</p>	<p>Issue Date: 14/6/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Levics Vehicle Dismantlers</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Len Levics, Sub Unit 1, 19, Atlantic Crescent, Barry Docks, Barry, South Glam, CF63 3RF</p>
33	525.0	E	313200,167713	<p>Site Address: 22, Atlantic Business Park, Barry Docks, Barry, Vale Of Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: COM003</p> <p>Operator: Comerford David John</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30354</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 29/9/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Atlantic Salvage Company</p> <p>Cancelled Date: -</p> <p>Correspondence Address: 22 Atlantic Business Park, Barry Docks, , Barry, Vale Of Glam, CF63 3RF</p>
34F	636.0	SE	313183,167268	<p>Site Address: Unit 14e, Atlantic Trading Estate, Barry, Vale Of Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: AND003</p> <p>Operator: Andrew Brown & Lee Walter Peacock</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30372</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 26/1/2006</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: A & L Scrap Metal Merchants</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Unit 14e, Atlantic Trading Estate, Barry, Vale Of Glam, CF63 3RF</p>
35F	636.0	SE	313183,167268	<p>Site Address: Unit 14e, Atlantic Trading Estate, Barry, Vale Of Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: AND003</p> <p>Operator: Andrew Brown & Lee Walter Peacock</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30372</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 26/1/2006</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: A & L Scrap Metal Merchants</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Unit 14e, Atlantic Trading Estate, Barry, Vale Of Glam, CF63 3RF</p>
36F	636.0	SE	313183,167268	<p>Site Address: Unit 14e, Atlantic Trading Estate, Barry, Vale Of Glam, CF63 3RF</p> <p>Type: End of Life Vehicles</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: AND003</p> <p>Operator: Andrew Brown & Lee Walter Peacock</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30372</p> <p>Annual Tonnage: 2499.0</p>	<p>Issue Date: 26/1/2006</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: A & L Scrap Metal Merchants</p> <p>Cancelled Date: 0</p> <p>Correspondence Address: Unit 14e, Atlantic Trading Estate, Barry, Vale Of Glam, CF63 3RF</p>

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Not shown	968.0	NE	313398,168308	Site Address: Dow Corning Landfill, Cardiff Road, Barry, Vale Of Glam, CF63 2YL Type: Industrial waste landfills Size: ← 25000 tonnes Regis Licence Number: DOW001 Operator: Dow Corning Ltd Surrendered Date: - Waste Management licence No: 30043 Annual Tonnage: 18250.0	Issue Date: 9/4/1991 Expiry Date: - Effective Date: - Status: Issued Modified: - Site Name: Dow Corning Ltd Cancelled Date: - Correspondence Address: Cardiff Road, Barry, Vale Of Glam, CF63 2YL
Not shown	968.0	NE	313398,168308	Site Address: Dow Corning Landfill, Cardiff Road, Barry, Vale Of Glam, CF63 2YL Type: - Size: 1 Regis Licence Number: - Operator: Dow Corning Ltd Surrendered Date: - Waste Management licence No: 30043 Annual Tonnage: 0.0	Issue Date: - Expiry Date: - Effective Date: - Status: - Modified: - Site Name: Dow Corning Ltd Cancelled Date: - Correspondence Address: , ,
Not shown	968.0	NE	313398,168308	Site Address: Dow Corning Landfill, Cardiff Road, Barry, Vale Of Glam, CF63 2YL Type: Industrial waste landfills Size: ← 25000 tonnes Regis Licence Number: DOW001 Operator: Dow Corning Ltd Surrendered Date: - Waste Management licence No: 30043 Annual Tonnage: 18250.0	Issue Date: 4/9/1991 0:00:00 Expiry Date: - Effective Date: - Status: Issued Modified: - Site Name: Dow Corning Ltd Cancelled Date: - Correspondence Address: Cardiff Road, Barry, Vale Of Glam, CF63 2YL
Not shown	968.0	NE	313398,168308	Site Address: Dow Corning Landfill, Cardiff Road, Barry, Vale Of Glam, CF63 2YL Type: Industrial waste landfills Size: ← 25000 tonnes Regis Licence Number: DOW001 Operator: Dow Corning Ltd Surrendered Date: - Waste Management licence No: 30043 Annual Tonnage: 18250.0	Issue Date: 9/4/1991 Expiry Date: - Effective Date: - Status: Issued Modified: - Site Name: Dow Corning Ltd Cancelled Date: - Correspondence Address: Beth Voice, Cardiff Road, Barry, Vale Of Glam, CF63 2YL
Not shown	1019.0	N	312323,168696	Site Address: Court Road C/ A Site, Court Road, Barry, Vale Of Glam, CF31 3XT Type: Household, Commercial and Industrial transfer stations Size: ← 25000 tonnes Regis Licence Number: ECO002 Operator: Ecovert Ltd Surrendered Date: - Waste Management licence No: 30076 Annual Tonnage: 24999.0	Issue Date: 22/12/1992 Expiry Date: - Effective Date: - Status: Issued Modified: 29/3/1999 Site Name: Court Road Civic Amenity Site Cancelled Date: - Correspondence Address: Stormy West Transfer Station, Stormy Down, Pyle, Bridgend, Vale Of Glam, CF32 0NP
Not shown	1019.0	N	312323,168696	Site Address: Court Road C/ A Site, Court Road, Barry, Vale Of Glam, CF31 3XT Type: - Size: 1 Regis Licence Number: - Operator: Ecovert Ltd Surrendered Date: - Waste Management licence No: 30076 Annual Tonnage: 0.0	Issue Date: - Expiry Date: - Effective Date: - Status: - Modified: - Site Name: Court Road Civic Amenity Site Cancelled Date: - Correspondence Address: , ,
Not shown	1019.0	N	312323,168696	Site Address: Court Road C/ A Site, Court Road, Barry, Vale Of Glam, CF31 3XT Type: Household, Commercial and Industrial transfer stations Size: ← 25000 tonnes Regis Licence Number: ECO002 Operator: Ecovert Ltd Surrendered Date: - Waste Management licence No: 30076 Annual Tonnage: 24999.0	Issue Date: 22/12/1992 Expiry Date: - Effective Date: - Status: Issued Modified: 29/3/1999 Site Name: Court Road Civic Amenity Site Cancelled Date: - Correspondence Address: Zac Shell, Stormy West Transfer Station, Stormy Down, Pyle, Bridgend, Vale Of Glam, CF32 0NP
Not shown	1019.0	N	312323,168696	Site Address: Court Road C/ A Site, Court Road, Barry, Vale Of Glam, CF31 3XT Type: Household, Commercial and Industrial transfer stations Size: ← 25000 tonnes Regis Licence Number: ECO002 Operator: Ecovert Ltd Surrendered Date: - Waste Management licence No: 30076 Annual Tonnage: 24999.0	Issue Date: 22/12/1992 Expiry Date: - Effective Date: - Status: Issued Modified: 29/3/1999 Site Name: Court Road Civic Amenity Site Cancelled Date: - Correspondence Address: Lakeside Pavillion, Chaucer Business Park, Watery Lane, Kemsing, Sevenoaks, TN15 6QY

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Not shown	1034.0	N	312290,168702	<p>Site Address: Court Road C/ A Site, Court Road, Barry, Vale Of Glam, CF63 1ET</p> <p>Type: Household, Commercial and Industrial transfer stations</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: ECO002</p> <p>Operator: Ecovert Ltd</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30076</p> <p>Annual Tonnage: 24999.0</p>	<p>Issue Date: 22/12/1992</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: 29/3/1999</p> <p>Site Name: Court Road Civic Amenity Site</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Lakeside Pavillion, Chaucer Business Park, Watery Lane, Kemsing, Sevenoaks, Kent, TN15 6QY</p>
Not shown	1034.0	N	312290,168702	<p>Site Address: Court Road C/ A Site, Court Road, Barry, Vale Of Glam, CF63 1ET</p> <p>Type: Household, Commercial and Industrial transfer stations</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: ECO002</p> <p>Operator: Ecovert Ltd</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30076</p> <p>Annual Tonnage: 24999.0</p>	<p>Issue Date: 22/12/1992</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: 29/3/1999</p> <p>Site Name: Court Road Civic Amenity Site</p> <p>Cancelled Date: 0</p> <p>Correspondence Address: Lakeside Pavillion, Chaucer Business Park, Watery Lane, Kemsing, Sevenoaks, Kent, TN15 6QY</p>
Not shown	1034.0	N	312290,168702	<p>Site Address: Aberthaw Power Station, Aberthaw, Barry, Vale Of Glam, CF62 4ZW</p> <p>Type: Industrial waste landfills</p> <p>Size: →= 75000 tonnes</p> <p>Regis Licence Number: INN001</p> <p>Operator: R W E Innogy Plc</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30067</p> <p>Annual Tonnage: 1100200.0</p>	<p>Issue Date: 22/8/1992</p> <p>Expiry Date: -</p> <p>Effective Date: 14/7/2001</p> <p>Status: Modified</p> <p>Modified: 17/7/2003</p> <p>Site Name: Aberthaw Power Station</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Aberthaw Power Station, Aberthaw, Vale Of Glam, CF62 4ZW</p>
Not shown	1050.0	NE	313595,168171	<p>Site Address: Dow Corning Waste Transfer Station, Cardiff Road, Barry, Vale Of Glam, CF63 2YL</p> <p>Type: Material recycling treatment facilities</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: DOW003</p> <p>Operator: Dow Corning Ltd</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30376</p> <p>Annual Tonnage: 4999.0</p>	<p>Issue Date: 29/12/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Dow Corning Waste Transfer Station</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Dow Corning Ltd, Cardiff Road, Barry, Vale Of Glam, CF63 2YL</p>
Not shown	1050.0	NE	313595,168171	<p>Site Address: Dow Corning Waste Transfer Station, Cardiff Road, Barry, Vale Of Glam, CF63 2YL</p> <p>Type: Material recycling treatment facilities</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: DOW003</p> <p>Operator: Dow Corning Ltd</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30376</p> <p>Annual Tonnage: 4999.0</p>	<p>Issue Date: 29/12/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Dow Corning Waste Transfer Station</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Dow Corning Ltd, Cardiff Road, Barry, , Vale Of Glam, CF63 2YL</p>
Not shown	1050.0	NE	313595,168171	<p>Site Address: Dow Corning Waste Transfer Station, Cardiff Road, Barry, Vale Of Glam, CF63 2YL</p> <p>Type: Material recycling treatment facilities</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: DOW003</p> <p>Operator: Dow Corning Ltd</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30376</p> <p>Annual Tonnage: 4999.0</p>	<p>Issue Date: 29/12/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Dow Corning Waste Transfer Station</p> <p>Cancelled Date: 0</p> <p>Correspondence Address: Dow Corning Ltd, Cardiff Road, Barry, Vale Of Glam, CF63 2YL</p>
Not shown	1051.0	NE	313591,168181	<p>Site Address: Dow Corning Ltd, Cardiff Road, Barry, Vale Of Glam, CF63 2YL</p> <p>Type: Material recycling treatment facilities</p> <p>Size: ← 25000 tonnes</p> <p>Regis Licence Number: DOW003</p> <p>Operator: Dow Corning Ltd</p> <p>Surrendered Date: -</p> <p>Waste Management licence No: 30376</p> <p>Annual Tonnage: 4999.0</p>	<p>Issue Date: 29/12/2005</p> <p>Expiry Date: -</p> <p>Effective Date: -</p> <p>Status: Issued</p> <p>Modified: -</p> <p>Site Name: Dow Corning Waste Transfer Station</p> <p>Cancelled Date: -</p> <p>Correspondence Address: Cardiff Road, Barry, , CF63 2YL</p>

GroundSure Environmental Data Report Reference: HMD-188-62960

Not shown	1210.0	NE	313530,168521	Site Address: Dow Corning Landfill, Cardiff Road, Barry, Vale Of Glam, CF63 2YL Type: Industrial waste landfills Size: ← 25000 tonnes Regis Licence Number: DOW001 Operator: Dow Corning Ltd Surrendered Date: - Waste Management licence No: 30043 Annual Tonnage: 18250.0	Issue Date: 9/4/1991 Expiry Date: - Effective Date: - Status: Issued Modified: - Site Name: Dow Corning Ltd Cancelled Date: - Correspondence Address: Dow Corning Ltd, Cardiff Road, , Barry, Vale Of Glam, CF63 2YL
Not shown	1210.0	NE	313530,168521	Site Address: Dow Corning Landfill, Cardiff Road, Barry, Vale Of Glam, CF63 2YL Type: Industrial waste landfills Size: ← 25000 tonnes Regis Licence Number: DOW001 Operator: Dow Corning Ltd Surrendered Date: - Waste Management licence No: 30043 Annual Tonnage: 18250.0	Issue Date: 9/4/1991 Expiry Date: - Effective Date: - Status: Issued Modified: - Site Name: Dow Corning Ltd Cancelled Date: 0 Correspondence Address: Dow Corning Ltd, Cardiff Road, Barry, Vale Of Glam, CF63 2YL
Not shown	1430.0	E	314100,167522	Site Address: Sully Hospital Transfer Stn, Hayes Road, Sully, Vale Of Glam, CF64 5YA Type: Clinical waste transfer stations or A20 or A15 Size: ← 25000 tonnes Regis Licence Number: LLA002 Operator: Cardiff & Vale N H S Trust Surrendered Date: 21/12/2004 Waste Management licence No: 30065 Annual Tonnage: 0.0	Issue Date: 1/7/1992 Expiry Date: - Effective Date: - Status: Surrendered Modified: - Site Name: Sully Hospital Transfer Station Cancelled Date: - Correspondence Address: Llandough Hospital, Penlan Road, , Penarth, Vale Of Glam, CF64 2XX
Not shown	1430.0	E	314100,167522	Site Address: Sully Hospital Transfer Stn, Hayes Road, Sully, Vale Of Glam, CF64 5YA Type: - Size: 1 Regis Licence Number: - Operator: Cardiff & Vale N H S Trust Surrendered Date: - Waste Management licence No: 30065 Annual Tonnage: 0.0	Issue Date: - Expiry Date: - Effective Date: - Status: - Modified: - Site Name: Sully Hospital Transfer Station Cancelled Date: - Correspondence Address: , ,
Not shown	1430.0	E	314100,167522	Site Address: Sully Hospital Transfer Stn, Hayes Road, Sully, Vale Of Glam, CF64 5YA Type: Clinical waste transfer stations or A20 or A15 Size: ← 25000 tonnes Regis Licence Number: LLA002 Operator: Cardiff & Vale N H S Trust Surrendered Date: 21/12/2004 Waste Management licence No: 30065 Annual Tonnage: 1346.0	Issue Date: 1/7/1992 Expiry Date: - Effective Date: - Status: Surrendered Modified: - Site Name: Sully Hospital Transfer Station Cancelled Date: 0 Correspondence Address: Llandough Hospital, Penlan Road, Penarth, Vale Of Glam, CF64 2XX

