

Afon Wysg 2

784-B070804



Geo-Environmental and Geotechnical Desk Top Study



FINAL

AW2 Energy Storage Limited

April 2025

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EXECUTIVE SUMMARY

The Site	The site comprises the former Pulverised fuel ash (PFA) storage area of Uskmouth Power Station. The site is narrow and rectangular in shape, oriented lengthways southwest to northeast. The site is approximately 6.9ha in area and is centred on National Grid Reference 332655 183558.
Site History	The earliest available OS mapping coverage for the area (dating back to 1882) show the site as agricultural land, with the first mapping evidence of Uskmouth Power Station being developed between 1950 and 1964. Preceding this the site has not undergone any significant changes with exception to the construction of GWR East Usk railway. The surrounding site has undergone various changes and developments since the first available mapping in 1882, with farmhouse buildings being located to the immediate east of the site, and residential buildings to the north. Uskmouth Power Station was developed during the 1950s. Previous reports (ERM, 2006) and anecdotal evidence from a site worker indicates the presence of an historical fire training area within the western extents of the current PFA storage area until the 1990s, where the area became a place for contractor cabins until the PFA store was built in 2008. No further details of the fire training area are available.
Geology, Hydrogeology and Hydrology	BGS mapping indicates the site is underlain by Tidal Flat Deposits and Glaciofluvial Deposits which overly bedrock strata of the Mercia Mudstone Group. Made Ground is not recorded on site; however, previous site investigations in adjacent areas have confirmed the presence of Made Ground, and it is anticipated on site due to prior development. The superficial Tidal Flat Deposits are classified as an 'Unproductive' Aquifer and the bedrock Mercia Mudstone is designated as a Secondary B Aquifer. The nearest surface water feature is a drainage channel along the southern perimeter of the PFA storage site. The nearest named surface water feature is the River Usk.
Radon	The BRE radon mapping coverage for the site area was consulted and indicates that the site is located within an area where no radon protection measures are required for new developments.
Unexploded Ordnance	The consulted bomb maps and historic UXO desk study indicate the site is at low risk from UXO.
Environmental Database Search	There are 8nr. integrated pollution controls (IPCs) listed on the site itself, and several environmental records within 250m of site. The site itself is largely low risk of flooding, however, to the east of the site, along the access road is marked as 'medium' risk and an area to the northwest is also marked as 'medium' risk.
Preliminary Geotechnical Assessment	The following potential geotechnical constraints have been identified at the site: - Compressible Deposits in association with TFD. - Running Sands rated as 'Moderate' risk from the Groundsure report and previous wider site investigations encountering running sand conditions

Preliminary Ground Contamination Assessment	The Preliminary Ground Contamination Assessment identified a moderate risk to construction workers relating to contaminants found in Made Grund soils including asbestos. Low and Moderate risk of contamination to surface water features and groundwater through leaching of contaminants from soil to groundwater table from risks associated with PFA store, drainage, railway sidings, road construction and lagoons. Evidence of a former fire training area in the southwestern extent of the PFA store suggests highly mobile PFAS compounds may be present in soils, surface water and groundwater.
Recommendations	A ground investigation is recommended to provide the following: • Confirmation of ground conditions; • Assess presence/absence of contamination; • Assess geotechnical properties of soils; • Install groundwater and ground gas monitoring wells with associated monitoring and sampling; • Undertake permeability testing within the Made Ground and TFD.

1.0 INTRODUCTION

1.1 INSTRUCTION

Tetra Tech Ltd (Tetra Tech) was commissioned by AW2 Energy Storage Limited (“the client”) to undertake a Geo-Environmental Desk Top Study for Afon Wysg 2 (known hereafter as “the site”) to support a planning application for the proposed Battery Energy Storage System (BESS) development.

The location of the site is shown at Appendix D.

It is understood that the proposed development will involve the development of a BESS at the location of the former Pulverised fuel ash (PFA) storage area in the southwestern area of Uskmouth Power Station, West Nash Road, Nash, Newport, Wales, NP18 2BZ.

The general layout for the proposed development is located in Appendix E.

1.2 REPORT SCOPE

A site visit and visual inspection walkover was undertaken by an associate director from Tetra Tech on Tuesday 28th January 2025. This report includes the findings of the site visit and the following key elements:

- Desk Based Assessment to identify potentially contaminative land uses.
- A discussion of the current site status and key associated environmental influences observable by general visual inspection around the site;
- An historical site and area review, primarily referring to past editions of Ordnance Survey Maps;
- A discussion of the general expected ground and groundwater conditions within the topographical and area context referring to our own geological and hydrogeological maps library;
- Details of an Environmental database search (Groundsure report, Ref: GS-EU7-KFQ-FZK-SRP) of key relevant agencies, including Local and Statutory Authorities such as Natural Resources Wales;
- A baseline UXO risk assessment using on-line databases to classify the site with regards to UXO risk;
- Development of a preliminary Conceptual Site Model
- Preliminary geotechnical hazard assessment
- Quantitative ground contamination risk assessment (compliant with CIRIA 552 methodology)
- An executive summary.

1.3 LIMITATIONS

The recommendations and opinions expressed in this report are based on information obtained as part of the walkover, desk study or provided by others. Information provided from other sources is taken in good faith and Tetra Tech cannot guarantee its accuracy.

This report is subject to the report conditions presented in Appendix A.

The information contained in this report is intended for the use of the AW2 Energy Storage Limited and Tetra Tech can take no responsibility for the use of this information by any third party or for uses other than that described in this report or detailed within the terms of our engagement.

2.0 SITE INFORMATION

2.1 LOCATION

The site is part of the wider Uskmouth Power Station Site and comprises the former Pulverised fuel ash (PFA) storage area. The site is narrow and rectangular in shape, oriented lengthways southwest to northeast, inclusive of the site access road West Nash Road. The site is approximately 6.9ha in area and is centred on National Grid Reference 332655 183558.

The site address is: Uskmouth Power Station, West Nash Road, Newport NP18 2BZ.

A site location plan is presented in Figure 1 and the general layout for the proposed development is located in Figure 2.

2.2 GENERAL AREA CONTEXT

Table 2-1 - Surrounding land uses

Direction	Description
North	To the immediate north of site is Severn Power Station, the former Uskmouth Power Station, including the railway line, and the River Usk.
East	The east of the site lies Nash Welsh Water and Julian's Reen.
South	To the south of site lies the attenuation pond, former coal stockyard and RSPB Newport Wetlands.
West	To the west of the site is the former fifoots point, and the River Usk.

2.3 SITE DESCRIPTION

A site walkover was undertaken by TT on Tuesday 28th January 2025. A series of photographs are presented in Appendix C and are cross referenced in the following section.

2.3.1 Current Site Usage

The site in its entirety is comprised within Uskmouth Power Station and comprises the PFA storage area (Plate 1) with associated drainage around the southern perimeter (Plate 2), lagoons to the west (Plate 3 and 4) with an asphalt access track trending east to west and curving around to the south at the east of site (Plate 5 and Plate 6). An area comprising biofuel and diesel generators is present to the north of site (Plate 7) however no access into this area was possible during the time of the site walkover.

2.3.2 Access and Boundaries

The main access to the site is located to the southeast, via a security hut on West Nash Road.

2.3.3 Topography

A 2D Topographical Survey was completed by TT on 13/12/24 (Drawing nr. 784-B070326-TTE-ZZ-ZZ-DR-G-001 Rev. A) and is provided in Appendix F. Broadly, the site is gently sloping from east to west. The railway tracks slope from east to west from approximately 8.9m AOD to 8.4m AOD (Plate 8). The asphalt access track

lies between 8.8m AOD in the east to between 7 and 8.8m AOD in the south and west. The former PFA storage area is bunded within a concrete wall surround and lies in mounds between c. 12 and 15m AOD. The lagoons were unable to be surveyed due to the vegetation cover, however there is a culvert connecting the north and south lagoon that is approximately 2.5m in diameter. A sampling point platform lies to the southwest of the smaller lagoon at an elevation of approximately 8.5m AOD.

2.3.4 Ground Cover and Vegetation

The groundcover is varied across the site. The PFA covers the majority of the site and is covered by self-seeded vegetation at the surface with long grass and low shrubbery (Plate 9), while the west of the site is comprised of dense vegetation and two lagoons (former unspecified disused pits, present since 1964). The remainder of site is comprised of grass, and an asphalt access road and metal grating over a closed culvert (Plate 5).

2.3.5 Drainage

A drainage channel is present around the western and southern perimeter of the PFA to capture runoff and runs under the road in front of the entrance into the PFA, and enters a lamellar plate clarifier which is not in use (Plate 10). The channel flows into the smaller lagoon to the southwest which is also connected to the larger lagoon through a c. 2.5m diameter pipe. The water exits into a small stream to the southwest of the smaller lagoon which flows into the Severn Estuary. The water is sampled on a monthly basis from a small water sampling platform in the southwest (Plate 11).

2.3.6 Services

As far as is known, all underground services are not live within site bounds, however infrastructure is anticipated to be present in the sub surface.

A water main is shown to enter site under the site access track to the southeast. Four high voltage (132kV) overhead lines are present and crossing the access track road from north to south immediately northwest of the former coal stockyard. An underground high pressure (>7bar) gas pipe lies immediately north of site from the southwest and is shown to trend northeast.

2.3.7 On-Site Structures and Fuel Tanks

On Site Structures

In the central portion of site there is an existing railway, where railway sidings date to 1963 and extend from the west to the east/northeast. These are due to be removed as part of the development. A water storage tank is present to the south of the PFA store, however anecdotal evidence indicates this is only being stored and has not been used within any historical site operations.

Fuel Tanks

3no. fuel storage tanks are present in the inaccessible area to the north; however anecdotal evidence indicates no fuel has ever been stored within the tanks. Thirty one unspecified historical tanks are recorded within 500m of site, the closest of which lie 3m east from the site boundary. Table 2-2 presents the tanks within 50m of site.