3. Current Land Use Map

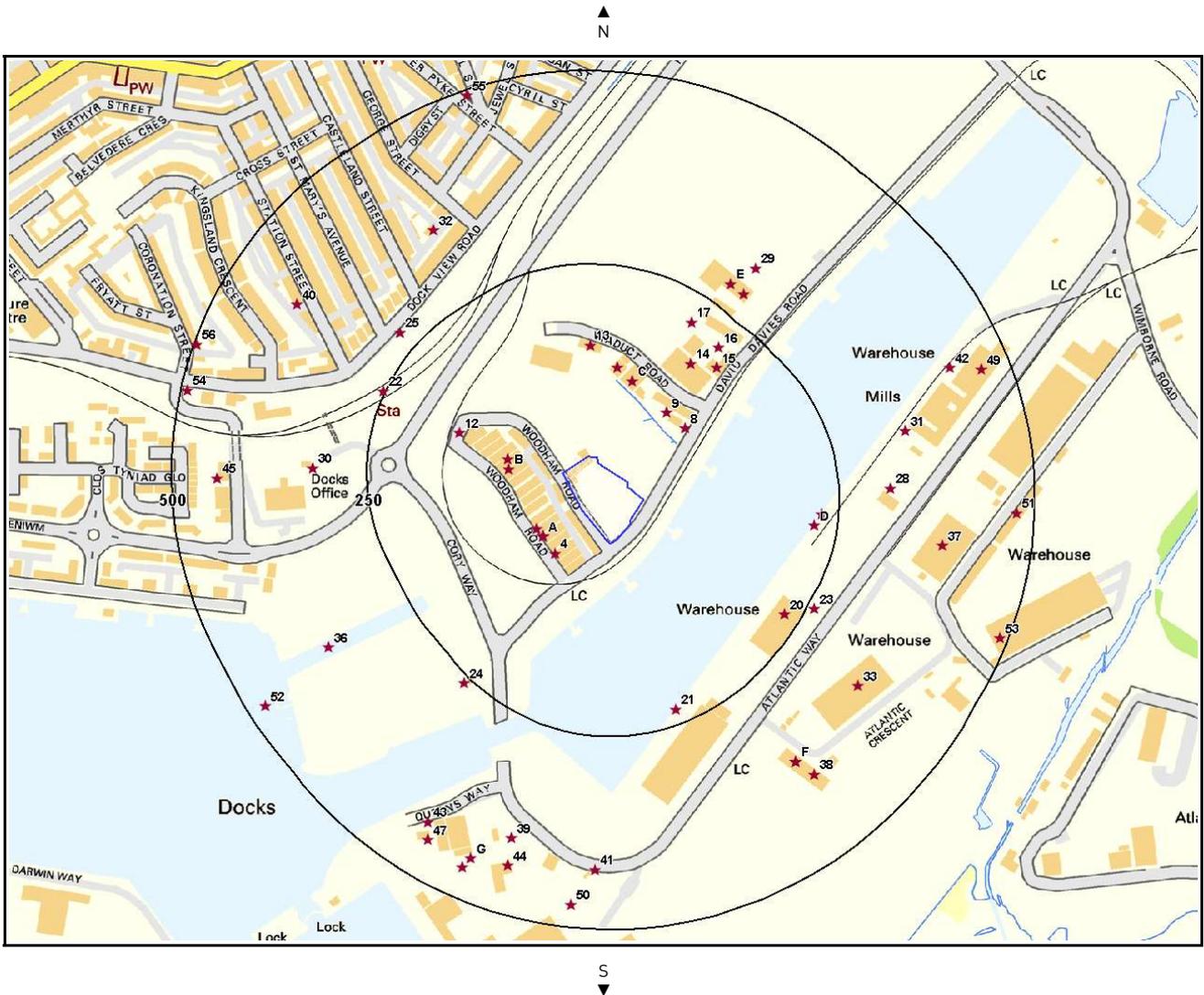
 NW
 ◀W

NE

E▶

SW

SE

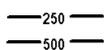

Current Land Use Legend

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Site Outline



Current Industrial Sites



Search Buffers (m)



Petrol & Fuel Sites



Underground High Pressure Oil & Fuel Pipelines

3. Current Land Uses

3.1 Current Industrial Data

Records of potentially contaminative industrial sites within 500m of the study site:

56

The following records are represented as points on the Current Land Uses map.

ID	Distance	Direction	Company	Address	Activity	Category
1A	60.0	SW	Cars On Gas	4, Woodham Road, Barry, CF63 4JE	Vehicle Repair and Servicing	Repair and Servicing
2A	60.0	SW	German Car Specialists	5, Woodham Road, Barry, CF63 4JE	Vehicle Repair and Servicing	Repair and Servicing
3A	60.0	SW	Welsh Caravan Specialist	5, Woodham Road, Barry, CF63 4JE	Sports and Leisure Equipment Repair	Repair and Servicing
4	62.0	SW	Ross Garage	3, Woodham Road, Barry, CF63 4JE	Vehicle Repair and Servicing	Repair and Servicing
5A	62.0	SW	Gym Systems & Servicing	6-7, Woodham Road, Barry, CF63 4JE	Hobby, Sports and Pastime Products	Consumer Products
6B	69.0	W	Potter	12, Woodham Road, Barry, CF63 4JE	Vehicle Bodybuilders	Industrial Products
7B	72.0	W	Topend Ltd	13, Woodham Road, Barry, CF63 4JE	Vehicle Repair and Servicing	Repair and Servicing
8	101.0	NE	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
9	103.0	NE	Works	-	Unspecified Works Or Factories	Industrial Features
10C	109.0	NE	Works	-	Unspecified Works Or Factories	Industrial Features
11C	119.0	N	Works	-	Unspecified Works Or Factories	Industrial Features
12	142.0	W	Church Motors	19, Woodham Road, Barry, CF63 4JE	Vehicle Repair and Servicing	Repair and Servicing
13	144.0	N	Works	-	Unspecified Works Or Factories	Industrial Features
14	170.0	NE	Vaughan Transport Systems	Dock 2, David Davies Road, Barry, CF63 4AB	Distribution and Haulage	Transport, Storage And Deliver
15	187.0	NE	S & K Haulage Ltd	David Davies Road, Barry, CF63 4AB	Distribution and Haulage	Transport, Storage And Deliver
16	209.0	NE	Depot	-	Container and Storage	Transport, Storage And Deliver
17	213.0	NE	Tank	-	Tanks (Generic)	Industrial Features
18D	220.0	E	Travelling Crane	-	Travelling Cranes and Gantries	Industrial Features
19D	228.0	E	Cranes	-	Travelling Cranes and Gantries	Industrial Features
20	230.0	SE	Warehouse	-	Container and Storage	Transport, Storage And Deliver
21	231.0	S	Travelling Cranes	-	Travelling Cranes and Gantries	Industrial Features
22	252.0	NW	Barry Docks Station	-	Railway Stations, Junctions and Halts	Transport Access Points
23	259.0	SE	Tank	-	Tanks (Generic)	Industrial Features
24	260.0	SW	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
25	276.0	NW	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
26E	283.0	NE	Works	-	Unspecified Works Or Factories	Industrial Features
27E	283.0	NE	Harris Pye Marine Ltd	David Davies Road, Barry, CF63 4AB	Marine Engineers and Services	Engineering Services

GroundSure Environmental Data Report Reference: HMD-188-62960

28	315.0	E	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
29	318.0	NE	Depot	-	Container and Storage	Transport, Storage And Deliver
30	320.0	W	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
31	345.0	E	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
32	354.0	NW	Vanguard (Wales) Ltd	Castleland Street, Barry, CF63 4LL	Construction Completion Services	Construction Services
33	358.0	SE	Warehouse	-	Container and Storage	Transport, Storage And Deliver
34F	367.0	SE	D B Engineering Services	Unit 1, Atlantic Crescent, Barry, CF63 3RG	Industrial Engineers	Engineering Services
35F	367.0	SE	Leisure Solutions	Unit 1, Atlantic Crescent, Barry, CF63 3RG	Hobby, Sports and Pastime Products	Consumer Products
36	369.0	SW	Graving Dock (Disused)	-	Marine Equipment Including Boats and Ships	Industrial Products
37	386.0	E	Warehouse	-	Container and Storage	Transport, Storage And Deliver
38	394.0	SE	Tank	-	Tanks (Generic)	Industrial Features
39	402.0	S	Depot	-	Container and Storage	Transport, Storage And Deliver
40	403.0	NW	Mr Fix I.T.	19, Station Street, Barry, CF63 4LW	Electrical Equipment Repair and Servicing	Electrical Equipment Repair and Servicing
41	423.0	S	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
42	426.0	NE	Silo	-	Hoppers and Silos	Hoppers and Silos
43	430.0	SW	Tank	-	Tanks (Generic)	Industrial Features
44	438.0	S	Groupe Samat UK Ltd	Atlantic Way, Barry, CF63 3RA	Distribution and Haulage	Transport, Storage And Deliver
45	441.0	W	Caterite Ltd	3, Subway Road, Barry, CF63 4QT	Food and Beverage Industry Machinery	Industrial Products
46G	446.0	SW	Tank	-	Tanks (Generic)	Industrial Features
47	449.0	SW	Tank	-	Tanks (Generic)	Industrial Features
48G	460.0	SW	Depot	-	Container and Storage	Transport, Storage And Deliver
49	463.0	E	Warehouse	-	Container and Storage	Transport, Storage And Deliver
50	471.0	S	Depot	-	Container and Storage	Transport, Storage And Deliver
51	476.0	E	Warehouse	-	Container and Storage	Transport, Storage And Deliver
52	478.0	SW	Jetty (Disused)	-	Moorings and Unloading Facilities	Water
53	489.0	E	Sos Salvage Car Breakers	Unit 19, Atlantic Crescent, Barry Docks, Barry, South Glamorgan, CF63 3RF	Vehicle Breakers	Recycling Services
54	492.0	W	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
55	493.0	N	Electricity Sub Station	-	Electrical Features	Infrastructure and facilities
56	496.0	W	A P C	35, Coronation Street, Barry, CF63 4JW	Construction Completion Services	Construction Services

3.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

3.3 Underground High Pressure Oil and Gas Pipelines

Records of underground pipelines within 500m of the study site: 0

Database searched and no data found.

4. Geology

4.1 Artificial Ground and Made Ground

The database has been searched on site, this includes a 50m buffer.

Distance (m)	Direction	LEX Code	Description	Rock Type
0.0	On Site	MGR-MGRD	MADE GROUND (UNDIVIDED)	MADE GROUND (COMPOSITION UNSPECIFIED)

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

4.2 Superficial Ground and Drift Geology

The database has been searched on site, this includes a 50m buffer.

Distance (m)	Direction	Lex Code	Description	Rock Type
0.0	On Site	TFD-CLSS	Tidal Flat Deposits	Clay, Silt And Sand

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

4.3 Bedrock and Solid Geology

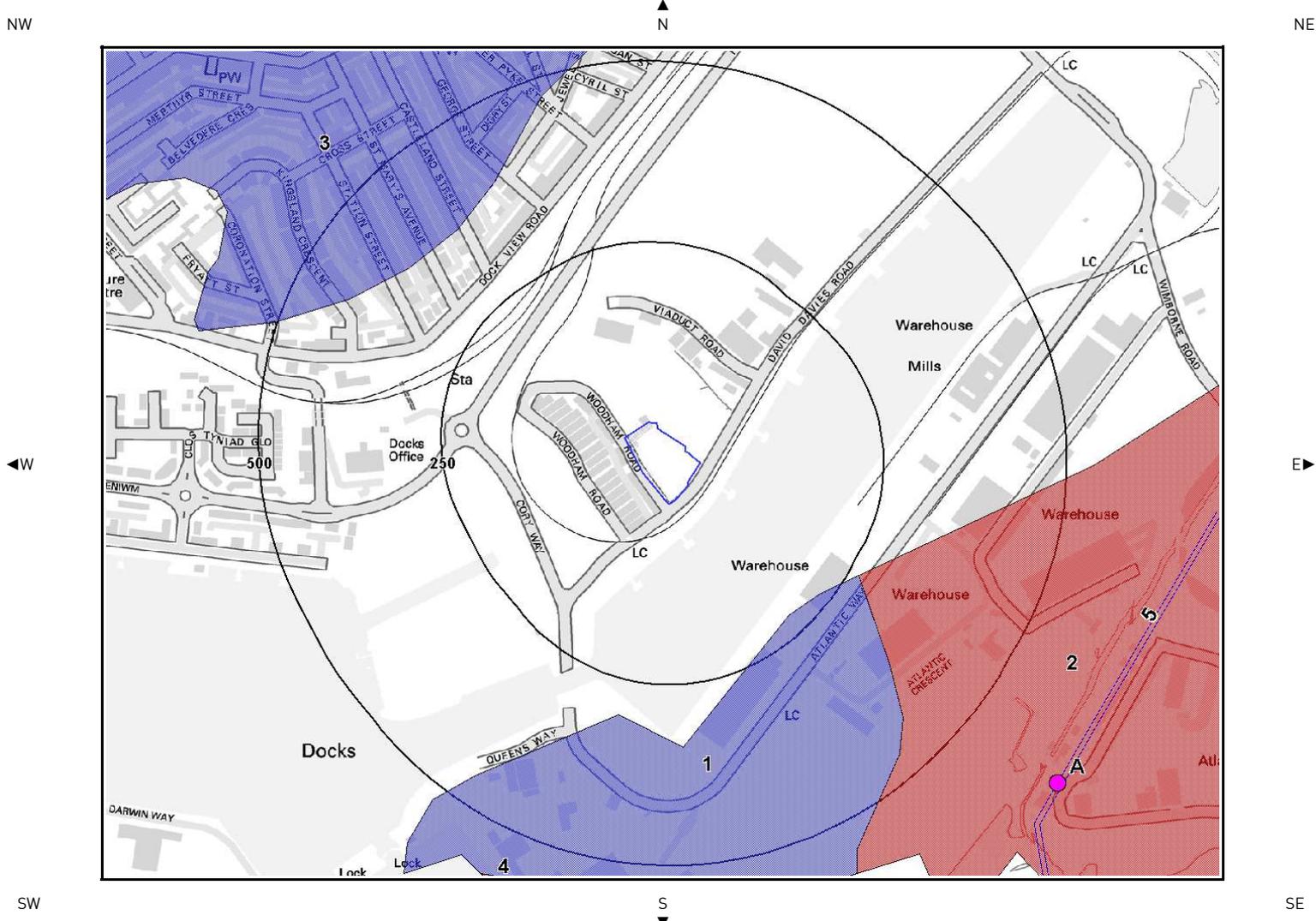
The database has been searched on site, this includes a 50m buffer.

Distance (m)	Direction	LEX Code	Description	Rock Type
0.0	On Site	MMG-MDST	Mercia Mudstone Group	Mudstone

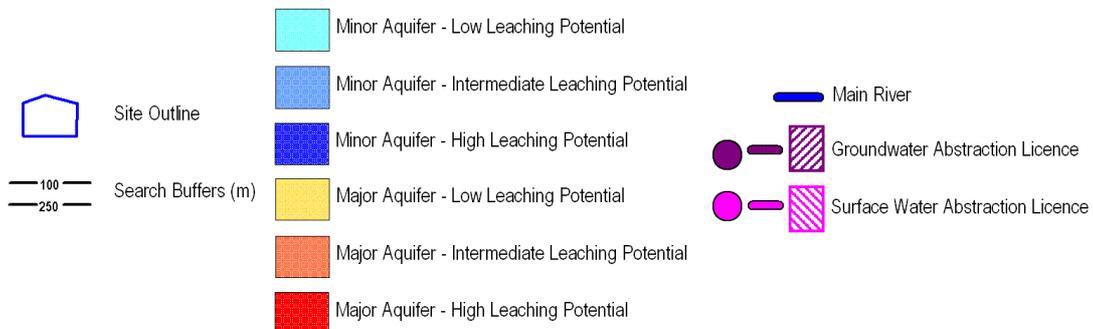
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

For more detailed geological and ground stability data please refer to the "GroundSure Geology and Ground Stability Report". Available from our website.

5. Hydrogeology and Hydrology: - Aquifer and Abstraction Licence Map



Hydrogeology and Hydrology Legend


 Mapping sourced from 

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5b. Hydrogeology and Hydrology: - SPZ and Potable Water Abstraction Map

NW

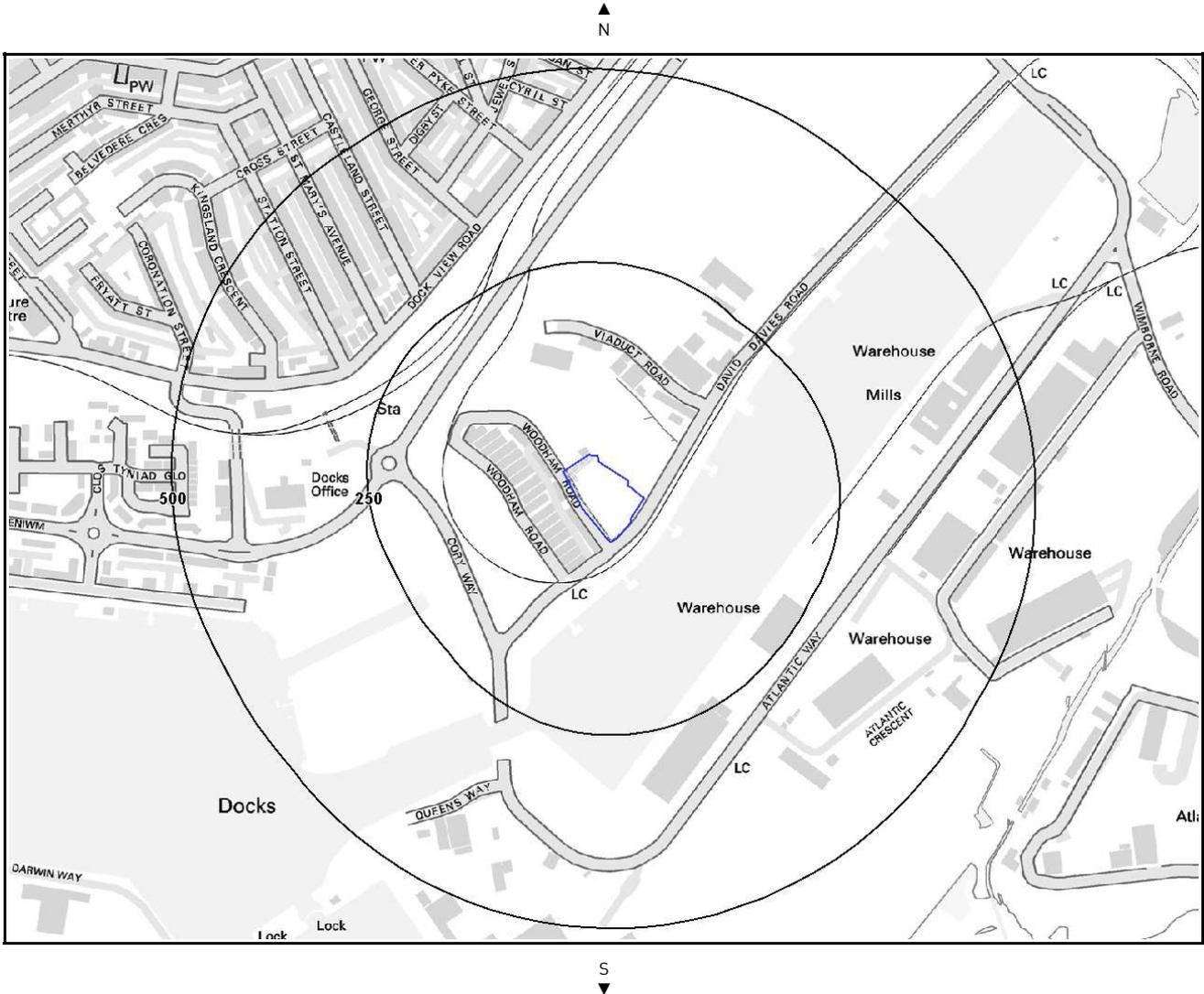
NE

W

E

SW

SE



Hydrogeology and Hydrology Legend


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- | | | | | | |
|---|--------------------|---|---|--|---|
|  | Site Outline |  | Source Protection Zone 1 - Inner Catchment |  |  Potable Water Abstraction Licence |
|  | Search Buffers (m) |  | Source Protection Zone 2 - Outer Catchment | | |
| | |  | Source Protection Zone 3 - Total Catchment | | |
| | |  | Source Protection Zone 4 - Zone of Special Interest | | |

Brought to you by GroundSure

5. Hydrogeology and Hydrology

5.1 Groundwater Vulnerability and Soil Classification

Records of aquifer and soil classification within 200m of the study site:

No

Database searched and no data found.

5.2 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site?

Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer and Abstraction Licence Map:

ID	Distance	Direction	NGR	Details	
Not shown	1413.0	SW	311620,166620	Licence No: 21/58/31/0031 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Eaw Groundwater Point: Borehole At Barry Island Pleasure Park Data Type: Point	Original Application No: Original Start Date: 31-May-2002 Expiry Date: 31-May-2002 Issue No: 1 Version Start Date: 31-May-2002 Version End Date: 31-May-2002
Not shown	1413.0	SW	311620,166620	Licence No: 21/58/31/0031 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Eaw Groundwater Point: Borehole At Barry Island Pleasure Park Data Type: Point	Original Application No: Original Start Date: 31-May-2002 Expiry Date: 31-Mar-2018 Issue No: 1 Version Start Date: 31-May-2002 Version End Date: 01-Jan-1900
Not shown	1413.0	SW	311620,166620	Licence No: 21/58/31/0030 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Eaw Groundwater Point: Borehole At Barry Island Pleasure Park Data Type: Point	Original Application No: Original Start Date: 21-Mar-1997 Expiry Date: Issue No: 100 Version Start Date: 21-Mar-1997 Version End Date:
Not shown	1413.0	SW	311620,166620	Licence No: 21/58/31/0031 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Eaw Groundwater Point: Borehole At Barry Island Pleasure Park Data Type: Point	Original Application No: Original Start Date: 31-May-2002 Expiry Date: 31-Mar-2018 Issue No: 1 Version Start Date: 21-May-2004 Version End Date:
Not shown	1413.0	SW	311620,166620	Licence No: 21/58/31/0031 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Eaw Groundwater Point: Borehole At Barry Island Pleasure Park Data Type: Point	Original Application No: Original Start Date: 31-May-2002 Expiry Date: 31-Mar-2018 Issue No: 1 Version Start Date: 21-May-2004 Version End Date:
Not shown	1413.0	SW	311620,166620	Licence No: 21/58/31/0031 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Eaw Groundwater Point: Borehole At Barry Island Pleasure Park Data Type: Point	Original Application No: Original Start Date: 31-May-2002 Expiry Date: 31-Mar-2018 Issue No: 1 Version Start Date: 21-May-2004 Version End Date:

5.3 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 1000m of the study site?

Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer and Abstraction Licence Map:

ID	Distance	Direction	NGR	Details
----	----------	-----------	-----	---------

GroundSure Environmental Data Report Reference: HMD-188-62960

12A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Mineral Washing Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 101 Version Start Date: 25-Jun-2001 Version End Date:
13A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Make-Up or Top Up Water Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 100 Version Start Date: 24-Apr-1996 Version End Date:
14A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Make-Up or Top Up Water Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: 30-Dec-1899 Issue No: 101 Version Start Date: 25-Jun-2001 Version End Date: 01-Jan-1900
15A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Dust Suppression Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 102 Version Start Date: 01-Oct-2005 Version End Date:
16A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Mineral Washing Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 102 Version Start Date: 01-Oct-2005 Version End Date:
17A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Dust suppression Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: 24-Apr-1996 Issue No: 101 Version Start Date: 24-Apr-1996 Version End Date: 24-Apr-1996
18A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Make-Up Or Top Up Water Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 102 Version Start Date: 01-Oct-2005 Version End Date:
19A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Mineral Washing Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: 24-Apr-1996 Issue No: 101 Version Start Date: 24-Apr-1996 Version End Date: 24-Apr-1996
20A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Dust suppression Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 100 Version Start Date: 24-Apr-1996 Version End Date:
21A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Make-Up or Top Up Water Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 101 Version Start Date: 25-Jun-2001 Version End Date:
22A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Mineral Washing Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 100 Version Start Date: 24-Apr-1996 Version End Date:
23A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Dust suppression Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: Issue No: 101 Version Start Date: 25-Jun-2001 Version End Date:

GroundSure Environmental Data Report Reference: HMD-188-62960

24A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Make-Up or Top Up Water Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: 24-Apr-1996 Issue No: 101 Version Start Date: 24-Apr-1996 Version End Date: 24-Apr-1996
25A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Mineral Washing Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: 30-Dec-1899 Issue No: 101 Version Start Date: 25-Jun-2001 Version End Date: 01-Jan-1900
26A	651.0	SE	313164,167218	Licence No: 21/58/11/0011 Details: Dust suppression Direct Source: Eaw Tidalwater Point: Cadoxton River At Barry Data Type: Point	Application No: Original Start Date: 24-Apr-1996 Expiry Date: 30-Dec-1899 Issue No: 101 Version Start Date: 25-Jun-2001 Version End Date: 01-Jan-1900

5.4 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? **No**

Database searched and no data found.

5.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? **No**

Database searched and no data found.

5.6 River Quality

Is there any Environment Agency information on river quality within 500m of the study site? **No**

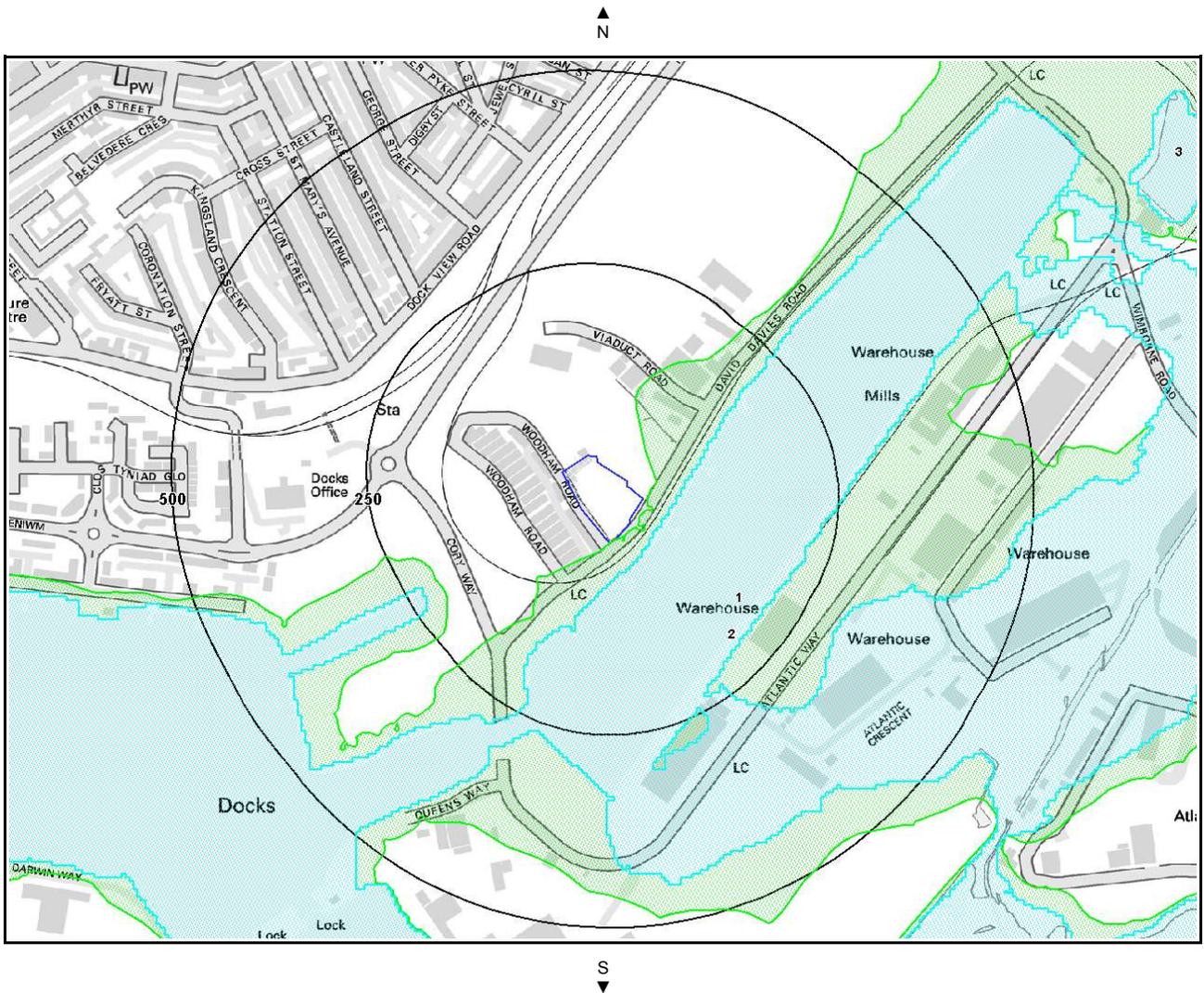
Database searched and no data found.

5.7 Main Rivers

Are there any Main Rivers within 500m of the study site? **No**

Database searched and no data found.

6. Surface Water Flood Map



Flood Legend



Site Outline



Search Buffers (m)



Zone 2 Floodplain



Zone 3 Floodplain



Flood Storage Area



Area Benefiting from Flood Defences



Flood Defences


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6. Flooding

6.1 Zone 2 Flooding

Zone 2 floodplain estimates the annual probability of flooding as one in one thousand (0.1%) or greater from rivers and the sea but less than 1% from rivers or 0.5% from the sea. Alternatively, where information is available they may show the highest known flood level.

Is the site within 250m of an Environment Agency indicative Zone 2 floodplain? **Yes**

Guidance: More detailed information may be available from the Environment Agency through their floodline (0845 988 1188) or by ordering an Environment Agency Flood Report from the local Environment Agency Office.

The following floodplain records are represented as green shading on the Flood Map:

ID	Distance	Direction	Update
1	0.0	SE	07-Feb-2008

6.2 Zone 3 Flooding

Zone 3 estimates the annual probability of flooding as one in one hundred (1%) or greater from rivers and a one in two hundred (0.5%) or greater from the sea. Alternatively, where information is available they may show the highest known flood level.

Is the site within 250m of an Environment Agency indicative Zone 3 floodplain? **Yes**

Guidance: More detailed information may be available from the Environment Agency through their floodline (0845 988 1188) or by ordering an Environment Agency Flood Report from the local Environment Agency Office.