Table 2-2 Summary of historical tanks within 50m of site

Land Use	Location	Date
4no. Tanks	3m E	1994, 1975
Unspecified tank	7mE	1992-1994
Unspecified tank	11m E	1975
Unspecified tank	47mE	1971-1992
Unspecified tank	48mE	1994
Unspecified tank	50mE	1971

2.3.8 Electrical Substations

1no. 11 kV electrical substation is present on site bounds in the northwestern corner (Plate 12).

3No. Electrical Generating Stations are recorded as present on site to the northeast of site which date from 1994 and 1975. 2No. Electricity substations are located within 16m east of site. An electricity transformer is located 16m east of the site boundary.

2.3.9 Asbestos Containing Materials

No evidence of asbestos containing materials were noted on the site walkover. However, given the age of the development on site asbestos containing materials below ground level cannot be discounted.

2.3.10 Waste & Landfill

No landfills are present on site, and no active or recent landfills are recorded within 500m of site. 4No. historical landfills are recorded within 500m of site, details are presented in Table 2-3.

Table 2-3 Summary of historical landfills 500m from site

Location	Details	Site Reference	Waste Type	Record	Operator
Edge of site	Uskmouth Power Station West Nash (Ash Lagoon, No.5 10-13, Uskmouth Power Station West Nash, West Nash, Newport	009/77	Industrial, Household, Liquid sludge	First- 31/12/1950 Last- 31/12/1977	Central Electricity Generating Board
5m SW	Uskmouth Power Station, Uskmouth, West Nash, Newport	009/77, 450	Industrial, Household, Liquid sludge	First- 31/12/1950 Last- 31/12/1977	Central Electricity Generating Board Southwestern Region
462m S	Uskmouth Power, Station East Nash, Land At South, West Of East Usk Lighthouse (landfill),	WDL/020/79, W897	Industrial, Commercial, Household	First- 31/12/1979 Last- 31/12/1983	International Power Plc

Location	Details	Site Reference	Waste Type	Record	Operator
	Uskmouth Power Station, West Nash, Newport		Environmental Permitting		Licence Holder: National Power Plc

Licensed waste sites

To the east and southeast of site 11No. licensed waste sites are recorded between 78m and 316m of the site. Licensed waste sites within 150m of site are detailed in Table 2-4.

Table 2-4 Summary of Licensed Waste Sites

Location	Details	Waste Management License No.	Waste Type	Record	Operator
78m E	Site Name: Uskmouth Power Station Landfill Site Address: West Nash, Newport, Gwent, NP18 2BZ	30172	Household, Commercial & Industrial Waste	Issued: 21/11/1995 Modified: 13/12/2000 Status: Surrendered	United Utilities Green Energy Ltd
79m E	Site Name: Uskmouth Power Station Landfill Site Address: West Nash, Newport, Gwent, NP18 2BZ	30214	Industrial Waste Landfill (Factory curtilage)	Issue Date: 22/03/2000 Status: Surrendered	A E S East Usk Ltd
121m SE	Site Name: Uskmouth Power Station Landfill Site Address: West Nash, Newport, Gwent, NP18 2BZ	30214	Industrial Waste Landfill (Factory curtilage)	Issue Date: 22/03/2000 Status: Surrendered	A E S East Usk Ltd

3.0 SUMMARY OF PREVIOUS INVESTIGATIONS

This section provides a summary of ground conditions encountered during previous phases of Geoenvironmental assessment adjacent to and surrounding the site. Table 2-5 summarises all the previous reports available to Tetra Tech. These reports are summarised for information only and the Client does not have reliance on the information provided.

Table 3-1 Summary of previous reports

Author	Title	Date
ERM	Uskmouth Power Station: GIR	July 2005
Soil Mechanics	Station 'A' Uskmouth Power Station, Newport, Volume 4, Photographs of the trial pits and core samples	September 2005
Soil Mechanics	Station 'A' Uskmouth Power Station, Newport, Volume 1, Factual Report on Site Investigation	November 2005
CL Associates	Station 'A' Uskmouth Power Station, Newport, Volume 3, Interpretive Environmental Report	November 2005
Soil Mechanics	Station 'A' Uskmouth Power Station, Newport, Volume 2, Geotechnical Interpretive Report	December 2005
ERM	Uskmouth Power Station: Phase II Site Investigation	February 2006
RPS/Tetra Tech	Updated Ground Investigation Factual and Interpretive Report	December 2023
Tetra Tech	Controlled Waters Detailed Quantitative Risk Assessment (CW-DQRA)	January 2024
Tetra Tech	Afon Wysg 1 BESS: Ground Investigation Factual Report	November 2024
RPS/Tetra Tech	Afon Wysg 1 BESS: Updated Preliminary Risk Assessment PRA	December 2024

Author	Title	Date
Tetra Tech	Afon Wysg 1 BESS: Ground Investigation Report	December 2024
Tetra Tech	Afon Wysg 1 BESS: Controlled Waters Detailed Quantitative Risk Assessment (CW-DQRA)	December 2024
Tetra Tech	Afon Wysg 1 BESS: Reactive Remediation Strategy Report	December 2024

The CLA Associates report, Volume 2, Interpretive Environmental Report and Soil Mechanics, Volume 3 report are summarised only, as they capture the Soil Mechanics Volume 1, Factual Report.

Similarly, only the Afon Wysg 1 BESS reports GIR (December 2024) and CW-DQRA (December 2024) by Tetra Tech will be summarised in the following section.

3.1.1 Uskmouth Power Station: GIR

ERM was commissioned by Uskmouth Power Company Ltd ('Uskmouth Power') to undertake an intrusive site investigation to assess the presence of buried asbestos containing material (ACM) at the site arising from historical waste disposal. Four areas of known or suspected landfilling had been identified within the wider Uskmouth Power Station site:

- Area A is located to the west of the Uskmouth B Unit, and appears to underlie the far western portion of the cooling towers site.
- Area B is located to the south-west of the Uskmouth B Unit, immediately south of the site.
- Area C is located to the north of Uskmouth B Unit, immediately north-east of the cooling tower site.
- Area D is located to the north west of the former location of Uskmouth Unit A, approx. 600m SW of the site.

A total of sixty six trial pits were advanced externally across the four areas on site (15 in Area A, 9 in Area B, 16 in Area C and 22 in Area D). The location of all areas of interest and trial pits are shown in Appendix C.

Three of the trial pits (A6, A7 and A15) were located within the site boundary of the cooling towers, towards the western end of the site.

Made Ground was encountered to depths of 2.9mbgl in A6, 1.5mbgl in A7, and 2.3mbgl in A15. Four samples were collected within the Made Ground and were analysed for asbestos containing materials (ACMs) and free asbestos fibres. Three samples did not contain asbestos. Trace (less than 0.001%) amounts of amosite asbestos fibres were detected in TP A7 at a depth of 0.1 to 0.2mbgl. The risk of asbestos within soils within the site boundary was considered to be low. However, higher concentrations of asbestos in soils were encountered on other areas of the wider Uskmouth site.

3.1.2 Station 'A' Uskmouth Power Station, Volume 3, Interpretive Environmental Report

CL Associates were instructed by Soil Mechanics to carry out a ground investigation and Environmental Interpretive Investigation at Uskmouth Power Station 'A'. The ground investigation comprised cable percussive boreholes, rotary cored boreholes, probe holes and trial pits. Soil samples were collected from all exploratory hole locations and groundwater samples were collected from 23no. boreholes with standpipe installations. The site was split into two sections, above and below +8m AOD.

Soil and Leachate

Above +8mAOD: Polychlorinated biphenyls and free cyanide were below the limits of detection. PAHS were found above the limits of detection at no significant concentrations. Trichloroethene, toluene and p/m-xylene exceeded their LoD within the southeastern corner of site.

Below +8mAOD: Metals are present within site, notably at the south and southeastern boundaries and to the northwest. PCBs and free cyanide were below the limit of detection in all soil samples. PAHs were above the LoD in soil across the site, with higher concentrations at the centre and west of site. No leachate results were reported above the LoDs.

Groundwater

Most metals were above the LoD, PCBs and sVOCs were below the LoD with exception to bis(2-ethylhexyl)phthalate which was above the LoD along the southern boundary. VOCs were all below the LoD.

Asbestos

Fifteen samples were screened for asbestos with no fibres detected.

A generic human health and generic controlled waters risk assessment for a commercial end use was carried out for the site. The levels of potential contaminants encountered do not pose a hazard to human health. Metals, benzo(a)pyrene, naphthalene and fluorene have the potential to cause pollution of controlled waters at the site. Metals and benzo(a)pyrene within the groundwater have the potential to pollute controlled waters.

CLA recommended that a further controlled waters risk assessment is carried out to assess the potential impact of contamination from contaminants of concern.

3.1.3 Station 'A' Uskmouth Power Station, Newport, Volume 2, Geotechnical Interpretive Report

Volume 2 presents geotechnical interpretation of the findings of the ground investigation detailed in Section 2.4.2. 12no. previous investigations were undertaken within the wider site between 1947 and 1975, however these are not available to Tetra Tech at this time.

The ground investigation encountered Made Ground in all locations at thicknesses between 0.30m and 11.30m and were typically described as loose to medium dense becoming dense to very dense very silty gravelly fine to medium SAND of PFA with many cobbles and boulders, with layers of demolition rubble, gravel, clay and reinforced concrete encountered. Underlying the Made Ground alluvium was encountered at thicknesses between 0.10m and 13.60m, typically described as firm locally stiff mottled brown slightly sandy slightly organic CLAY/SILT, with bands of sand encountered. River terrace deposits were encountered underlying the alluvium at thicknesses between 0.10m and 4.00m, typically described as dense silty sandy gravel with many cobbles. Underlying the superficial deposits is the Mercia Mudstone, encountered as a weathered layer with weak but competent rock underneath. The geotechnical parameters concluded from the Ground Investigation are presented in Table 2-6.