The following floodplain records are represented as blue shading on the Flood Map:

ID	Distance	Direction	Update
2	32.0	E	07-Feb-2008

6.3 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? **No**

Guidance: More detailed information may be available from the Environment Agency through their floodline (0845 988 1188) or by ordering an Environment Agency Flood Report from the local Environment Agency Office.

6.4 Areas used for Storage Areas

Are there any areas used for Flood Storage within 250m of the study site? **No**

Guidance: More detailed information may be available from the Environment Agency through their floodline (0845 988 1188) or by ordering an Environment Agency Flood Report from the local Environment Agency Office.

6.5. Groundwater Flooding Susceptibility Areas

Are there any British Geological Survey groundwater flooding susceptibility flood areas within 50m of the centre of the study site? **Yes**

What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

High

6.6 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result?

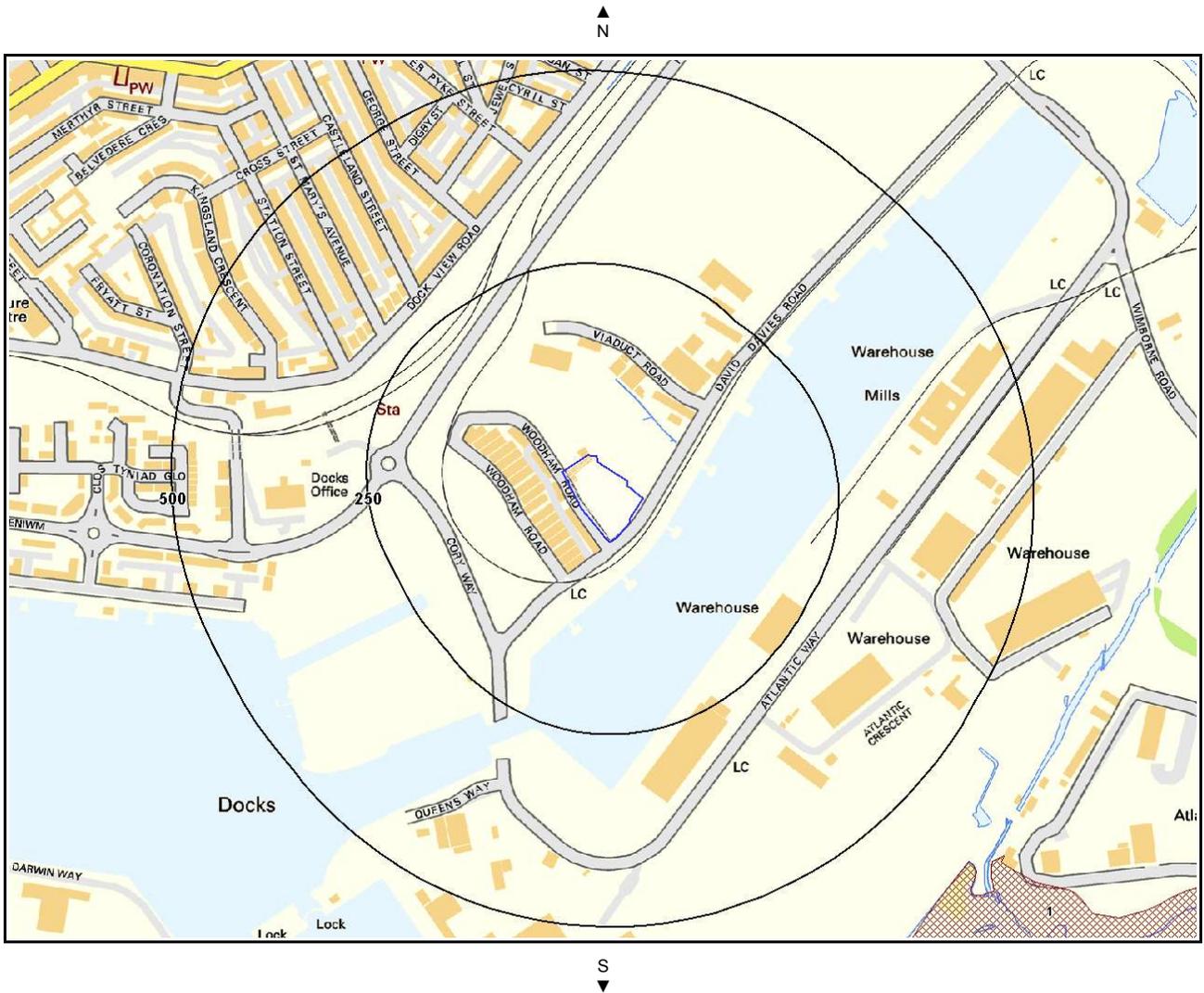
Moderate

Notes:

Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a fivefold scale - Low, Moderately Low, Moderate, Moderately High and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

7. Ecological Designated Sites Map



Ecological Designated Sites Legend



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- | | | | | |
|--|---|--|--|--|
|  Site Outline |  SAC |  SSSI |  NNR |  World Heritage Sites |
|  Search Buffers (m) |  SPA |  Ramsar |  LNR | |

7 Ecological Designated Sites

Presence of sites of ecological value within 1000m of the study site? **Yes**

Records of Sites of Special Scientific Interest (SSSI) within 1000m of the study site: **1**

The following Sites of Special Scientific Interest (SSSI) records provided by English Nature/Countryside Council for Wales are represented as polygons on the Ecological Designated Sites Map:

ID	Distance	Direction	SSSI Name	Data Source
1	616.0	SE	HAYES POINT TO BENDRICK ROCK	Countryside Council For Wales

Records of National Nature Reserves (NNR) within 1000m of the study site: **0**

Database searched and no data found.

Records of Special Areas of Conservation (SAC) within 1000m of the study site: **0**

Database searched and no data found.

Records of Special Protection Areas (SPA) within 1000m of the study site: **0**

Database searched and no data found.

Records of Ramsar sites within 1000m of the study site: **0**

Database searched and no data found.

Records of Local Nature Reserves (LNR) within 1000m of the study site: **0**

Database searched and no data found.

Records of World Heritage Sites within 1000m of the study site: **0**

Database searched and no data found.

8. Natural Hazards Findings

8.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information, please obtain a GroundSure Geology and Ground Stability Report. Available from our website. The following information has been found:

8.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? **Very Low**

8.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? **Very Low**

8.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? **Null - Negligible**

8.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? **Very Low**

8.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? **Null - Negligible**

8.1.6 Running Sand

What is the maximum Running Sand* hazard rating identified on the study site? **Very Low**

9. Mining

9.1 Coal Mining

Are there any coal mining areas within 75m of the study site? **No**

Database searched and no data found.

9.2 Shallow Mining

What is the hazard of subsidence relating to shallow mining onsite? (this includes a 150m buffer) **Negligible**

10. Contacts

GroundSure Helpline

Telephone: 01273 819700
mapsandinfo@groundsure.com



British Geological Survey (England & Wales)

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143. Fax: 0115 936 3136. www.bgs.ac.uk
BGS Geological Hazards Reports and general geological enquiries



Environment Agency

South East
Rivers house / Plas Yr Afon - St. Mellons Business Park, Forttran
Road, St. Mellons, Cardiff, CF3 0LT Tel: (01222) 770088
EA Wales Tel: (02920) 770 088



The Coal Authority

200 Lichfield Lane, Mansfield, Notts NG18 4RG
Tel: 0845 762 6848. DX 716176 Mansfield 5
www.coal-authority.co.uk
Coal mining reports and related enquiries



Ordnance Survey

Romsey Road
Southampton SO16 4GU
Tel: 08456 050505



Local Authority

Vale of Glamorgan County Borough Council Tel:

Get Mapping PLC

Virginia Villas, High Street, Hartley Witney, Hampshire RG27 8NW
Tel: 01252 845444



Acknowledgements

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Annex D – Groundsure Geology and Stability Report



Oaktree Environmental
Unit 5 Oasis Park, Road 1,
Winsford Industrial Estate, Winsford,
CW7 3PP

GroundSure Reference: HMD-188-62961
Your Reference: Barry
Report Date: Mar 6, 2008
Report Delivery Method: Email - pdf

GroundSure Geology & Ground Stability Report

Address: WOODHAM ROAD, DOCKS, BARRY, CF62

Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the **GroundSure Geology & Ground Stability Report** as requested.

If you need any further assistance, please do not hesitate to contact our maps and data helpline on 01273 819700 or email maps&data@groundsure.com quoting the above GroundSure reference number.

Yours faithfully,

A handwritten signature in black ink, appearing to read "P. Smith".

Managing Director
Groundsure Limited

Enc.
GroundSure Geology & Ground Stability Report

GroundSure Geology & Ground Stability Report

Address: WOODHAM ROAD, DOCKS, BARRY, CF62

Date: Mar 6, 2008

GroundSure Reference: HMD-188-62961

Your Reference: Barry



Aerial Photograph of Study Site



Site Name: WOODHAM ROAD, DOCKS, BARRY, CF62
Grid Reference: 312620,167670

Aerial photography supplied by Getmapping PLC.
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Overview of Findings

The GroundSure Geology and Ground Stability Report provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database and GroundSure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Report Section	Number of records found within (X) m of the study site boundary
1. Geology	
	Description
1.1 Artificial Ground,	
1.1.1 Is there any Artificial Ground /Made Ground present beneath the study site? *	Yes
1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	Yes
1.2 Superficial Geology & Landslips	
1.2.1 Is there any Superficial Ground /Drift Geology present beneath the study site? *	Yes
1.2.2 Are there any records relating to permeability of superficial geology within the study site* boundary?	Yes
1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
1.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No
1.3 Bedrock, Solid Geology & Faults	
1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
1.3.2 Are there any records relating to permeability of bedrock within the study site* boundary?	Yes
1.3.3 Are there any records of faults within 500m of the study site boundary?	Yes
1.3.4 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a radon Affected Area, as less than 1% of properties are above the Action Level
1.3.5 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary

* This includes an automatically generated 50m buffer zone around the site

Source:Scale 1:50,000 BGS Sheet No:263

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Geology & Ground Stability Report Reference: HMD-188-62961

2. Ground Workings	on-site	0-50	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	3	9	22	-	-
2.2 Historical Underground Workings Features from Small Scale Mapping	0	0	5	0	9
2.3 Current Ground Workings	0	0	1	2	1

3. Mining, Extraction & Natural Cavities	on-site	0-50	51-250	251-500	501-1000
3.1 Historical Mining	0	4	11	10	23
3.2 Coal Mining	0	0	0	0	0
3.3 Shallow Mining*	1	-	-	-	-
3.4 Non – Coal Mining Cavities	0	0	0	0	0
3.5 Natural Cavities	0	0	0	0	0
3.6 Brine Extraction	0	0	0	0	0
3.7 Gypsum Extraction	0	0	0	0	0
3.8 Tin Mining	0	0	0	0	0
3.9 Clay Mining	0	0	0	0	0

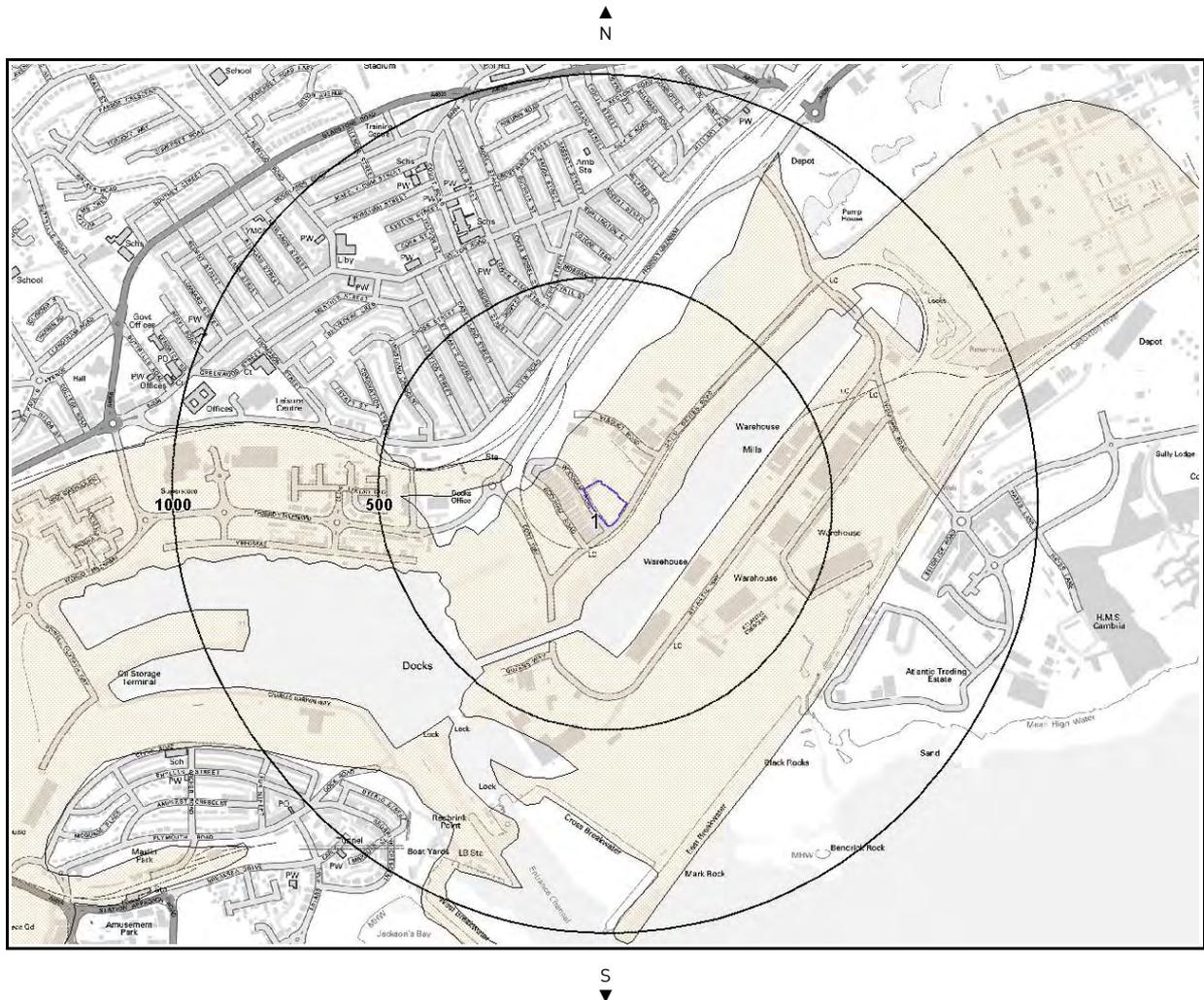
*This includes an automatically generated 150m buffer zone around the site

4. Natural Ground Subsidence	on-site*	0-50	51-250	251-500	501-1000
4.1 Shrink-Swell Clay	Very Low	-	-	-	-
4.2 Landslides	Very Low	-	-	-	-
4.3 Ground Dissolution of Soluble Rocks	Negligible	-	-	-	-
4.4 Compressible Deposits	Very Low	-	-	-	-
4.5 Collapsible Deposits	Negligible	-	-	-	-
4.6 Running Sand	Very Low	-	-	-	-

* This includes an automatically generated 50m buffer zone around the site

5. Borehole Records	on-site	0-50	51-250	251-500	501-1000
5.1 BGS Recorded Boreholes	0	0	3	-	-

1.1 Artificial Ground Map



Artificial Ground Legend

-  Site Outline
-  50
-  250 Search Buffers



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1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:263