Table 3-2 Summary of Geotechnical Parameters

Parameter	Made Ground	Cohesive Alluvium	Granular alluvium	River Terrace Deposits
SPT 'N' values	6 - 50	1 - 44	4 - 38	29 - >50
Undrained Shear Strength – Cu (kPa)	-	5 – 100	-	-
Angle of Friction (°)	25 - 28	-	36 - 38	-
Bulk Density (Mg/m ³)	1.3 – 1.5	1.6 - 1.8	1.7 – 1.9	2 – 2.1
Permeability Tests - K (m/sec)	5.5 x 10 ⁻⁵ to 7.8 x 10 ⁻⁸	5.7 x 10 ⁻⁷ to 1.4 x 10 ⁻⁸	1.4 x 10 ⁻⁵ to 6.7 x 10 ⁻⁸	7.8 x 10 ⁻⁵ to 3.5 x 10 ⁻⁷
Atterberg Limits	-	LL: 25% - 71% PL: 17% - 40%	-	-
Natural Moisture Content (%)	-	22% - 70%	-	-
Volume Compressibility (m ² /MN)	-	0.3 – 1.5	-	-

The Mercia Mudstone was highly or completely weathered to a stiff to very stiff clay and increased in strength with depth. The Mercia Mudstone was divided into 4 zones ranging from completely weathered material to weak to moderately weak red brown mudstone. Rock strength was determined from point load tests on core recovered from boreholes. Point Load Index (Is(50)) in the range of 0.02 to 2.01 MPa was measured with an average of 0.25 MPa. An approximate UCS is in the range of 0.4 to 40.2 MPa, with an average value of 5MPa, and a bulk density of around 2.2 Mg/ m³ was reported.

Groundwater strikes were encountered in the majority of the boreholes and more than one groundwater level was encountered across site, within the Made Ground and Alluvium. Tidal fluctuations against groundwater was investigated using divers however little tidal variation was noted.

In accordance with BRE Special Digest (SD1):2005 and adopting the assessment procedure specified therein, the laboratory chemical test results indicate Design Sulphate Class DS-4 and Aggressive Chemical Environment Classification (ACEC) class AC-4.

Gas monitoring has recorded levels of methane up to 11.5% and levels of carbon dioxide up to 11 % were recorded. Flow volumes up to 4 litres per hour were recorded. Based on the levels of gas found by both this and the previous investigation it was recorded as necessary to include measures in the structure so that ingress of gas cannot occur.

3.1.4 Uskmouth Power Station: Phase II Site Investigation

A ground investigation was undertaken by ERM for Carron Energy across the wider Uskmouth site to establish baseline conditions and assess soil and groundwater contamination. The site works were undertaken in January 2005 and comprised thirty boreholes with installation of groundwater monitoring wells in 23no. exploratory hole locations.

Made Ground was encountered in all locations to a maximum depth of 5.0m bgl and comprised sand, ACMs, gravels and clays. Clay followed by sand and organic rich silts with bands of peat and gravel underlay the Made Ground in all locations to between 14m bgl and 22m bgl. Firm red mudstone was encountered in 5no. boreholes at depths between 18m bgl and 23m bgl.

Groundwater levels within the boreholes across site indicated each stratum is isolated; Made Ground and bedrock were not tidally influenced, and alluvial (TFD) deposits were tidally influenced.

The conceptual model indicated that potential sources of contamination relating to the site bounds in Afon Wysg 2 include generators, ash storage area, rail sidings, former fire training area, transformers, tanks, site drainage, ash disposal area. Current and future employees were considered at risk from direct contact and associated dermal exposure, ingestion and inhalation of dust. The pollutant linkage was considered viable in areas that are not covered by hard standing, confined spaces and the volatile nature of chemicals in source areas.

Impact on groundwater was considered a linkage due to the depth of water encountered in Made Ground and at the surface reaching the tidally influenced groundwater in alluvial deposits. The surface waters River Usk, Julian's Pill and the Severn Estuary were considered impacted by contamination at the site.

Analytical results for leachate samples indicated 56no. exceedances for the following chemicals: Arsenic, Chromium, Copper, Vanadium, Zinc, Naphthalene, Anthracene and Fluoranthene. This indicates a potential for impact to groundwater from dissolution of these analytes, although no exceedances were recorded of these chemicals from groundwater samples.

26no. samples exceeded assessment criteria in groundwater for arsenic, chromium, zinc, TPH(C12-16), TPH (C16-21), TPH (21-35), fluoranthene, anthracene and benzo(a)pyrene. 7no. of these exceedances were recorded in samples of groundwater in Made Ground with the remainder in the alluvial or mudstone strata.

No human health exceedances against commercial end use values were recorded out of the 116 soil and 2 drainage samples taken across the site for the human health risk assessment.

In summary, controlled waters (groundwater and surface water) were thought to be at risk from leaching of mobile contaminants and lateral migration of groundwater.

3.1.5 Updated Ground Investigation Factual and Interpretive Report

A geoenvironmental and geotechnical ground investigation and assessment was undertaken by RPS to support the development of a Battery Energy Storage System (BESS) for a parcel of land adjacent to site,

within former Uskmouth B Power Station, comprising the former coal stockyard area. A supplementary ground investigation was undertaken in early 2023 by TT.

The ground investigation comprised 6nr boreholes to a maximum depth of 10m bgl and 3no. hand dug pits to 0.1m bgl. Dual monitoring well installations were installed within the Made Ground and underlying TFD. Soil and groundwater samples were taken and analysed at a UKAS accredited laboratory for a range of contaminants.

Concentrations of contaminants in soil were above the LOD in both the RPS and TT GIs, but below the human health screening criteria for commercial end use. In addition, no asbestos was detected in any of the samples. Results suggested there is a low risk posed to human health from chemical contaminants and asbestos in soil. WAC testing undertaken by TT identified potential for leaching from a number of contaminants to a limited extent.

In groundwater, widespread contamination was identified for inorganic and organic contaminants including manganese, vanadium and boron with respect to relevant EQS and DWS. No hazardous substances were detected within the TFD, or in significant concentrations generally.

Exceedances of chloride, sulphate and possibly boron is likely related to the brackish or saline water within the TFD, which is expected to be in hydraulic continuity with the Severn and Usk estuaries, albeit at significant distance and low permeability.

From identified gas concentrations and flow rates from the single monitoring round undertaken on 20th July 2022, it is considered that the majority of the main development area (former coal stockyard considered as Characteristic Situation 1 (CS 1) (Made Ground) and CS2 (Tidal Flat Deposits) under the Wilson and Card (Situation A) classification. The CS2 classification is a result of elevated methane at one location in TFD. Based on the information, it is suggested that there may be a requirement for gas protection measures however the potential risk is relatively low.

3.1.6 Uskmouth Battery Energy Storage System (BESS): CW-DQRA

Following on from the 2023 supplementary groundwater investigation undertaken by TT within the former coal yard area, a CW-DQRA was commissioned by Private Energy Partners for the former coalyard adjacent to Afon Wysg 2 to evaluate the risks to environmental receptors elevated concentrations of metals and inorganic contaminants detected in groundwater.

A review of site investigation data and published literature informed the refinement of the site conceptual model in Section 2.4.3. The source was considered to be made ground present within the former coal stockyard area. Tidal Flat Deposits (TFD) beneath the site acts as the pathway for contaminant migration, although these deposits are classified as an unproductive aquifer by the BGS and NRW. Groundwater flow within the TFD beneath the site was demonstrated to flow towards the River Usk, which is considered the main receptor and receiving water for groundwater within the TFD.

Groundwater within the Glaciofluvial Deposits and Mercia Mudstone Group, which underlie the TFD, was ruled out as a receptor, due to the depth to these receptors beneath the TFD, beneath mean low water, and due to the lack of hydraulic continuity with any groundwater dependant ecosystems. Additionally, the Newport Wetlands located south-west of the site, are at a higher elevation than groundwater levels recorded on the site, and were not considered a viable receptor.

A quantitative risk assessment methodology utilising the probabilistic ConSim groundwater modelling software was used to calculate contaminant concentrations at the compliance point. A Level 1 to 3 assessment modelled the partitioning from soil to groundwater, pore water migration and dilution by the receiving groundwater, and natural attenuation within the underlying aquifer.

Two scenarios were modelled. Scenario 1 modelled the site in its baseline state, open to rainfall. Scenario 2 modelled the site with the constructed BESS and drainage system. The model was calibrated to observed site specific groundwater concentrations.

At the 250m compliance point, which was considered protective of the River Usk, predicted groundwater concentrations are not predicted to exceed water quality target criteria under Scenario 1, baseline conditions. Under Scenario 2, reduced infiltration, a reduction in the most likely predicted contaminant concentrations was observed at the compliance point. The risk to controlled waters was therefore thought to be low.

The results supported the findings of the GIR qualitative assessment, which considered that the closest receptors were too distant and that the attenuation of the contaminants would result in no risk to Controlled Waters; and that the construction of the BESS would result in betterment to groundwater quality, effectively capping the site.

The model underwent a sensitivity analysis, with modelled variations of key input parameters showing no exceedances at the 250m compliance point. The findings of the numerical modelling were considered robust, and the results of the DQRA were approved without comment by the NRW in February 2024

3.1.7 Afon Wysg 1 BESS Ground Investigation Report

A ground investigation and assessment was undertaken in the northeast of site in the former cooling towers area, to support in the development of a BESS. The ground investigation was undertaken in September 2024 and comprised 8no. cable percussive boreholes to a maximum depth of 10.45m bgl, 19no. trial pits, 9nr. concrete cores, 14no. window sample holes, permeability testing and 6no. return groundwater monitoring visits. Dual install monitoring well installations were installed within the Made Ground and TFDs. Soil and groundwater samples were collected during the site investigation and in 2no. rounds of the return visits. Samples were analysed for a wide range of contaminants and geotechnical laboratory testing.