1.1.1 Artificial/Made Ground

Are there any records of Artificial/Made Ground within 500m of the study site boundary: **Yes**

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-MGRD	MADE GROUND (UNDIVIDED)	MADE GROUND (COMPOSITION UNSPECIFIED)

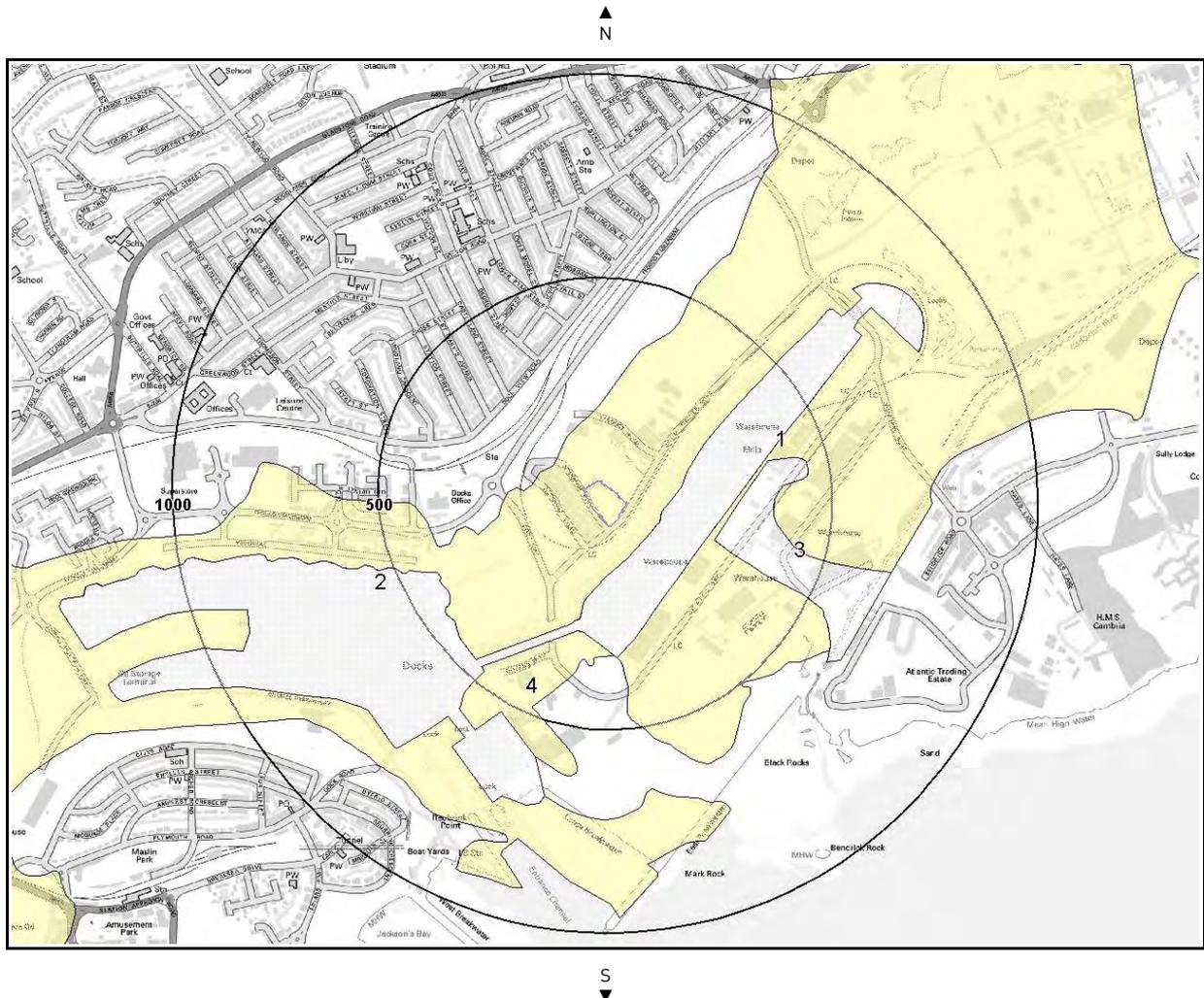
1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site* boundary: **Yes**

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Very High	Very Low

* This includes an automatically generated 50m buffer zone around the site.

1.2 Superficial Deposits and Landslips Map



Superficial and Landslips Legend

-  Site Outline
-  50
-  250 Search Buffers



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1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/Drift Geology

Are there any records of Superficial Deposits/Drift Geology within 500m of the study site boundary: **Yes**

ID	Distance (m)	Direction	Lex Code	Description	Rock Description
1	0.0	On Site	TFD-CLSS	Tidal Flat Deposits	Clay, Silt And Sand
2	81.0	SE	SUPNM-UNKN	Superficial Deposits Not Mapped [for Digital Map Use Only]	Unknown Lithology
3	233.0	SE	BSA-SAND	Blown Sand	Sand
4	267.0	S	TFD-CLSS	Tidal Flat Deposits	Clay, Silt And Sand

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site* boundary: **Yes**

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Moderate	Very Low

1.2.3 Landslip

Database searched and no data found.

Are there any records of Landslip within 500m of the study site boundary? **No**

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discreet layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

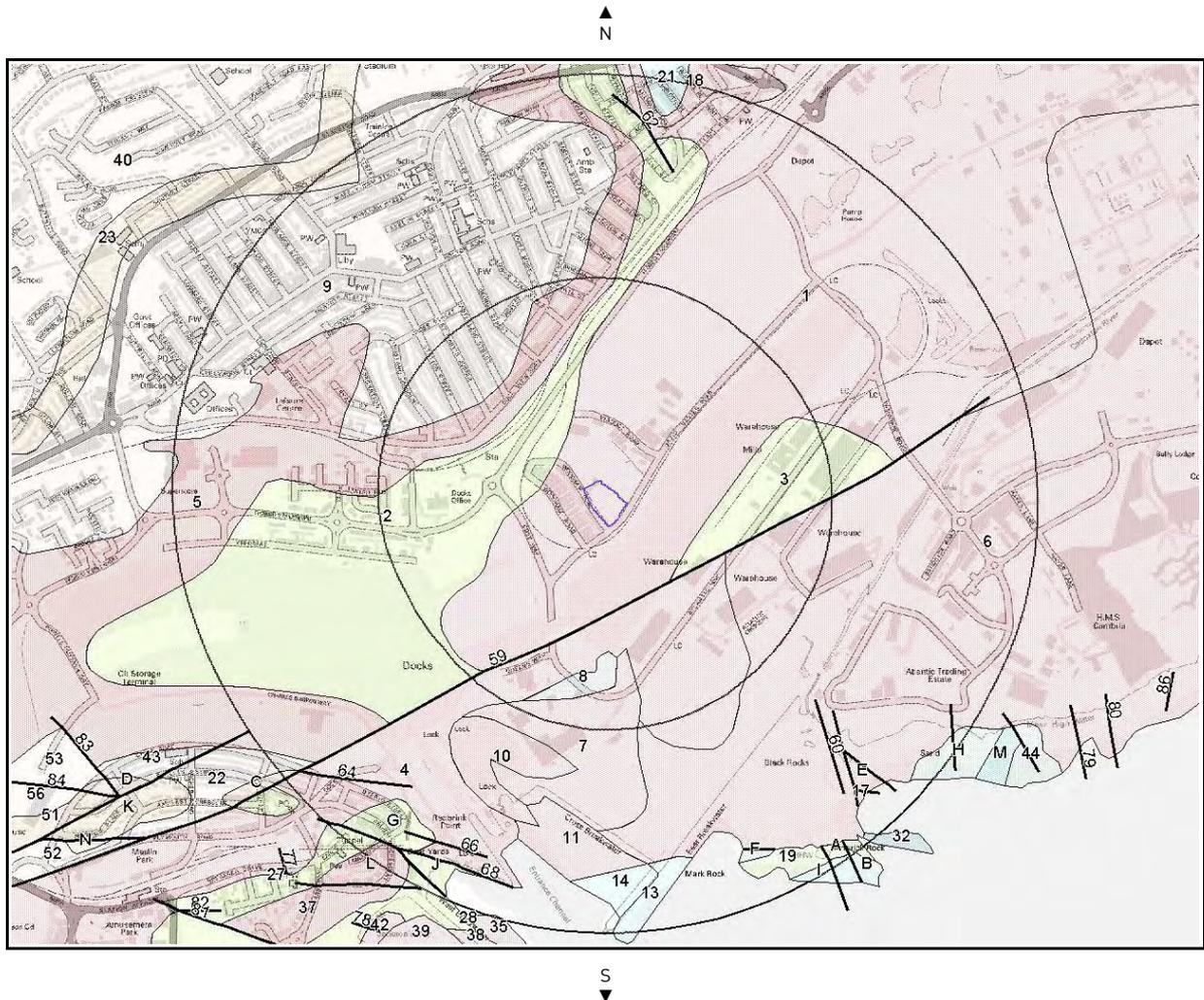
1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site* boundary: **No**

Database searched and no data found.

* This includes an automatically generated 50m buffer zone around the site.

1.3 Bedrock and Faults Map



Bedrock & Faults Deposits Legend

-  Site Outline
-  50
-  250 Search Buffers



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1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:263

1.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian / Scythian
2	93.0	NW	BAN-MDST	Blue Anchor Formation - Mudstone	Rhaetian / Norian
3	182.0	SE	BAN-MDST	Blue Anchor Formation - Mudstone	Rhaetian / Norian
4	189.0	SE	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian / Scythian
5	245.0	NW	PNG-MDLM	Penarth Group - Mudstone And Limestone, Interbedded	Rhaetian
6	269.0	SE	MMMF-CONG	Mercia Mudstone Group (marginal Facies) - Conglomerate	Triassic
7	302.0	S	QCG-SCON	Quartz Conglomerate Group (south Wales) - Sandstone And Conglomerate, Interbedded	Famennian
8	305.0	S	AVO-LSMD	Avon Group - Limestone And Mudstone, Interbedded	Courseyan
9	327.0	NW	STM-LSMD	St Mary's Well Bay Member - Limestone And Mudstone, Interbedded	Hettangian / Rhaetian

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary: **Yes**

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? **Yes**

ID	Distance (m)	Direction	Category Description	Feature Description
59	190.0	SE	FAULT	Normal fault, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discreet layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3.4 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

* This includes an automatically generated 50m buffer zone around the site.

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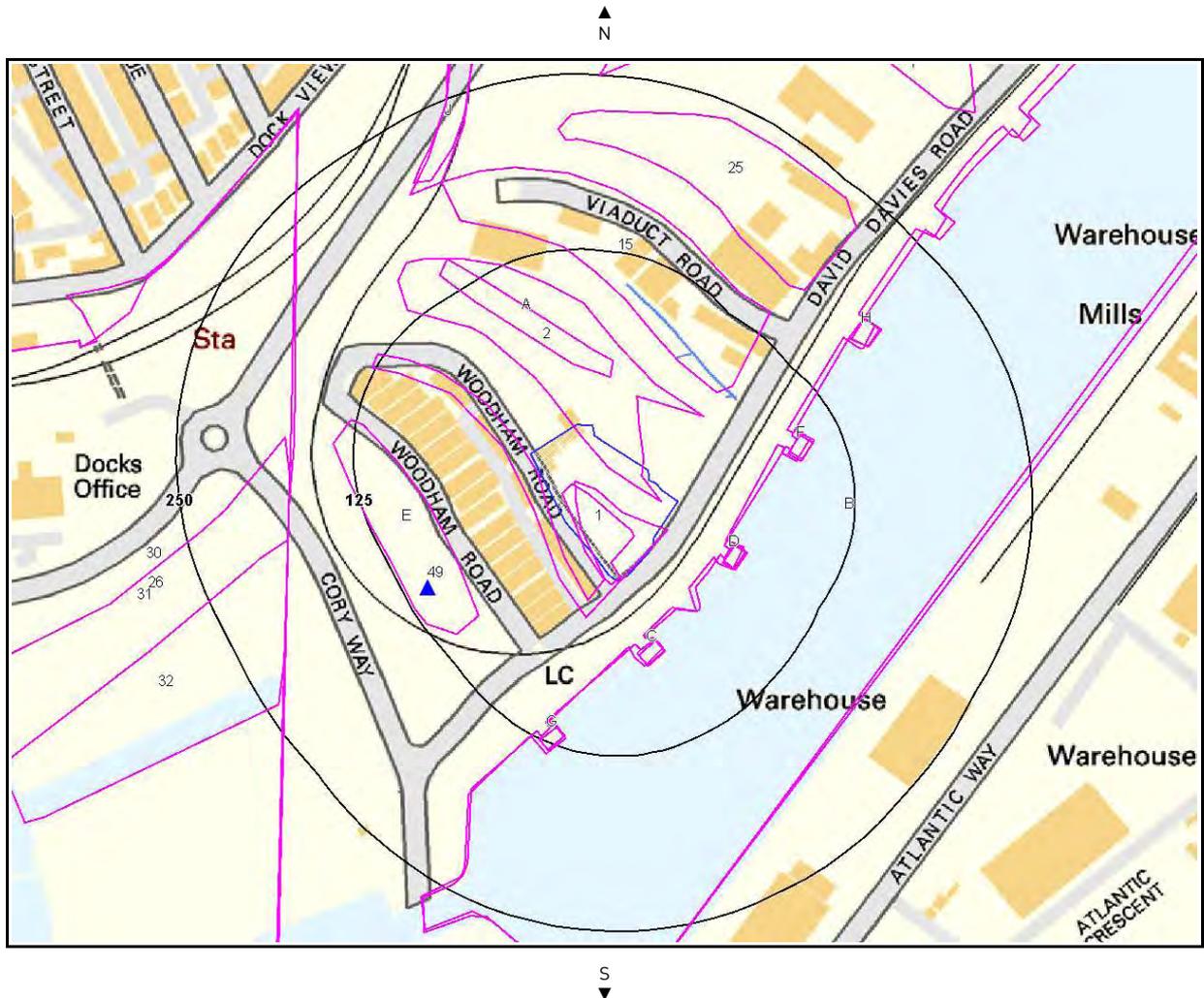
The property is not in a radon Affected Area, as less than 1% of properties are above the Action Level

1.3.5 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?