The ground investigation identified Made Ground from surface in all locations to a maximum depth of 4m bgl, with varying locations and thicknesses of hardstanding and topsoil across site. Typically Made Ground comprised slightly clayey sandy GRAVEL and sandy gravelly CLAY or SILT. Tidal Flat Deposits underlies Made Ground in 16nr locations across site, encountered to a maximum depth of 10.45m bgl. TFD typically comprised a silty CLAY or clayey SILT. Bedrock was not encountered.

Soil and groundwater samples were collected and analysed at a UKAS/MCERTS accredited laboratory for a range of contaminants and geotechnical laboratory testing. A Geotechnical Design Report is being prepared by TT which will cover geotechnical considerations and risks to site.

With regard to the screening criteria for commercial end use, there were no exceedances identified in collected soil samples from Made Ground and natural strata. These results suggest that there is a low potential risk posed to human health from chemical contaminants in the sites current setting and for the end users for the proposed battery storage system.

Asbestos was identified in 13 out of 29 samples of Made Ground at a maximum total quantification of 0.310%. The 11 samples where asbestos quantification analysis recorded concentrations above the laboratory limit of detection were located across the whole site. The area around the historic chemical storage has the most concentrated cluster of exploratory locations detecting asbestos. This includes TP06 which found asbestos at three different depths (up to 1.30m bgl).

Groundwater contamination in the groundwater within the TFD has been identified across the former cooling towers area with widespread elevated inorganic and organic contaminants with respect to EQS and inorganic contaminants with regard to DWS. Hazardous contaminants have not been detected in groundwater within the Tidal Flat deposits.

Groundwater flow direction has been plotted through groundwater contour plots and shows a west, northwest direction. Tidal influence is negligible across site, likely due to the high fines content underlying site in the TFD.

Exceedances of chloride, sulphate and possibly boron are likely related to brackish or saline water within the Tidal Flats, which is expected to be in hydraulic continuity with the Severn and Usk estuaries, albeit at a significant distance, within a low permeability formation (high fines content). A surface water sample collected from the River Usk has elevated concentrations of Boron above those detected on site.

Exceedances of both water quality standards and drinking water standards of contaminants Manganese, Selenium, Nitrite, Ammonium and hazardous substances Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(123cd)perylene and Benzo(ghi)perylene lead to a CW-DQRA for the site.

Gas concentrations and flow rates from the six ground gas monitoring rounds undertaken consider that the site is classified as a CS2 under the Wilson and Card (Situation A) classification. The CS2 classification is due to the elevated Carbon Dioxide and Methane levels throughout. Gas protection measures in line with BS8485:2015+A1 2019 are required.

3.1.8 Afon Wysg 1 BESS Controlled Waters Detailed Quantitative Risk Assessment

A CW-DQRA was completed to evaluate the risks to Controlled Waters from elevated concentrations of metals, organic and inorganic contaminants beneath the proposed development of a proposed Battery Energy Storage System at Uskmouth B Power Station.

The source was considered to be Made Ground present beneath the former cooling towers area. Tidal Flat Deposits (TFD) beneath the site is acting as the pathway for contaminant migration, although these deposits are classified as an unproductive aquifer by the BGS and NRW. Groundwater flow within the TFD beneath the site has been demonstrated to flow northwest, towards the River Usk, considered the main receptor and receiving water for groundwater within the TFD.

Groundwater within the Glaciofluvial Deposits and Mercia Mudstone Group, which underlie the TFD was ruled out as a receptor, due to the depth to these receptors beneath the TFD, beneath mean low water, and due to the lack of hydraulic continuity with any groundwater dependant ecosystems.

A quantitative risk assessment methodology utilising the probabilistic ConSim groundwater modelling software was used to calculate contaminant concentrations at compliance points. A Level 1 to 3 assessment modelled the partitioning from soil to groundwater, pore water migration and dilution by the receiving groundwater, and natural attenuation within the underlying aquifer.

Current site conditions were created with conservative parameters. The model was also calibrated to observed site specific groundwater concentrations. At the 200m compliance point (Non-Hazardous Contaminants), which is the distance between the source area and the River Usk, predicted groundwater concentrations are not expected to exceed water quality target criteria under baseline conditions, except Benzo(a)pyrene.

Hazardous substances are not predicted to exceed the WQS at a theoretical compliance point immediately down hydraulic gradient of the source area, with the exception of Benzo(a)pyrene. However, raising levels and reduced infiltration to ground (no surface water infiltration will be incorporated into the design) lead to a second model (with reduced infiltration) which demonstrates no exceedance of Benzo(a)pyrene at the hazardous compliance point. This demonstrates that the construction of the BESS would result in betterment to groundwater quality, effectively capping the site. The risk to controlled waters was therefore thought to be low.

The model was subject to a sensitivity analysis, with modelled variations of key input parameters showing no exceedances at the compliance points. The findings of the numerical modelling are therefore considered robust, and the results were accepted by the NRW in January 2025.

4.0 GEOLOGY, HYDROGEOLOGY AND HYDROLOGY

4.1 GEOLOGY

Details of the geology underlying the site have been obtained from the following sources:

- British Geological Survey (BGS)
- BGS website (British Geological Survey, 2023)
- Environmental database (Groundsure™) presented in Appendix B.
- BR211 Indicative Radon Mapping (Scivyer, 2015);
- Coal Authority Interactive Mapper (The Coal Authority, 2023);

4.1.1 Made Ground / Artificial Ground

The BGS mapping records outline there are no artificial or Made Ground within 500m of the site, however Made Ground is anticipated to underlie site in association with historical site usage, including PFA storage and construction of the road and railway. Made Ground is associated with potentially contaminated material, unpredictable engineering conditions and instability.

4.1.2 Superficial Geology

The BGS mapping records the entirety of the site to underlain by strata associated with Tidal Flat Deposits of Clay and Silt, which are anticipated to consist of unconsolidated sediments, mainly mud and/or sand.

BGS lexicon lithological description states '*Tidal flat deposits, including mud flat and sand flat deposits, form extensive nearly horizontal marshy land in the intertidal zone that is alternately covered and uncovered by the rise and fall of the tide. They consist of unconsolidated sediment, mainly mud and/or sand. They may form the top surface of a deltaic deposit.*'

4.1.3 Solid Geology

The underlying bedrock strata is comprised of the Mercia Mudstone Group which is defined by the BGS lexicon 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 are widespread; thin sandstones are also present. Mid Triassic (Anisian) to latest Triassic (Rhaetian)*'.

4.1.4 Historical Borehole Logs

The Groundsure Report and British Geological Survey (BGS) interactive viewer shows the presence of 17No. boreholes which have been undertaken largely to the north and northeast of Uskmouth Power Station, with no boreholes within the site itself. 10No. of the borehole records are confidential and cannot be reviewed as part of this report. Of the 7No. which are available, 1No. borehole depth is unknown and 6No. range between 10-30m.

Table 4-1 – Summary of BGS Borehole Logs

Reference Number	Confidential	Name	Grid Reference	Distance and Direction from Site	Depth	Details
ST38SW18	Y	USKMOUTH B, GENERATING STATION. BORE H	332780, 183660	14m NE	-	-
ST38SW22	Y	NASH, NEWPORT CORP ELEC DEPT. 4	332370, 183590	66m W	-	-
ST38SW50	Y	USKMOUTH 275KV SUBSTATION 1	332310, 183590	81m W	-	1996
ST38SW15	Y	USKMOUTH B GENERATING STATION. BORE 11	332930 183790	105m W	-	-
ST38SW45	N	NEWPORT POWER STATION NO.4	332360 183650	126m W	19.81	Messrs Mouchel & Partners Drilled 1/8/47
ST38SW13	Y	USKMOUTH B GENERATING STATION. BORE 1	332740 183840	132m N	-	
ST38SW44	N	NEWPORT POWER STATION NO.3	332440 183690	144m NW	20.11	Messrs Mouchel & Partners 1947
ST38SW46	N	NEWPORT POWER STATION NO.5	332390 183680	148m NW	21.03	Messrs Mouchel & Partners 1947
ST38SW42	N	NEWPORT POWER STATION NO.1	332350 183670	148m W	21.51	Messrs Mouchel & Partners Ltd 1947
ST38SW47	N	NEWPORT POWER STATION NO.6	332400 183690	155m NW	-1	Messrs Mouchel & Partners Trial pit? 1947
ST38SW14	Y	USKMOUTH B GENERATING STATION. BORE 2	332820 183850	168m NW	-	Messrs Mouchel & Partners 1947
ST38SW43	Y	NEWPORT POWER STATION NO.2	332410 183720	181m NW	17.55	Messrs Mouchel & Partners

Reference Number	Confidential	Name	Grid Reference	Distance and Direction from Site	Depth	Details
						1947
ST38SW17	Y	USKMOUTH B GENERATING STATION. BORE D	332890 183860	185m NE	-	-
ST38SW33	Y	NEWPORT POWER STATION, LOE.333, 1-5	332450 183750	199m NW	-	-
ST38SW39	Y	USKMOUTH 1	332510 183860	229m NW	26.55	1988
ST38SW16	Y	USKMOUTH B GENERATING STATION. BORE B	332850 183920	243m NE	-	-
ST38SW24	Y	USKMOUTH B PUMPING STATION, C.E.G.B. 5	332380 183780	247m NW	-	-

4.1.5 BGS Soil Chemistry

The Groundsure Report provides Urban Soil Chemistry averages for soils within 50m of the site (source: Urban Soil and Soil Chemistry data provided by the British Geological Survey). The BGS estimated background soil chemistry provide the likely background concentration of the potentially harmful elements provided in the Table 2-8:

Table 4-2 – BGS Background Soil Chemistry Averages

Determinand	Soil Concentration Range	
	Minimum (mg/kg)	Max (mg.kg)
Arsenic	15	15
Cadmium	1.80	1.80
Chromium	60	90
Lead	100	100
Nickel	15	30
Bioaccessible Lead	60	60

There were no records for BGS estimated or measured urban soil chemistry.

4.2 HYDROGEOLOGY

4.2.1 Aquifer Classification

The Superficial Deposits (Tidal Flat Deposits) on and surrounding the site are designated as an unproductive aquifer. These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

The Bedrock strata on and surrounding the site are designated as 'Secondary B' which are predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

4.2.2 Groundwater Vulnerability

Guidance released by the EA (Environment Agency, March 2017) states that activities that have the potential to affect the quality or quantity of groundwater must prevent groundwater pollution. All groundwater is vulnerable to pollution, and some geological formations are more vulnerable than others. The risks of groundwater pollution from any given activity depend in part on:

- The physical, chemical and biological properties of the underlying soil and rocks;
- Depth and quality of soil;
- The presence of glacial sediment and other materials – known as 'drift' deposits; and,
- Depth of the unsaturated zone.

All of the above affect how groundwater is more or less vulnerable to pollution, with type of vulnerability generally one of the following:

- Intrinsic vulnerability – this relates to the physical characteristics, it includes soil type, presence of superficial soils, or rock type; and,
- Specific vulnerability – this relates to the effect of the proposed activity including any contaminant and consequent risk to groundwater.

A review of the Groundwater Vulnerability Maps for Wales has revealed that the bedrock strata is categorised as 'Secondary Aquifer – medium' for the majority of the site and 'Secondary Aquifer – Low' to the east of the site, largely along the West Nash Road. The Tidal Flat Deposits are classified as being low and medium vulnerability.

Medium vulnerability soils are defined as being *'able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits'*

Low vulnerability soils are defined *'as areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability'*.

4.2.3 Groundwater Source Protection Zones

The EA defines groundwater Source Protection Zones (SPZs) around identified abstractions to aid the assessment of risk to groundwater or abstraction sources from development. SPZs have three subdivisions and bespoke SPZs are defined for all major abstraction sources intended for human consumption or food use, e.g. boreholes and springs. These sub-divisions are defined as follows:

- SPZ1 – Inner protection zone - defined as the 50-day travel time from any point below the water table to the abstraction source. This zone has a minimum radius of 50 metres;
- SPZ2 – Outer protection zone - defined by a 400-day travel time from a point below the water table. This zone has a minimum radius of 250 or 500 metres around the abstraction source, depending on the size of the abstraction;

- SPZ3 – Source catchment protection zone - defined as the area around an abstraction source within which all groundwater recharge is presumed to be discharged at the abstraction source.

The site is not shown to be situated within a Natural Resource Wales (NRW) defined groundwater SPZ.

4.2.4 Depth to Groundwater and Anticipated Groundwater Flow Direction

Local groundwaters are likely to be influenced by the historical redevelopments and alterations in topography within the general area.

Considering the history of the site and the presence an inland river being located directly to the north and west of the site, it is difficult to ascertain the accurate direction of groundwater flow, however, due to topographic changes on the site, depth to groundwater, and tidal fluctuation, groundwater flow direction is likely to vary. General groundwater flow directions are anticipated to be towards the River Usk and Severn Estuary, therefore anticipated to be mostly in a westerly and/or north-westerly direction, as evidenced by groundwater contour plots for adjacent sites (former coalyard and former cooling towers areas).

4.2.5 Groundwater Abstractions

An email on Thursday 6th February 2025 from Natural Resources Wales (NRW) confirmed that there are no groundwater abstractions within 2km of site.

It should be noted that abstractions of less than 20m³/d are classified as Private Water Supplies (PWS) and do not require an abstraction licence from NRW. Therefore, smaller abstraction boreholes may not be recorded.

4.2.6 Water Framework Directive

According to the Water Framework Directive (WFD) the site is located within Usk Devonian Old Redstone (GB409026201700) groundwater body which is classified by the WFD in 2017 as:

- Overall Rating: Good
- Chemical Rating: Good
- Quantitative Rating: Poor

4.3 HYDROLOGY

Details of the hydrology of the area have been obtained from the following sources:

- MAGIC interactive mapping website (DEFRA, 2023);
- Google Earth Pro Software (Google, 2024),
- Environmental database (GroundsureTM) GS-9KF-AMV-KOY-CS6,.

4.3.1 Watercourses

The Groundsure report and Google Earth Imagery show a surface water features located on site, which comprise an unnamed stream which extends from the west of site to the central area and an unnamed lagoon to the west of site, which is fed by an unnamed stream to the south.

The site is located within the convex bank of the River Usk, which is located c. 400m north and 600m west. Juan's Reen is located to the east of the sites access road and flows into the River Usk, An attenuation pond

is present immediately south of site. Several unnamed streams are located within 500m of site, to the west, south and east. Several lagoons/lakes are also located to the south/southeast of the site.

The site is divided by two Water Framework Directive (WFD) surface water body concernments. A river water body catchment in the west and northern portion of the site, Monks Ditch- source to Wainbridge River Catchment (GB109056026850), known as East Reen operational catchment. The central area and western portion of the site is located within a Coastal Catchment, known as Usk below Abergavenny operational catchment.

The Natural Resources Wales Water Watch Map Gallery shows that the site is located with the Usk catchment which is classified under the Water Framework Directive (WFD) Cycle 3 for Overall Water Body and Chemical Status as “Good” for 2015-2021 inclusive.

No WFD surface water bodies are located within the site however two WFD surface water bodies are located outside of the site, including the transitional water body ‘Usk’ (GB530905415404) and the river ‘ Monk Ditech source to Wainbridge (GB109056026850) which have an overall ‘moderate’ rating.

4.3.2 Surface Water Abstractions

The Groundsure Report shows there are no current surface water abstractions are recorded within 1km of the site boundary. 1No. historical record is located <1km for of an annual abstraction of 20,000m³. Full details of the records are detailed in Table 2-9.

A follow up email on Thursday 6th February 2025 from Natural Resources Wales (NRW) confirmed that there are no surface water abstractions within 2km of site.

Table 4-3 – Summary of Surface Water Discharge Consents within 200m of the site.

Location & Direction	Licence No	Details	Source	Point	Easting, Northing	Max Daily Volume	Original Start date
1.13km North East	20/56/72/0040	Evaporative Cooling	EAW Surface Water	Lagoon at Alpha Steel	3333650, 184750	320m ³	26/04/1995

4.3.3 Discharge Consents

The Groundsure Report outlines that there are 20 records of licensed discharges to controlled water within 500m of the site, of which 8No. are ‘effective’. Table 2-10 outlines details of 1No. surface water discharge consent located in the site boundary (surrendered) and 2No. records of consents within 100m. All other consent records within 500m of the site are presented in Appendix B.

Table 4-4 – Summary of Surface Water Discharge Consents within 200m of the site.

Location and Direction	Address	Details	
Located to the NE of the site.	USKMOUTH POWERSTATION, WEST NASHROAD, NEWPORT, GWENT, NP182BZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: NPSWQD005104 Permit Version: 1 Receiving Water: RIVER USK	Status: SURRENDERED UNDER EPR 2010 Issue date: 22/01/2009 Effective Date: 01/02/2009 Revocation Date: 20/12/2011

Location and Direction	Address	Details	
48m North	Severn Power Station, WEST NASHROAD, Newport, SOUTH EAST WALES, NP182BZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: AN0260501 Permit Version: 4 Receiving Water: RIVER USK (ESTUARY)	Status: Effective Issue date: 10/11/2014 Effective Date: 17/11/2014 Revocation Date: -
95m South	AREA IN FRONT OF USKMOUTH POWER STN, USKMOUTH NEAR NEWPORT	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AN028420101 Permit Version: 1 Receiving Water: UNNAMED FRESHWATER DITCH	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV Issue date: 13/07/1998 Effective Date: 13/07/1998 Revocation Date: 29/01/2003

4.3.4 Pollution Incidents and Prosecutions

Data sourced from Natural Resource Wales and the Groundsure Report shows there was 11No. Pollution Incidents and Prosecutions within 500m of the site. On site there has been 1No. pollution incident reported on site and 7No. within 200m by NRW which are presented in Table 2-11. The remaining pollution incidents are presented in Appendix B.

Since 2006, this database no longer includes Category 3 and 4 incidents.

Table 4-5 – Summary of Pollution Incidents and Prosecutions within 250m of the site.

Location and Direction	Details	
On site	Incident Date: 26/09/2001 Incident Identification: 32995 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
23m Northeast	Incident Date: 13/06/2001 Incident Identification: 8896 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
48m N	Incident Date: 06/12/2001 Incident Identification: 47028 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
115m Northeast	Incident Date: 14/05/2001 Incident Identification: 5598 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

Location and Direction	Details	
115m Northeast	Incident Date: 30/04/2001 Incident Identification: 3881 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
115m Northeast	Incident Date: 09/07/2001 Incident Identification: 15321 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
192m Northeast	Incident Date: 14/06/2013 Incident Identification: 1122507 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

4.4 RADON

Mapping provided by UK Radon was consulted and indicates that the site is located in an area where less than 1% of properties are above the action level for radon. This statement is supported by the Groundsure Report (Appendix B) which confirms that the site is in a low probability radon area. As such, radon protection measures are not considered necessary on the site.

4.5 HISTORICAL MINING

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

One historical BritPit is recorded 84m northwest of site relating to the Uskmouth Power Station Ash Plant producing PFA.

4.5.1 Non-Coal Related Mining

The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

The BGS states '*underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.*'

4.6 BGS RECORDED MINERAL SITES

With reference to the Environmental Database (Groundsure™) and the BGS Geoindex database the following BGS recorded mineral site are recorded within 1km of the site.

Table 4-6 – Summary of BGS Recorded Mineral Sites within 1km of the site.