No radon protective measures are necessary

2 Ground Workings Map



Ground Workings Legend

Mapping sourced from 

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-  Site Outline
-  250 Search Buffers (m)
-  500 Search Buffers (m)

-  Historic Surface Ground Workings
-  Historic Underground Workings
-  Current Ground Workings

2 Ground Workings

2.1 Historical Surface Ground Working Features derived from the Historical Mapping

This dataset is based on GroundSure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? **Yes**

The following Historical Surface Ground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	312621,167639	Unspecified Pit	1947
2	0.0	On Site	312588,167749	Unspecified Pit	1973
3	0.0	On Site	312574,167673	Unspecified Pit	1973
4A	37.0	N	312570,167793	Unspecified Ground Workings	1921
5A	37.0	N	312570,167793	Unspecified Ground Workings	1915
6A	37.0	N	312570,167793	Unspecified Ground Workings	1898
7B	38.0	SE	312815,167738	Dock	1898
8B	40.0	SE	312868,167729	Dock	1915
9C	49.0	SE	312658,167554	Coal Tips	1915
10D	49.0	SE	312717,167622	Coal Tips	1915
11C	50.0	SE	312656,167552	Coal Tips	1921
12C	50.0	SE	312656,167552	Coal Tips	1947
13D	51.0	SE	312716,167620	Coal Tips	1921
14D	51.0	SE	312716,167620	Coal Tips	1947
15	74.0	NE	312626,167820	Unspecified Pit	1973
16E	80.0	SW	312485,167644	Unspecified Heap	1973
17E	80.0	SW	312485,167644	Unspecified Heap	1991
18E	80.0	SW	312485,167644	Unspecified Heap	1982
19F	85.0	NE	312764,167700	Coal Tips	1915
20F	87.0	NE	312762,167701	Coal Tips	1921
21F	87.0	NE	312762,167701	Coal Tips	1947
22G	112.0	SW	312588,167494	Coal Tips	1915
23G	112.0	S	312587,167490	Coal Tips	1921
24G	112.0	S	312587,167490	Coal Tips	1947
25	165.0	NE	312748,167877	Unspecified Pit	1973
26	167.0	W	311610,167338	Docks	1915
27H	168.0	NE	312810,167783	Coal Tips	1921
28H	168.0	NE	312810,167783	Coal Tips	1947
29H	168.0	NE	312809,167782	Coal Tips	1915
30	169.0	W	311732,167331	Dock	1921
31	171.0	W	312285,167590	Graving Dock	1921
32	182.0	W	312300,167534	Graving Dock	1921
33I	249.0	N	312804,168020	Unspecified Ground Workings	1973
34I	249.0	N	312804,168020	Unspecified Ground Workings	1982

2.2 Historical Underground Workings Features derived from the Historical Mapping

This data is derived from the GroundSure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? **Yes**

The following Historical Underground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
35J	197.0	NW	312516,167957	Tunnel	1982

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36J	197.0	NW	312516,167957	Tunnel	1991
37J	197.0	NW	312516,167957	Tunnel	1973
38J	197.0	NW	312516,167957	Tunnel	1947
39J	202.0	NW	312514,167960	Tunnel	1898
Not shown	932.0	SW	312007,166813	Tunnel	1921
Not shown	933.0	SW	312016,166814	Tunnel	1898
Not shown	933.0	SW	312016,166814	Tunnel	1938
Not shown	933.0	SW	312016,166814	Tunnel	1936
Not shown	933.0	SW	312016,166814	Tunnel	1915
Not shown	962.0	SW	311980,166815	Tunnel	1982
Not shown	962.0	SW	311980,166815	Tunnel	1991
Not shown	962.0	SW	311980,166815	Tunnel	1973
Not shown	962.0	SW	311980,166815	Tunnel	1947

2.3 Current Ground Workings

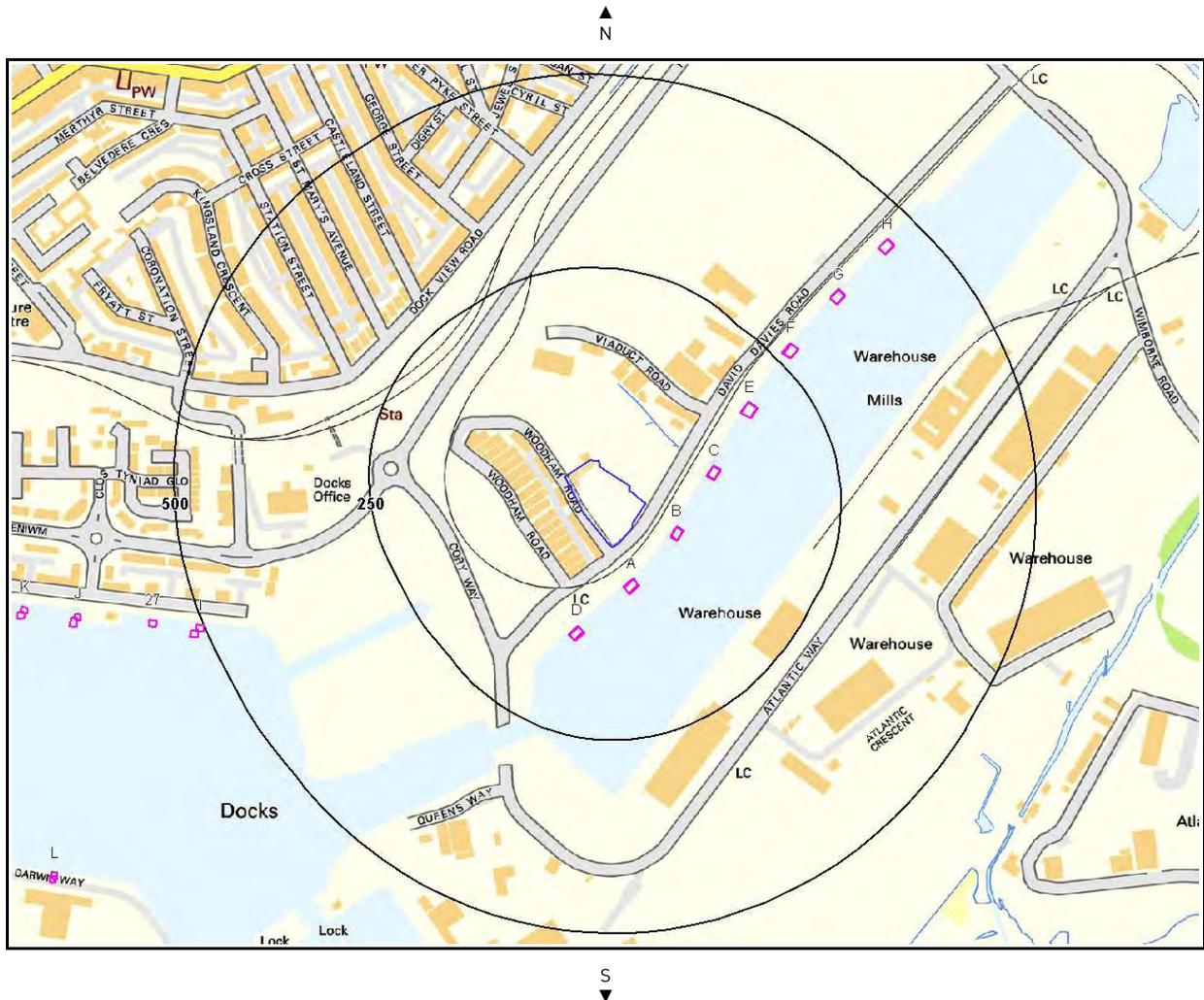
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? **Yes**

The following Current Ground Workings information is provided by British Geological Society:

ID	Distance [m]	Direction	NGR	Use	Date Updated
49	109.0	SW	312500.0,167600.0	Secondary	16-Jul-2007
Not shown	326.0	S	312750.0,167300.0	Marine Sand & Gravel	06-Sep-2007
Not shown	326.0	S	312750.0,167300.0	Marine Sand & Gravel	21-Sep-2007
Not shown	847.0	SW	312250.0,166850.0	Marine Sand & Gravel	06-Sep-2007

3 Mining, Extraction & Natural Cavities Map



Mining, Extraction & Natural Cavities Legend

Mapping sourced from 

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-  Site Outline
-  Search Buffers (m)
-  Historical Mining
-  Non-Coal Mining Cavities
-  Natural Cavities

3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from GroundSure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary?

Yes

The following Historical Mining information is provided by Groundsure :

ID	Distance (m)	Direction	NGR	Details	Date
1A	49.0	SE	312658,167554	Coal Tips	1915
2B	49.0	SE	312717,167622	Coal Tips	1915
3A	50.0	SE	312656,167552	Coal Tips	1921
4A	50.0	SE	312656,167552	Coal Tips	1947
5B	51.0	SE	312716,167620	Coal Tips	1921
6B	51.0	SE	312716,167620	Coal Tips	1947
7C	85.0	NE	312764,167700	Coal Tips	1915
8C	87.0	NE	312762,167701	Coal Tips	1921
9C	87.0	NE	312762,167701	Coal Tips	1947
10D	112.0	SW	312588,167494	Coal Tips	1915
11D	112.0	S	312587,167490	Coal Tips	1921
12D	112.0	S	312587,167490	Coal Tips	1947
13E	168.0	NE	312810,167783	Coal Tips	1921
14E	168.0	NE	312810,167783	Coal Tips	1947
15E	168.0	NE	312809,167782	Coal Tips	1915
16F	260.0	NE	312862,167859	Coal Tips	1915
17F	262.0	NE	312862,167856	Coal Tips	1947
18F	262.0	NE	312862,167856	Coal Tips	1921
19G	353.0	NE	312923,167927	Coal Tips	1947
20G	353.0	NE	312923,167927	Coal Tips	1921
21G	354.0	NE	312923,167929	Coal Tips	1915
22H	443.0	NE	312984,167994	Coal Tips	1921
23H	443.0	NE	312984,167994	Coal Tips	1947
24H	444.0	NE	312984,167995	Coal Tips	1915
25I	500.0	SW	312107,167500	Coal Tips	1915
26I	509.0	SW	312099,167493	Coal Tips	1921
27	554.0	W	312046,167506	Coal Tips	1915
28J	644.0	W	311950,167514	Coal Tips	1915
29J	650.0	W	311945,167508	Coal Tips	1921
30K	707.0	W	311882,167524	Coal Tips	1915
31K	713.0	W	311878,167516	Coal Tips	1921
Not shown	796.0	W	311789,167534	Coal Tips	1915
Not shown	802.0	W	311784,167527	Coal Tips	1921
34L	818.0	SW	311920,167180	Coal Tips	1915
35L	823.0	SW	311918,167175	Coal Tips	1921
Not shown	880.0	W	311702,167538	Coal Tips	1915
Not shown	886.0	W	311696,167531	Coal Tips	1921
Not shown	890.0	W	311733,167367	Coal Tips	1915
Not shown	896.0	W	311736,167364	Coal Tips	1921
Not shown	906.0	SW	311806,167198	Coal Tips	1915
Not shown	915.0	SW	311797,167195	Coal Tips	1921
Not shown	945.0	W	311667,167405	Coal Tips	1915
Not shown	951.0	W	311661,167409	Coal Tips	1921
Not shown	960.0	SW	311679,167312	Coal Tips	1915
Not shown	970.0	W	311613,167532	Coal Tips	1915

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Not shown	974.0	SW	311674,167307	Coal Tips	1921
Not shown	976.0	W	311607,167525	Coal Tips	1921
Not shown	997.0	SW	311696,167213	Coal Tips	1915

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.3 Shallow Mining

This dataset refers to the (largely very old) extraction of mineral deposits by means of near surface underground workings.

What is the maximum hazard rating of subsidence relating to shallow mining within the study site* boundary? Negligible

*This includes an automatically generated 150m buffer zone around the study site boundary

The following Shallow Mining information provided by the British Geological Survey is not represented on Mapping:

Distance (m)	Direction	Hazard Rating	Details
0.0	On Site	Negligible	Where negligible potential is indicated, this means that the rocks underlying the area are not likely to have been mined at shallow depth. However, you should still find out whether or not a Coal Authority mining search is required in the area, for example, to check for deeper mining.

3.4 Non – Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA)/DEFRA mining cavities database (compiled for the national study entitled "Review of mining instability in Great Britain, 1990" PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.5 Natural Cavities

This dataset provides information based on Peter Brett Associates/ DEFRA natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.6 Brine Extraction

This dataset provides information from the Brine compensation board which has been discontinued and is now covered by the Coal Authority.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.7 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

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3.8 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records.

Are there any Tin Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.9 Clay Mining

This dataset provides information on Kalin and Ball Clay mining from relevant mining records.

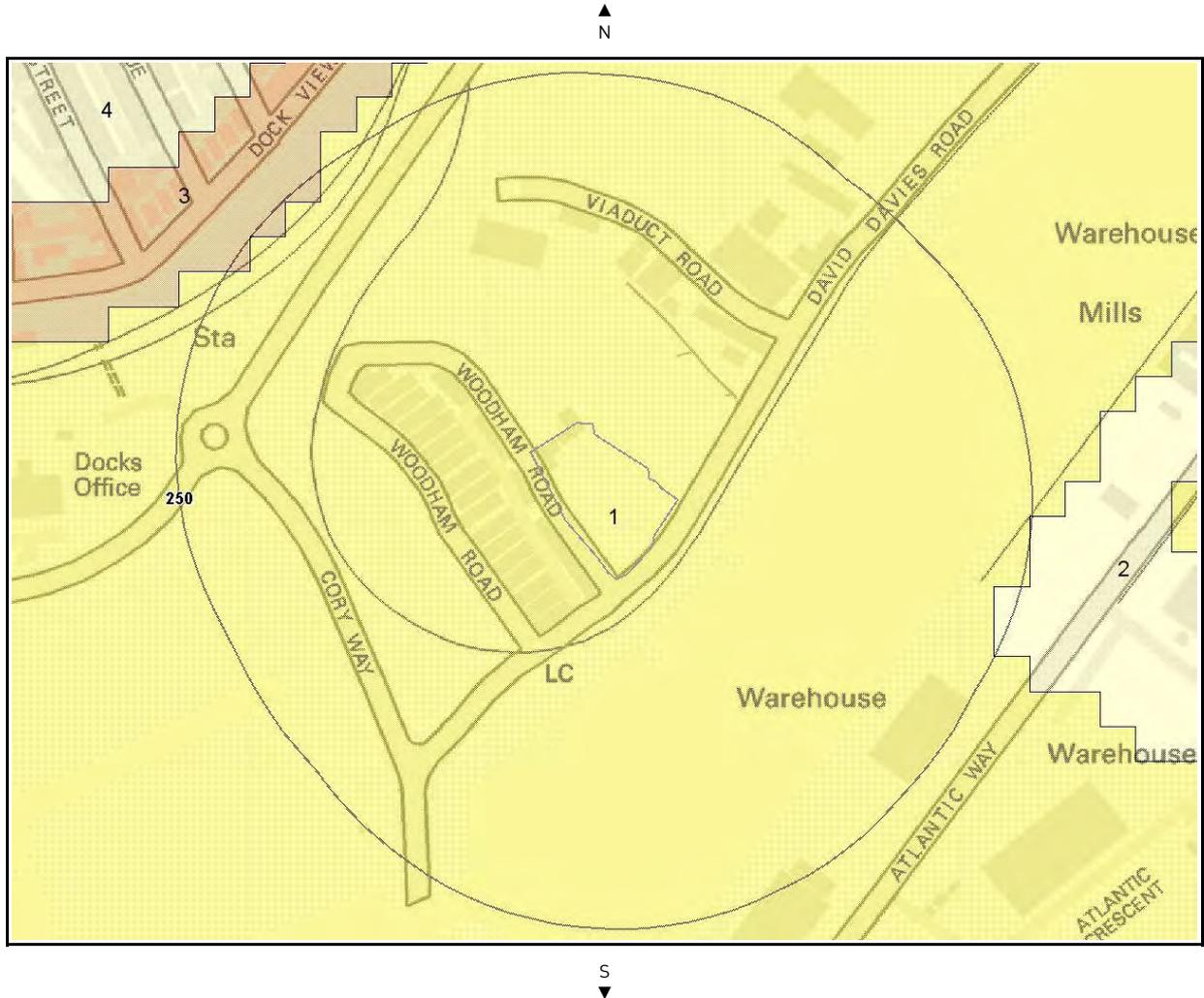
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4 Natural Ground Subsidence