Site Name	Reference and Status	Type	Commodity	Distance and Direction from Site
Uskmouth power Station Ash Plant	Ceased	Power station which produces Desulphogypsum and, or, Pulverised Fuel Ash or Furnace Bottom Ash Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority.	Pulverised-Fuel Ash	84m NW
Uskmouth power Station Ash Plant	Ceased	Power station which produces Desulphogypsum and, or, Pulverised Fuel Ash or Furnace Bottom Ash Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority.	Pulverised-Fuel Ash	84m NW

4.7 SURFACE GROUND WORKINGS

Surface ground workings are historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled. 1No. feature is reported by the GroundSure report within 250m of the site which is an unspecified discussed pit dating to 1964. There are an additional 3No. surface ground workings within 500m of the site boundary, 1No. adjacent to Fiftoots Point and 2no to the northeast.

5.0 UNEXPLODED ORDNANCE

Based on freely available mapping data from Zetica UXO (Zetica UXO, 2008), the site is located within a Low Risk Area with regards to Unexpected Ordnance (UXO). A 'Low Risk' is defined by Zetica as:

"Low risk regions are those with a bomb density of up to 10 bombs per 1000 acres. These areas are considered to have a significant but low UXB risk. In general, further action to mitigate the risk is considered prudent, although not essential. Care is required when assessing the risk for specific site where the risk may be higher because of local wartime activity."

6.0 SITE HISTORY

6.1 INTRODUCTION

The historical development of the site and surrounding area has been assessed using information available from historical Ordnance Survey (OS) maps within the Groundsure Report for the site which is presented in Appendix B of this report.

In the context of the summary of historical development of the surrounding area, the descriptions are limited to within approximately 500m of the site boundary, unless specified in the following section.

6.2 SITE HISTORY

6.2.1 Detailed Analysis of Site History

Table 5-1 provides a detailed account of the review of available OS mapping coverage and historical aerial imagery for the site and general area dating back to 1882.

Table 6-1 – Summary of Historical Data

Map Date & Scale	Within Site Boundary	Surrounding Area
1882 OS Map (1:10,560) and 1882 OS Map (1:2,500)	The earliest available maps indicate that the site is covered by agricultural land. A track road is present in the southeast. A second track road crosses the central part of site broadly trending north to south.	Surrounding the site are mainly agricultural fields with interspersed residential dwellings, the closest of which is a farm labelled Red Barn. River Usk is present to the north and west. Thieves Pill is present to the northwest and Julian's Pill to the northeast. Juan's Reen is present immediately east of site. A track road is present to the southwest which enters the southeast portion of site before trending west.
1885 OS Map (1:2,500) and 1900 OS Map (1:10,560)	Site is still largely covered by agricultural land. A GWR Railway is now present in the north of site, broadly trending northeast-southwest.	GWR East Usk Branch railway enters site from the northeast and curves around to trend northeast southwest across the north of site. Breakwaters are present across the northern bank of the River Usk. Further development is now present surrounding the railway.
1920-22 OS Map (1:10,560) and 1949-1950 Map (1:10,560)	No significant changes	There have been no changes recorded in the surrounding area.
1964 OS Map (1:10,560) and 1947 and 1951-53 OS Map (1:2,500)	Some development has occurred within the site are, potentially fencing and track roads. The track road has been extending northwards through the south southeast portion of site.	There has been significant development to the north of site comprising many buildings of Uskmouth Power Station, the largest labelled as 'works'. A camp has been erected to the south labelled 'West Nash Camp'.

Map Date & Scale	Within Site Boundary	Surrounding Area
1954 – 1969 OS Map (1:1,1250)	There have been no changes recorded within the site boundary.	Residential development has increased significantly in all surrounding areas. Red Barn farmhouse to the east of the site is no longer present.
2001 OS Map (1:10,000) and 2010 OS Map (1: 10,000)	The site intersects an area to the north labelled as an Electricity Generating station.	Further industrial development has taken place to the north of site, along with an ash pond being constructed to the south. The south also shows the development of roadways. The Sailing Club is now present to the northwest.
2010 OS Map (1:10,000)	Site largely remains the same, potential evidence of 4no. train tracks through site from northwest to southeast. West Nash Road and the site access track are now in the current layout.	Newport Weland Nature Reserve is now present to the south of site.
2024 OS Map (1: 10,000)	Current site layout. Various water bodies are now present within the boundary.	Further development of industrial buildings with associated infrastructure has taken place to the north of the site and water bodies to the south.

6.2.2 Summary of Site History

The earliest available OS mapping coverage for the area (dating back to 1882) shows the site as agricultural land, with the first mapping evidence of Uskmouth Power Station being developed between 1950 and 1964. The Uskmouth A (500m SW) unit construction commenced in the 1940s and was demolished in 2002. It was a coal fired unit with twelve boilers and four 60MW generator sets. The Uskmouth B (immediately SW) unit construction commenced in the 1950s and is currently undergoing demolition. It was a coal fired unit with three 110MW generator sets.

The surrounding site has undergone various changes and developments since the first available mapping in 1882, with farmhouse buildings being located to the immediate east of the site, and residential buildings to the north. Uskmouth Power Station was developed during the 1950s.

Previous reports (ERM, 2006) and anecdotal evidence from a site worker indicates the presence of an historical fire training area within the western extents of the current PFA storage area until the 1990s, where the area became a place for contractor cabins until the PFA store was built in 2008. No further details of the fire training area are available.

Severn Power Station comprises two combined cycle gas turbine (CCGT) generator units with a capacity of 850MW. Construction commenced in 2010, on the site of the former Uskmouth A unit. The plant has been mothballed since 2020. Preceding this the site has not undergone any significant changes with exception to the construction of GWR East Usk railway.

7.0 ENVIRONMENTAL DATABASE SEARCH

7.1 INTRODUCTION

Regulatory authority information relevant to the site and its surroundings has been obtained from the undertaking of an environmental database search (Groundsure™). The information is summarised below, and the environmental database records are enclosed in Appendix B. Distances stated are approximate and are taken from the boundary of the site to the database recorded entries.

The following summary is generally limited to locations within 250m of the site boundaries unless it is considered that installations or activities beyond that range could potentially have an impact on the site or be affected by the redevelopment of the site.

7.2 POLLUTION CONTROLS

Table 6-1 details incidents within 250m of site.

Table 7-1 – Summary of Pollution Controls within 500m of the Site

Type	Details	
Integrated Pollution Controls	8no. IPCs on site. 1no. IPC 115m NE of site. On site permit numbers: BA9436 (1998), BE3979 (1998), BK4561 (2001), BQ3835 (2002), BY1310 (2004), BY3207 (2004), BY9604 (2005), BZ9604 (2005) Off site permit number: AA2640 (1993)	
Licensed Industrial Activities (Part A(1))	18no. licensed activities within 250m of site all in association with Uskmouth Power Station. Processes include combustion, burning fuels in appliances, producing inorganic chemicals and other mineral activities including storing PFA.	
Licensed Pollutant Release (Part A(2)/B)	None recorded.	
Licensed Discharges to controlled waters	One on site: Treated sewage to River Usk – Permit no. NPSWQD005104 and surrendered in 2010. Two discharges off site; sewage to River Usk 48m N (Permit Number: AN0260501) and Unspecified discharge to River Usk 95m SE (AN028420101).	
Pollutant Release to Surface Waters (Red List)	None recorded.	
List 1 Dangerous Substances	None recorded.	
List 2 Dangerous Substances	None recorded.	
Pollution Incidents	One on site, six off site.	On site: 2001, dust, Minor air impact only.
		23m NE: 2001, dust, minor air impact only.
		48m N: 2001, minor air impact only.
		115m NE: 14/05/2001, dust, minor air and land impact only.
		115m NE: 30/04/2001, dust, minor air impact only.

Type	Details
	192m NE. 2013, dust, minor air impact only.

7.3 WASTE

A summary of records pertaining to waste disposal, management and transfer facilities are presented in Table 6-2.

Table 7-2- Summary of Waste Facilities within 250m of the Site

Facility Type	Location	Details
BGS Recorded Landfill	None recorded.	
Active or Recent Landfill	None recorded.	
Historical Landfill (LA/mapping records)	None recorded.	
Historical Landfill (EA/NRW Records)	On site	Waste Licence: Yes Site Reference: 009/77 Waste Type: Industrial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: WU1/L/NAT002 Licence Issue: 01/06/1977 Licence Surrender: 13/08/2001
	5m SW	Waste Licence: Yes Site Reference: 009/77, 450 Waste Type: Industrial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01/06/1977 Licence Surrender: -
Historical Waste Sites	None recorded.	
Licensed Waste Sites	78m E, 79m E	Site Name: Nash Sewage Treatment Works Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Operator: United Utilities Green Energy Ltd Waste Management licence No: 30172

Facility Type	Location	Details
	121m SE	Uskmouth Power Station Landfill Industrial Waste Landfill (Factory curtilage) Operator: A E S East Usk Ltd Waste Management licence No: 30214
Registered Waste Treatment or Disposal Sites	None recorded.	
Active Registered Waste Transfer Stations	None recorded.	

Full details of further waste exemptions are outlined within Groundsure Report within Appendix B.

7.4 HAZARDOUS SUBSTANCES

The following table outlines records relating to the storage and use of Hazardous Substances within 250m of the site boundary.

Table 7-3 – Summary of Hazardous Substances within 500m of the Site

Type	Details
Control of Major Hazards Sites (COMAH)	None recorded
Regulated Explosive Sites	None recorded
Notification of Installations Handling Hazardous Substances (NIHHS)	Located 187m NE, Application reference number: No Details Application status: Approved Application date: No Details Address: SIMEC Oil and Chemical Ltd, Liberty Steel, Corporation Road, Newport, Gwent, Wales, NP19 4XE

The Groundsure report indicates that there are no COMAH/NIHHS sites or regulated explosive sites within 250 m of the site boundary.

7.5 ENVIRONMENTALLY SENSITIVE AREAS

Table 7-4 – Summary of Environmentally Sensitive Areas

Designation	Location and Name	Details
Nitrate Vulnerable Zone (Surface Waters)	None recorded.	

Designation	Location and Name	Details
Nitrate Vulnerable Zone (Groundwater)		None recorded.
Special Protected Areas	108m SW	Severn Estuary (Wales) Species of interest- Tundra swan; Common shelduck; Gadwall; Common redshank; Greater white-fronted goose; Dunlin. Habitat Description- Coastal sand dunes, Sand beaches, Machair; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins); Improved grassland; Salt marshes, Salt pastures, Salt steppes Data source: Natural Resources Wales
Sites of Special Scientific Interest	On Site	Newport Wetlands
Sites of Special Scientific Interest	108m SW	Severn Estuary
Sites of Special Scientific Interest	250m N	River Usk
Sites of Special Scientific interest Impact Risk Zone	On site	Developments requiring consultation: Infrastructure, air pollution, combustion processes
	On site	Developments requiring consultation: All applications affecting greenspace, farmland, semi natural habitats or landscape features. Infrastructure including pipes, cables, transport proposals. Wind and Solar proposals. Minerals, Oil and Gas planning applications – quarries. Rural non-residential, Residential, Rural Residential, Waste Landfill.
	On site	Developments requiring consultation: All applications affecting greenspace, farmland, semi natural habitats or landscape features. Infrastructure including pipes, cables, transport proposals. Wind and Solar proposals. Minerals, Oil and Gas planning applications – quarries. Rural non-residential, Residential, Rural Residential, Waste Landfill.

Designation	Location and Name	Details
Special Areas of Conservation	108m SW	Name: Severn Estuary (Wales) Features- Subtidal sandbanks; Estuaries; Intertidal mudflats and sandflats; Reefs; Glasswort and other annuals colonising mud and sand; Cord-grass swards; Atlantic salt meadows; Shifting dunes; Sea lamprey; River lamprey; Allis shad; Twaite shad. Habitat- Salt marshes, Salt pastures, Salt steppes; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins) Data source: Natural Resources Wales
Special Areas of Conservation	250m N	River Usk Estuaries; Intertidal mudflats and sandflats; Atlantic salt meadows; Rivers with floating vegetation often dominated by water-crowfoot; Beech forests on neutral to rich soils; Mixed woodland on base-rich soils associated with rocky slopes; Western acidic oak woodland; Bog woodland; Alder woodland on floodplains; Sea lamprey; Brook lamprey; River lamprey; Allis shad; Twaite shad; Atlantic salmon; Bullhead; Freshwater pearl mussel; White-clawed (or Atlantic stream) crayfish; Lesser horseshoe bat; Otter.
Adopted green belt		None recorded.
Green belt		None recorded.
Nature Reserve	On site	Newport Wetlands
Local Nature Reserve		None recorded.
Designated Ancient Woodland		None recorded on site however 1.823km NE there is an ancient semi natural woodland.

Table 6-4 shows that the site is not located within any other environmentally sensitive areas within 250m of the site boundary.

7.6 FLOODING

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200

chance) or High (greater than or equal to 1 in 30 chance). The absence or presence of flooding potential at the site is summarised in Table 6-5.

Table 7-5 - Summary of Flooding Potential

Designation	Details	
Risk of Flooding from Rivers and Seas	The site itself is largely low risk however, to the east of the site, along the access road is marked as 'medium' risk and an area to the northwest is also marked as 'medium' risk. The majority of the Uskmouth site is marked at 'low' risk, with scattered areas marked as 'medium' risk. The banks of the River Usk are marked as 'High'.	
Historical Flood Events	None recorded	
Flood Defences	None recorded	
Areas Benefiting from Flood Defences	On site, 17m NE, 90m W, 207m SW, 210m SW	
Flood Storage Areas	None recorded.	
River and coastal flooding - Flood Zone 2	One site - Fluvial /Tidal Models- comprises the majority of the site.	
River and coastal flooding - Flood Zone 3	One site - Fluvial /Tidal Models- Marked to the west of the site, along the access road and the southwest of the site.	
Flooding at Surface (from Groundwater)	Yes	Negligible risk on site and within 50m
Flooding below Ground Level (from Groundwater)	Yes	Low risk on site and within 50m
Flooding from Surface Waters	Yes	1 in 30 year, 0.10 – 0.30m

7.7 INDUSTRIAL LAND USE

The following section outlines the surrounding industrial land use within 250m and considered to be relevant to the site and the proposed development.

Table 7-6 - Summary of Industrial Land Use

Land Use	Detail
Contemporary Trade Directory Entries (on site)	None recorded.
Contemporary Trade Directory Entries (surrounding area)	None recorded.
Fuel Station Entries	None recorded.

7.8 SUMMARY OF ENVIRONMENTAL SETTING

There are no recorded active integrated pollution controls within 250m of the site. There are numerous historical and current landfill and waste sites within 250m of the site. There are no records of COMAH and NIHHS sites within 500 m of the site boundary.

There are records of Sites of Special Scientific Interest and a Nature reserve on site. The site is not designated to be within a Special Area of Conservation, a Special Protected Area, adopted Green Belt or within a NVZ (Nitrate Vulnerable Zone) with the nearest record being located 108m northwest of the site within the Special Areas of Conservation.

There are no listed buildings located within 250m of the site.

The site is classified as being at a high risk from flooding by rivers and seas due to the distance located from the nearest watercourse. The site is classified to not be within Flood Zones 2/3 in the area. The site is at a negligible risk from groundwater flooding at both surface level and below ground level, with the highest risk of flooding from surface waters within 50m of the site is 1:30 year floods (greater than 1.0m). There are no known flood defences within 250m of the site, nor any historical flooding events recorded within 250m.

There are no fuel station entries within 500m of the site, with the nearest historical garage (ID 8563) being located 430m southeast of the site, dated 1966.

8.0 PRELIMINARY GEOTECHNICAL ASSESSMENT

8.1 INTRODUCTION

Based on the information identified in the preceding sections, the sections below summarise the anticipated ground conditions and associated geotechnical assessment for the site, including highlighting the potential constraints for future development. Actual ground conditions will need to be confirmed and augmented through ground investigation in due course.

8.2 ANTICIPATED GROUND CONDITIONS & RECOMMENDATIONS

On account of its historic use, a coverage of Made Ground is anticipated across the site. Based on previous works undertaken by others, Made Ground may be up to 5.0m thick, over between approximately 10m and 20m thick superficial deposits comprising Tidal Flat Deposits and Glaciofluvial Deposits over solid geology comprising Mercia Mudstone.

8.2.1 Shrinking and Swelling Clay

The potential hazard presented on site by clays within the Tidal Flat Deposit exhibiting shrink-swell behaviour is rated as 'Low Risk', with ground conditions predominantly of medium plasticity. This should be confirmed by ground investigation.

8.2.2 Compressible Deposits

From previous ground investigations and reports in areas adjacent to the site, the Tidal Flat Deposits are known to be very soft to soft and may result in over settlement of foundations, under loads, or with groundwater changes. The risk from the Groundsure Report is rated as 'Medium' and detailed *"Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site."* This should be confirmed with a ground investigation.

8.2.3 Dissolution Features

The potential hazard of dissolution features being present under site is rated as 'Negligible'. The Mercia Mudstone Group is an impermeable layer at a depth of c. 15m to 20m. The bedrock is not prone to dissolution or at a depth to impact any development.

8.2.4 Running Sands

The potential hazard of running sands being present underlying site is rated as 'Moderate' on site. Running sands conditions are likely present under site within sandy layers in the TFD. Previous investigations have encountered sandy layers under site. As such, this should be confirmed with a ground investigation.

9.0 CONCEPTUAL SITE MODEL AND PRELIMINARY GROUND CONTAMINATION RISK ASSESSMENT

9.1 OVERVIEW

The information presented in the previous sections of this report have been collated and evaluated to establish an initial qualitative risk assessment for the site. A conceptual model of the site has been generated based on information derived from this Phase 1 Geo-environmental Assessment, supplemented by information attained during the WYG site walkover.

The site has been considered with regard to current UK legislation and guidance, namely Part 2A of the Environmental Protection Act 1990 and the Contaminated Land (England) Regulations 2006, as amended, and in accordance with current UK good practice guidelines (for example BS10175:2011).

In general, ground contamination can occur through several causes, particularly from historical operations and activities. Contamination can result from either on-site sources or from on-site migration from off-site sources, leading to long term liabilities under recent legislation for any site owner.

For a risk of pollution or environmental harm to occur as a result of ground contamination, all of the following elements must be present:

- Source, i.e. a substance that is capable of causing pollution or harm;
- Pathway, i.e. a route by which the contaminant can reach a target; and
- Receptor (target), i.e. something which could be adversely affected by the contaminant.

If one of these elements is absent there can be no significant risk. If all are present then the magnitude of the risk is a function of the magnitude and mobility of the source, the sensitivity of the receptor and the nature of the migration pathway.

9.2 CURRENT SITE USAGE AND PROPOSED DEVELOPMENT

The site is currently not operational and is used as a site access road and PFA storage area. Development plans for the site comprise the installation of a battery energy storage system (BESS) with associated infrastructure works. The proposed BESS will be built on land that is currently used for the storage of pulverised fuel ash (PFA) bounded by concrete walls.

9.3 CONCEPTUAL SITE MODEL

The key source, pathways and receptor model is outlined in Table 8-1 within the context of potential development of the site.