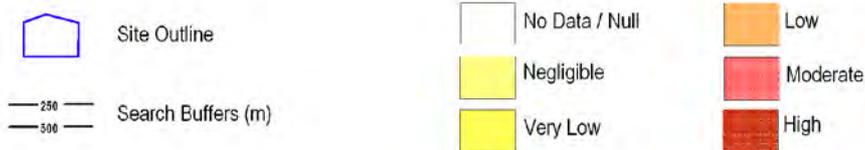
4.1 Shrink-Swell Clay Map



Shrink-Swell Clay Legend



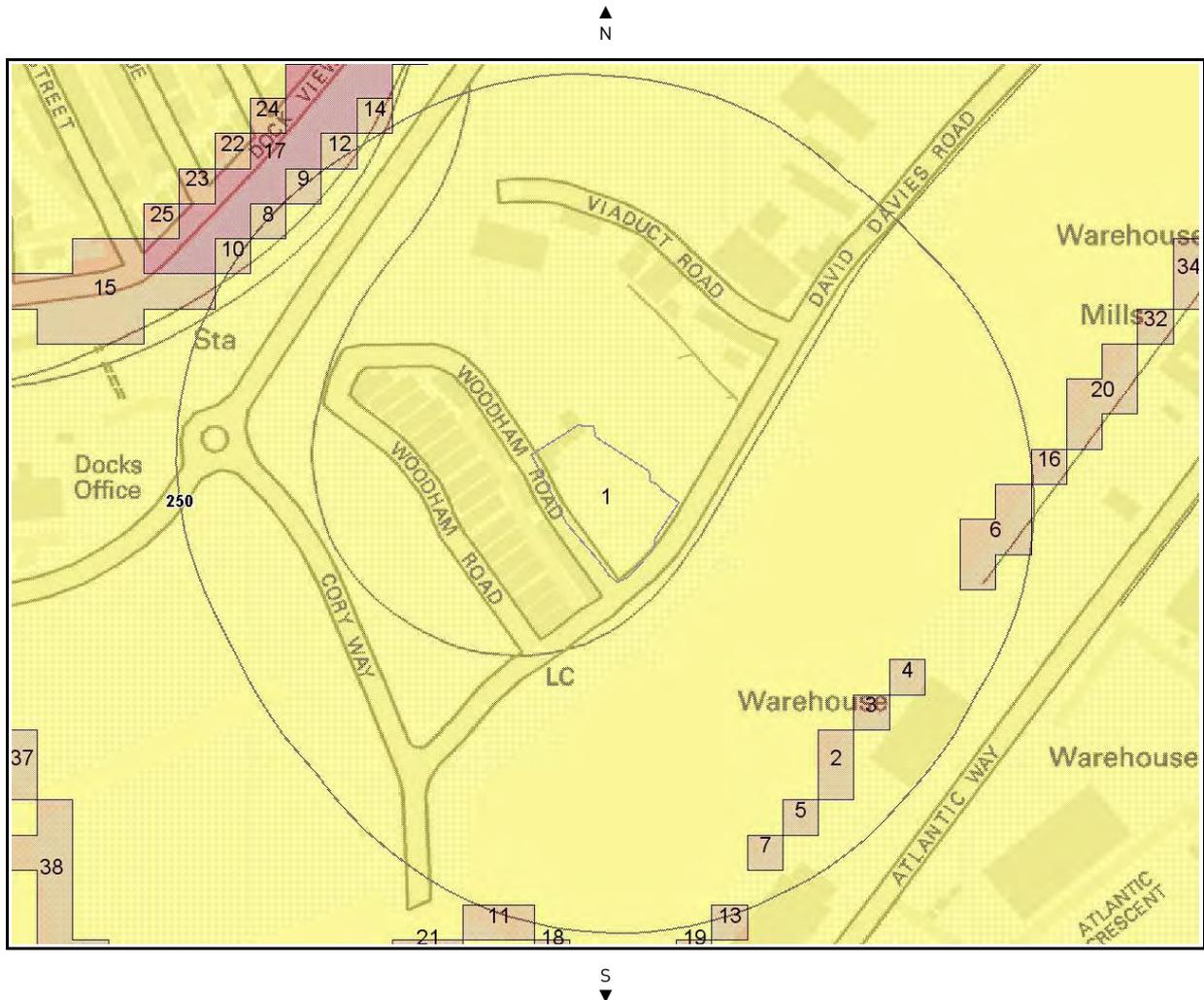
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4.2 Landslides Map



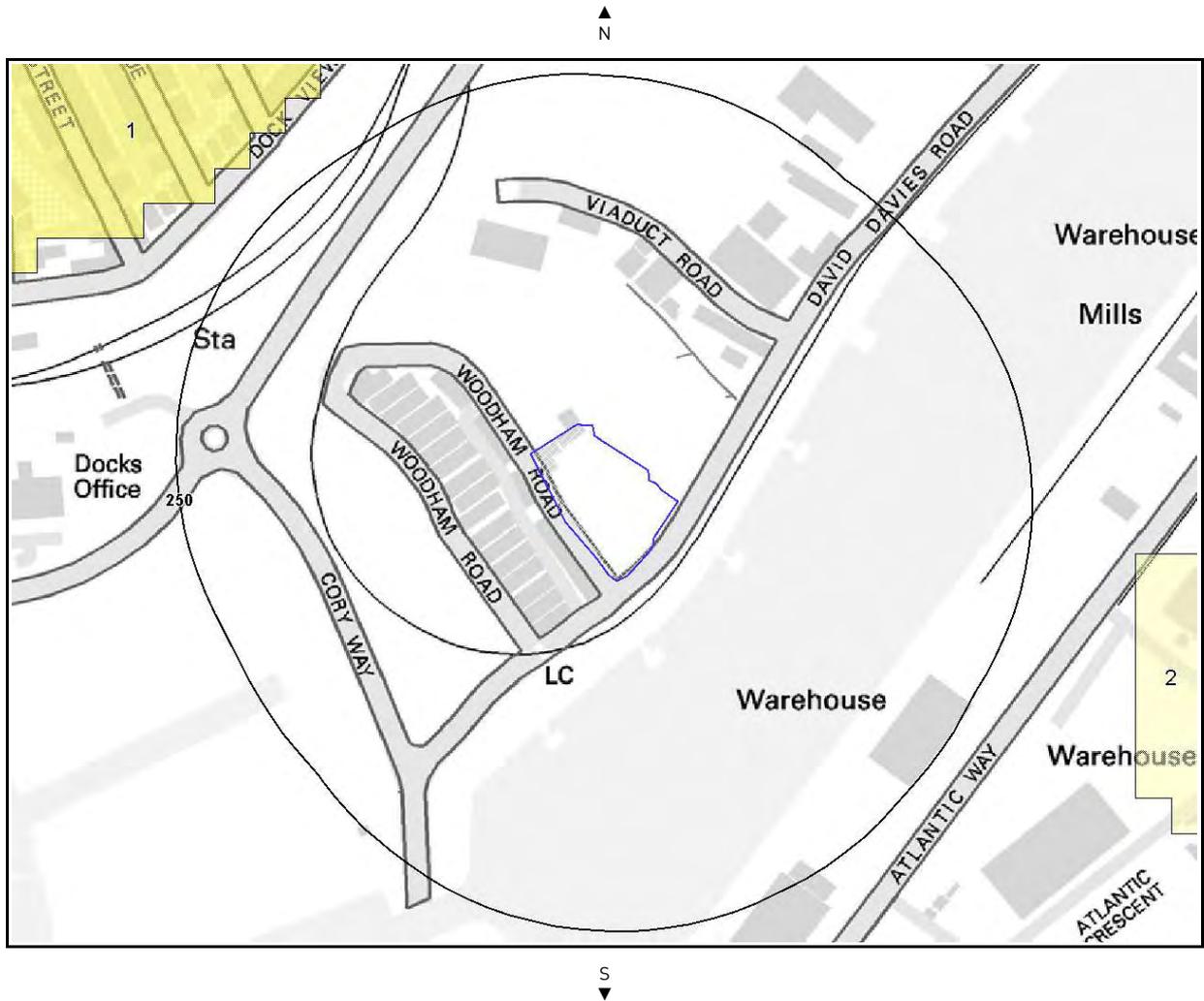
Landslides Legend

Mapping sourced from 

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-  Site Outline
-  No Data / Null
-  Low
-  Search Buffers (m)
-  Negligible
-  Moderate
-  Very Low
-  High

4.3 Ground Dissolution Soluble Rocks Map



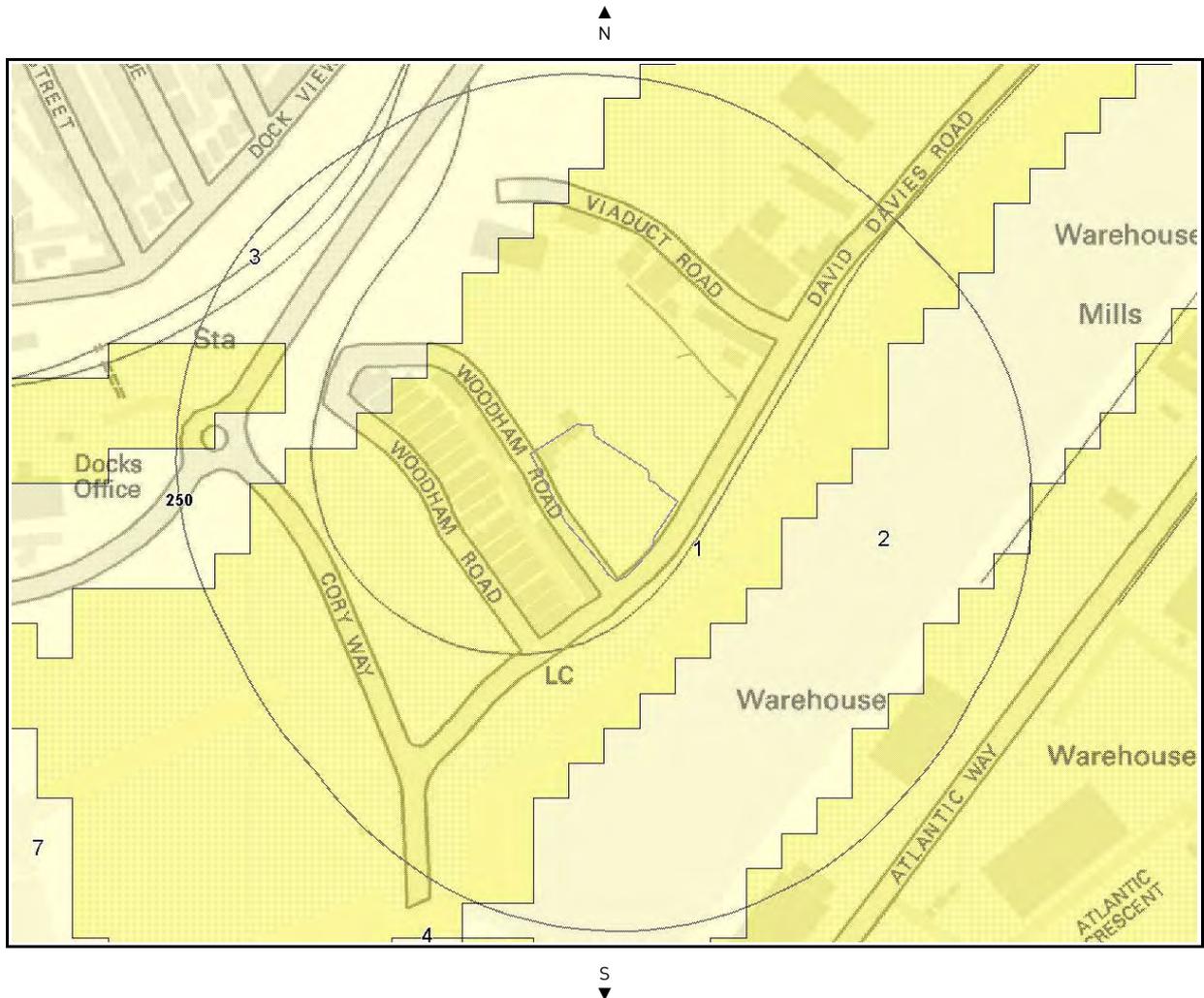
Ground Dissolution Soluble Rocks Legend

Mapping sourced from  Ordnance Survey

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-  Site Outline
-  No Data / Null
-  Low
-  Search Buffers (m)
-  Negligible
-  Moderate
-  Very Low
-  High

4.4 Compressible Deposits Map



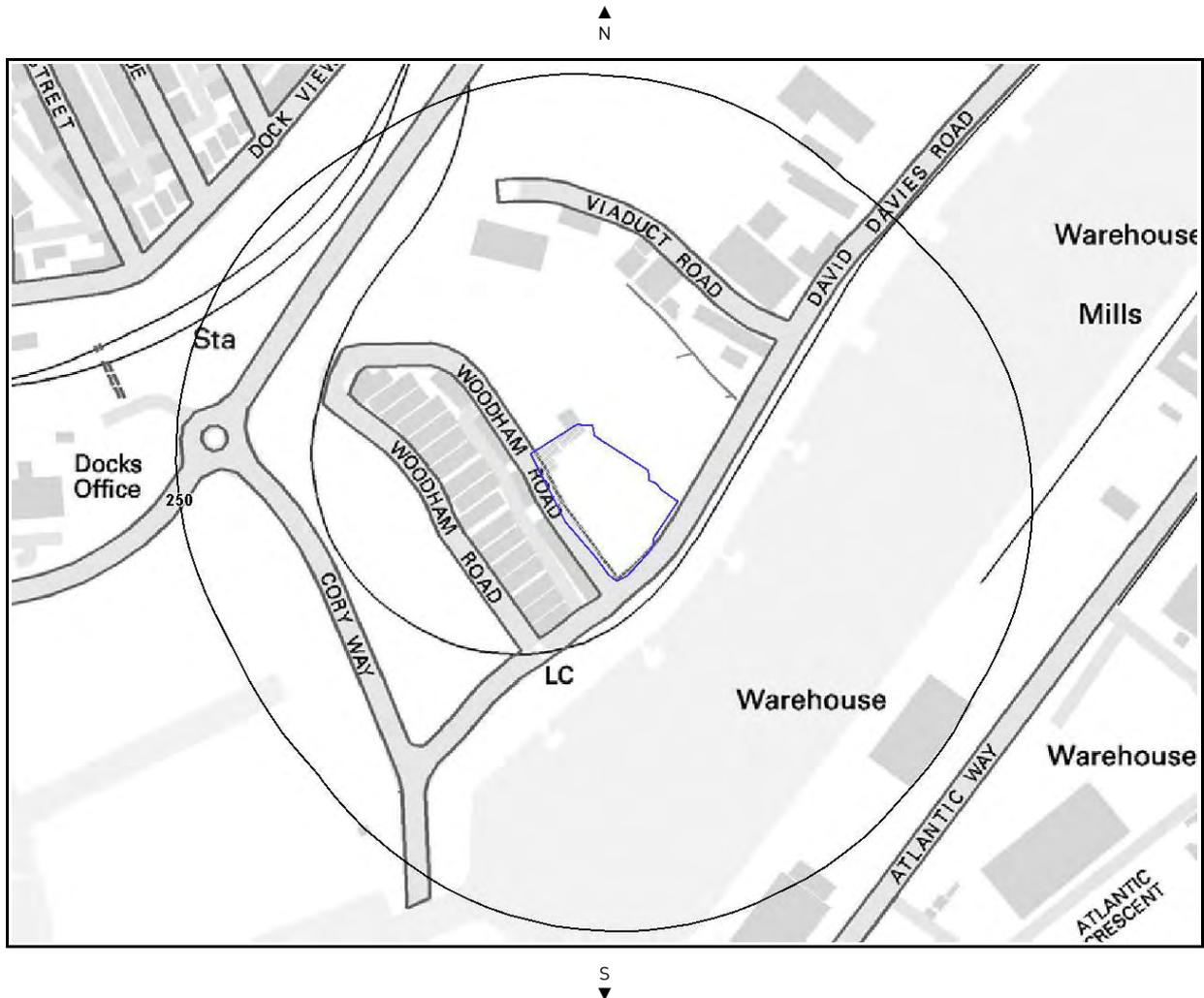
Compressible Deposits Legend

Mapping sourced from  Ordnance Survey

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4.5 Collapsible Deposits Map



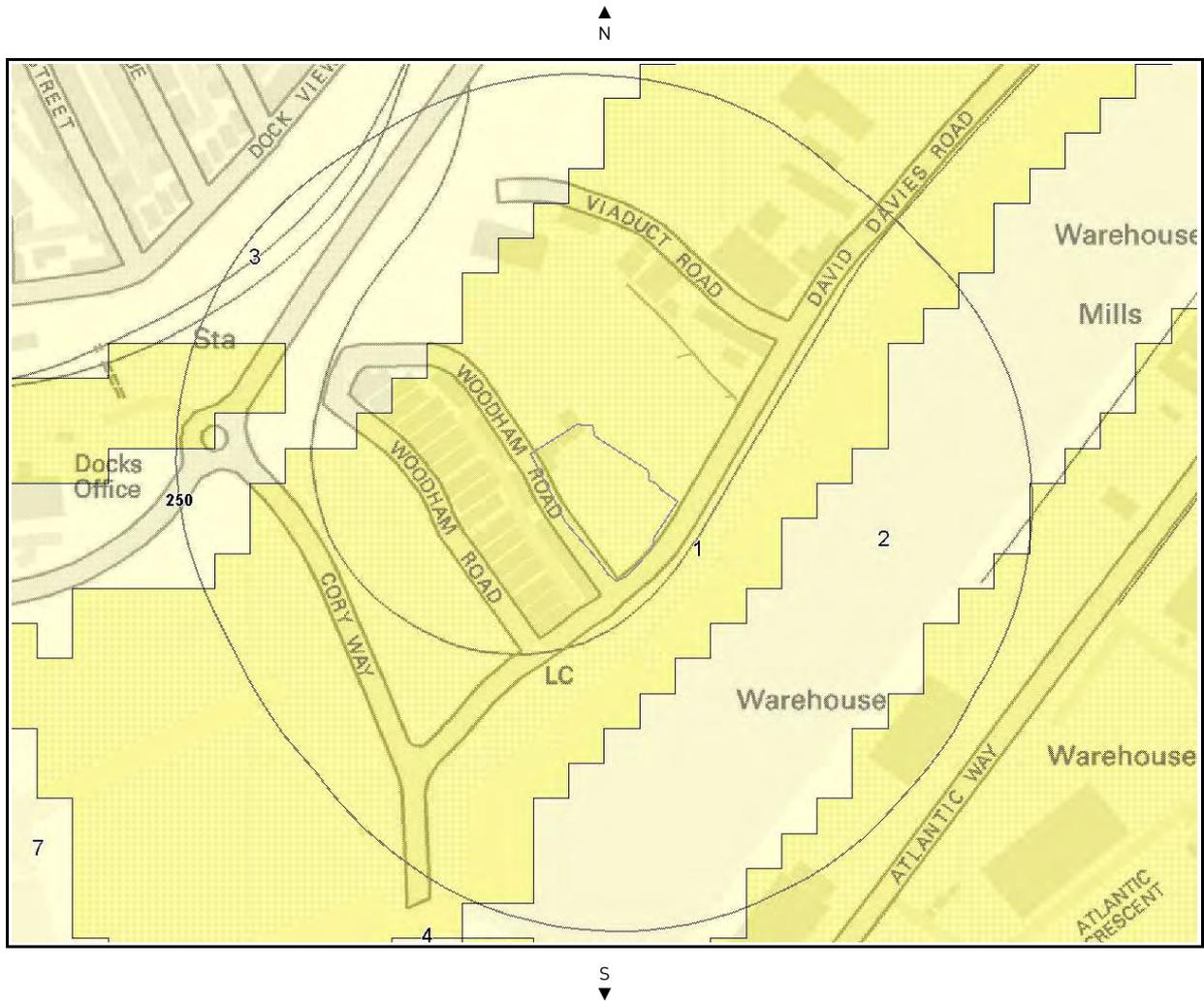
Collapsible Deposits Legend



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-  Site Outline
-  Search Buffers (m)
-  Significant
-  No Data / Null

4.6 Running Sand Map



Running Sand Legend



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4. Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS)

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary?

Very Low

*This includes an automatically generated 50m buffer zone around the study site boundary.

4.1 Shrink – Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

4.3 Ground Dissolution of Soluble Rocks

The following Soluble Rocks information provided by the British Geological Survey:

Distance (m)*	Direction	Hazard Rating	Details
0	On site	Null-Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Ground information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

4.5 Collapsible Deposits

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Geology & Ground Stability Report Reference: HMD-188-62961

The following Collapsible Rocks information is provided by the British Geological Survey:

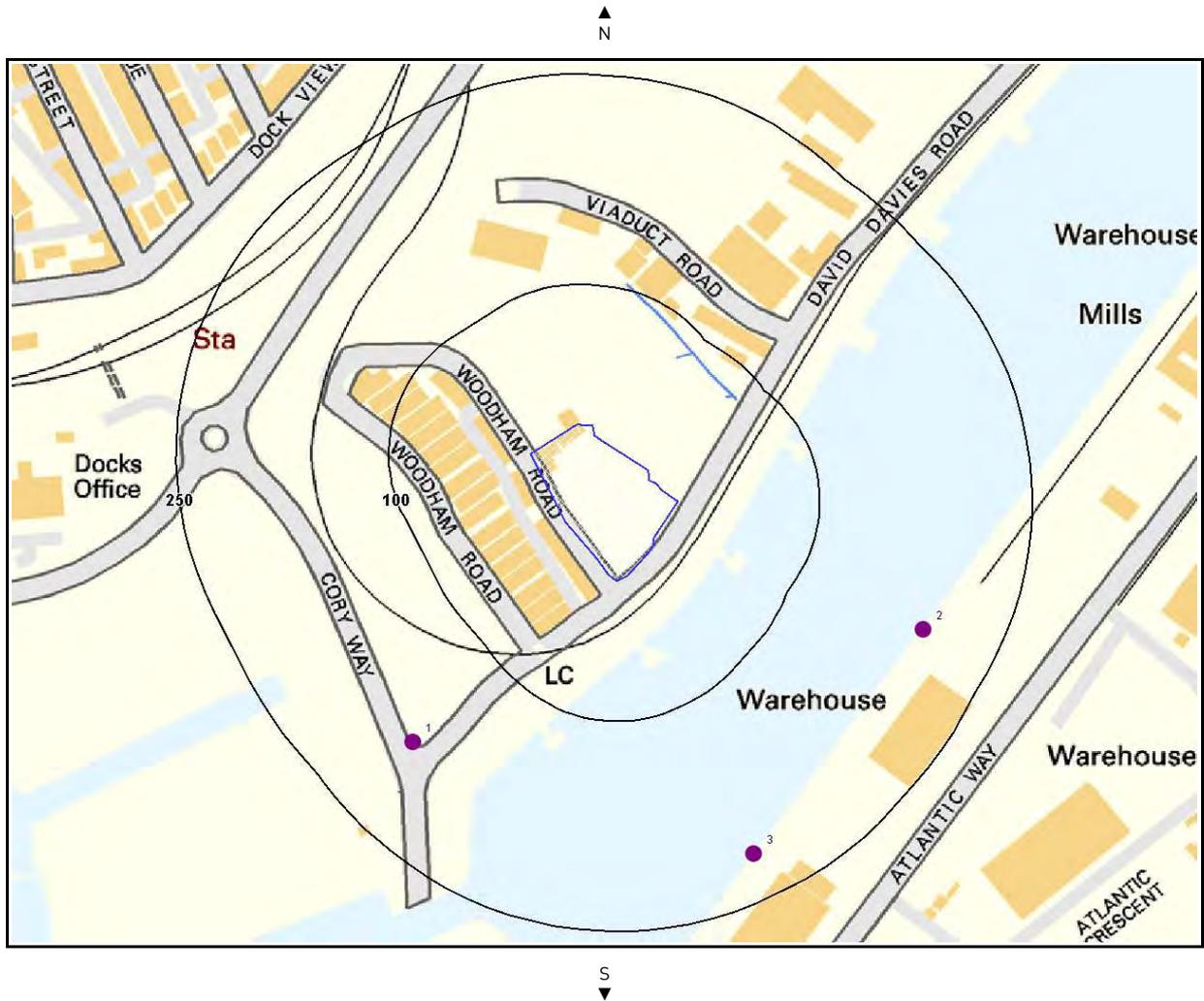
Distance (m)*	Direction	Hazard Rating	Details
0	On site	Null-Negligible	No Indicators for collapsible deposits identified. No Special actions required to avoid problems due to collapsible deposit.

4.6 Running Sands

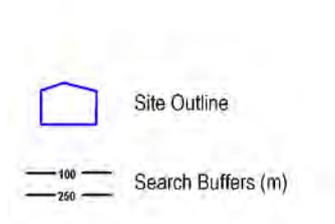
The following Running Sands information is provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

5. Borehole Records Map



Borehole Records Legend



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5. Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:
3

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length (m)	Borehole Name
1	183.0	SW	312490,167490	ST16NW109	1.8	BARRY DUCK CUSTOMS & EXICISE BLDG
2	196.0	SE	312850,167570	ST16NW157	14.0	CRANE BEAM, BARRY DOCKS, NO.2
3	217.0	SE	312730,167410	ST16NW158	12.7	CRANE BEAM, BARRY DOCKS, NO.3

Contacts

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Acknowledgements

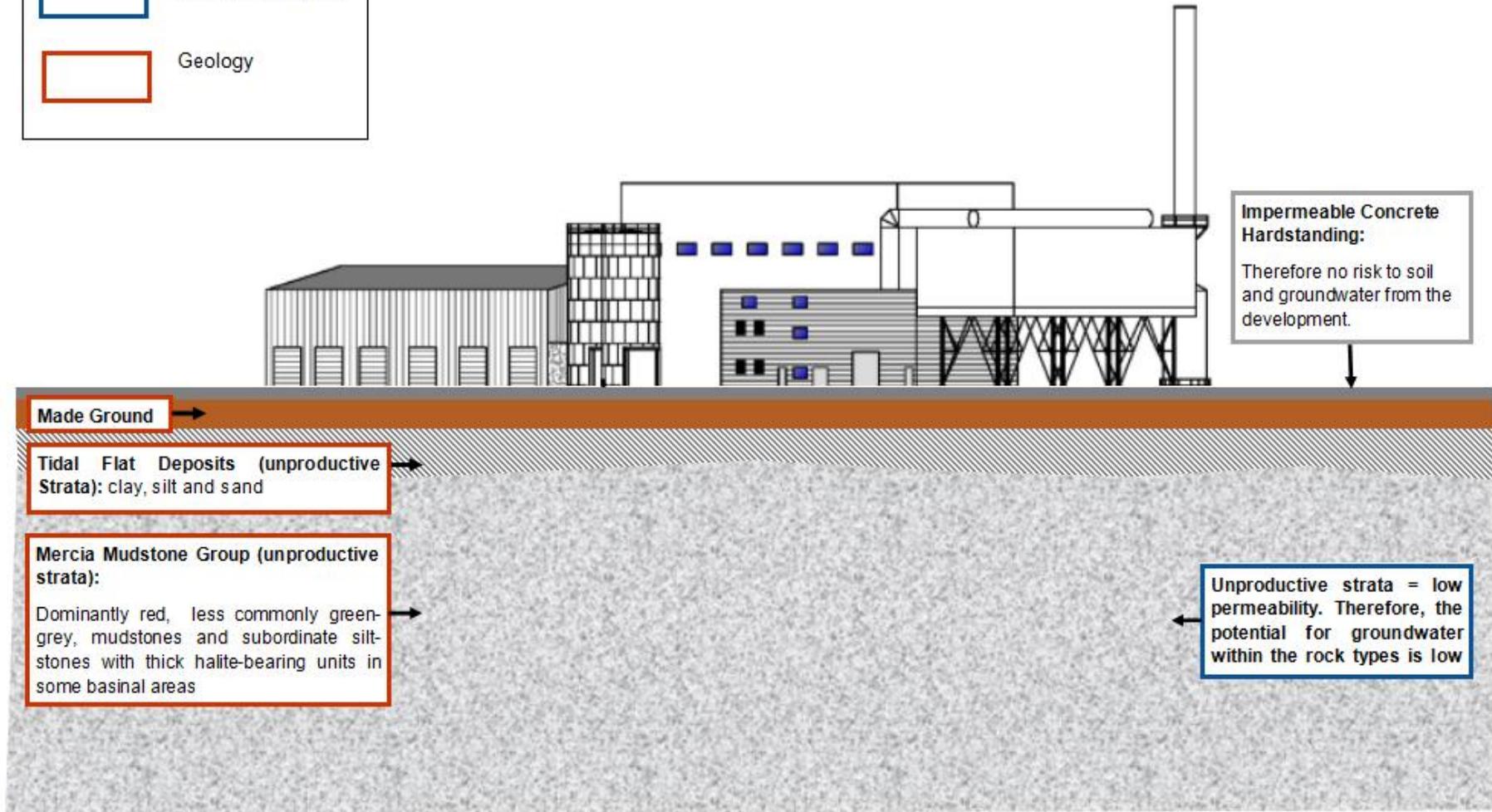
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Annex E: Conceptual Model

Key:

-  Site Infrastructure
-  Potential Receptor
-  Geology



Made Ground

Tidal Flat Deposits (unproductive Strata): clay, silt and sand

Mercia Mudstone Group (unproductive strata):

Dominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite-bearing units in some basinal areas

Impermeable Concrete Hardstanding:

Therefore no risk to soil and groundwater from the development.

Unproductive strata = low permeability. Therefore, the potential for groundwater within the rock types is low

1. Do not scale off this drawing
2. All dimensions to be confirmed on site
3. This drawing is copyright of Sol Environment Ltd
4. This drawing is to be read in conjunction with relevant consultant drawings and specifications

Rev:	Date:	Desc:
0	JUL 16	Original

Client: BIOMASS UK NO. 2 Ltd

Project: BARRY BIOMASS RECOVERY FACILITY

Drawing Title: CONCEPTUAL MODEL

Job No: SOL1605BUK201

Date: JUL 16

Drawn By: SOPHIE PERRIN

Drawing No: BUK204

Revision: 0

Scale: NTS



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