Table 9-1 Summary of Potential S-P-Rs

Potential Hazard	Associated Contaminants	Plausible Pollutant Linkage?
Elevated concentrations of contaminants in Made Ground soils beneath site	Heavy Metals, PAHs, asbestos, ground gas	Yes – MG is expected to be encountered in association with the road and rail construction, as well as Electrical Generating Stations to the north.
Electrical Generating Stations/Transformer/pylons	PCBs, chlorinated solvents, oils	Yes – The oldest record of electrical generating station is dated to 1975, before the ban of using PCBs and may be in shallow soils underneath site. Surface water, groundwater and soil may be contaminated by run off oil. Solvents are highly mobile, volatile and water soluble.
Fire Training Ground	PFAS, metals including chromium and lead	PFAS are highly mobile contaminants which may enter soil and groundwater and migrate large distances.
Rail Sidings	Asbestos, metals, organics, PCBs, herbicides, sulphates	Yes, however potentially slow migration due to high fines. Heavy metals likely within top horizons of soil, potential localised asbestos. Localised fuel spills may have entered Made Ground and groundwater, or drainage systems.
PFA storage	Metals, sulphates, organics (PAHs), inorganics (sulphates), asbestos	Yes, surface water run off with water soluble and highly mobile contaminants to enter soils and groundwater.
Landfills immediately adjacent to site: Industrial, Household, Liquid sludge	Ground gas (methane, CO ₂), organics, inorganics, asbestos, metals	Yes – potential for ground gas to migrate through to surrounding strata. Potential for contamination of surface water through leachate breakouts.

Potential Hazard	Associated Contaminants	Plausible Pollutant Linkage?
		Potential to contaminate groundwater where it flows through site. High fines indicates high adsorption to soil and low mobility for some contaminants.

9.3.1 Potential Contaminant Pathways

The following contaminant pathways are considered to potentially be active based on the current site use and proposed development:

Human Exposure Pathways

- Direct dermal contact or ingestion of soils, or inhalation of dust and/or vapours (i.e. human interaction with surface and sub-surface materials).

Environmental Pathways

- Leaching and horizontal or vertical migration through the unsaturated ground, either through permeable sub-surface materials and/or preferential pathways;
- Lateral and vertical migration of groundwater through permeable sub-surface materials and/ or preferential pathways;
- Leaching to surface water run-off/drainage;
- The migration and accumulation of gases or vapours through permeable sub-surface materials and/ or preferential pathways.

9.3.2 Potential Receptors at Risk

The following potential receptors have been identified:

Human Health

- Current site users
- Future site users; and
- Site workers during the redevelopment of the site.

Wider Environment

- Tidal Flat Deposits;
- Nearby surface receptors (River Usk, Julian's Reen, Severn Estuary)
- Plant uptake; and
- Building Infrastructure and supply pipes.

9.4 GROUND CONDITIONS RISK ASSESSMENT

The source, pathway, receptor linkages identified in the previous section are outlined and a qualitative risk assessment shown in the following tables.

The risk assessment considers the site within an area context and assesses potential risks to identified receptors in relation to the existing site setting and the proposed development. CIRIA C552 has been used to define the risk rating presented in the Qualitative Risk Assessment matrix, the methodology for which is presented in Appendix D.

Table 9-2 Qualitative Risk Assessment

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix G						
Source	Pathway	Receptor	Consequence of risk being realised	Probability of risk being realised	Risk Classification	Potential Risk Management Requirements
Made Ground; PFA storage	Direct dermal contact, inhalation, leaching, airborne migration	Current Site Users	Medium	Unlikely	Low Risk	PFA is stored within a tin chamber with one access point. No site users are required to work in this area. PFA is not moved and vegetation prevents dust.
		Construction Workers		Likely	Moderate Risk	Potential for dust whilst removing PFA store from site. Risk can be reduced using a dust suppression system and appropriate PPE when disposing of PFA during construction.
		Future Site Users		Unlikely	Low Risk	PFA will be removed as part of the development removing any risk to future site users.
	Vertical and lateral migration through Made Ground and TFD	Groundwater (TFD)	Medium	Likely	Moderate Risk	Concrete pad under entirety of storage area cuts pathway to underlying soils, however there is potential for runoff to migrate into the groundwater table.
		Surface Waters; River Usk, Severn Estuary, Newport Wetlands				Potential for surface water runoff captured in drainage system, enters stream which would leach into groundwater, which is in hydraulic continuity with River Usk.

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix G							
Source	Pathway	Receptor	Consequence of risk being realised	Probability of risk being realised	Risk Classification	Potential Requirements	Risk Management
Made Ground; PFAS	Leaching, lateral and vertical migration	Surface Waters: River Usk, Severn Estuary	Medium	Likely	Moderate Risk	Potential for highly mobile and persistent PFAS compounds in underlying soils to migrate to the groundwater table. Potential for PFAS in rainwater to enter drainage system from PFA storage runoff and enter surface waters.	Intrusive ground investigation and surface water sampling of the drainage channel, lagoons and stream outlet is recommended.
		Groundwater (TFD)					
		Plant Uptake	Mild	Low Likelihood	Low Risk	Potential for plants to uptake PFAS contaminated soils is low due to concrete base over historic FTA, however potential for migration off site and impact in wider site vegetation.	
	Direct dermal contact, ingestion	Current and Future Site Users	Medium	Low Likelihood	Low Risk	Current FTA source pathway is removed due to concrete base in PFA storage and asphalt road surrounds. BESS to be raised using imported infill material, removing pathway from PFAS contaminated soils to site users.	
		Construction Workers	Medium	Likely	Moderate Risk	Potential for PFAS contamination during removal of PFA storage and construction of BESS through dermal contact and ingestion of contaminated soil and inhalation through dust in disturbed soils. Intrusive ground investigation is recommended.	

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix G

Source	Pathway	Receptor	Consequence of risk being realised	Probability of risk being realised	Risk Classification	Potential Risk Management Requirements
Made Ground; construction of rail sidings and road	Direct contact, ingestion	Current Site Users	Medium	Unlikely	Very Low Risk	Railway currently not in operation, no site users in surrounds. Road is in use, asphalt in good condition. No evidence of fuel leaks or spillages during the site walkover.
		Construction workers	Medium	Low Likelihood	Low Risk	Potential for inhalation of dust during removal of rail sidings. Reduce risk through mitigation measures such as dust suppression and appropriate PPE such as an FFP3 filter mask.
	Leaching through lateral and vertical migration	Groundwater	Medium	Likely	Moderate Risk	Potential from historical leaks or spills along railway and road for contaminants to have migrated into shallow subsoil and leach into groundwater. Intrusive ground investigation is recommended.
		Surface Water; River Usk, Severn Estuary	Medium	Low Likelihood	Moderate/Low Risk	Potential for contaminants in groundwater to enter surface water receptors due to known hydraulic continuity in adjacent sites between superficial deposits (TFD) and River Usk. Surface water sampling of lagoons and exit stream is recommended.

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix G						
Source	Pathway	Receptor	Consequence of risk being realised	Probability of risk being realised	Risk Classification	Potential Risk Management Requirements
Asbestos Containing Materials (ACMs)	Inhalation	Current Site Users	Medium	Likely	Moderate Risk	ACMs not observed during the site walkover, however given the history of site, PFA storage, and adjacent sites being positive for ACMs, it is recommended to undertake intrusive ground investigation and screen soil samples for asbestos.
		Construction Workers		Likely	Moderate Risk	
		Future Site Users		Unlikely	Low Risk	
Electrical Generating Stations/Transformer/pylons	Direct dermal contact, ingestion, inhalation	Current and Future Site Users, construction workers	Medium	Low Likelihood	Moderate/Low Risk	Previous reports have encountered low concentrations of PCBs in shallow soils in areas adjacent to site, however, all substations have been removed within site bounds. Potential for PCBs are low given the age and re-use of the land since, however intrusive ground investigation is recommended.
	Leaching through lateral and vertical migration	Groundwater	Medium	Unlikely	Low Risk	Previous reports in adjacent areas have not encountered any PCBs in groundwater and surface water samples. PCBs are generally immobile and risk of migration is low. Groundwater and surface water sampling is recommended.
		Surface Water				

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix G						
Source	Pathway	Receptor	Consequence of risk being realised	Probability of risk being realised	Risk Classification	Potential Risk Management Requirements
Ground gas from landfills adjacent to site, Made Ground and alluvial deposits	Migration along preferential pathways and accumulation in enclosed spaces Inhalation	Current Site Users	Severe	Unlikely	Moderate to Low Risk	Currently no frequent site users on site and no buildings.
		Future Site Users	Severe	Low Likelihood	Moderate Risk	Proposed buildings for the BESS are on raised ground however migration pathways may be present in the proposed development.
		Building Infrastructure	Severe	Low Likelihood	Moderate Risk	Intrusive ground investigation is recommended with ground gas monitoring to classify site and identify requirement for ground gas protection measures.

10.0 CONCLUSIONS AND RECOMMENDATIONS

10.1 GROUND CONTAMINATION

The site is set in the southwestern extent of the wider Uskmouth Power Station with development beginning in the early 1900s with the construction of GWR East Usk Branch Railway, which runs through the northern extent of site from east to west. Development of the site and wider Uskmouth Power Station is shown from 1950s to the current day. A fire training ground is believed to be present in the southwestern extent of the current PFA storage area, before being a contractor's cabin area and the current PFA storage area since 2008.

A site walkover was undertaken by a Tetra Tech representative. The walkover did not highlight any evidence of Asbestos Containing Materials (ACMs), evidence of fuel leakages along the road, or any visual evidence of contamination within the site bounds. However, the walkover is only representative of conditions at that time and site conditions may have varied historically. Previous investigations adjacent to the site and within the wider Uskmouth Power Station area have found concentrations of a range of contaminants both within both the soil and groundwater sampled.

Anecdotal evidence and previous reports indicate the presence of a fire training area in the southwest of the current PFA storage area, which may be indicative of potential PFAS compounds underlying the site within the soils from previous use of Aqueous Film Forming Foams (AFFFs). Due to their high mobility and persistence, it is likely any PFAS compounds could have migrated from this source into the groundwater table. In current site conditions, any PFAS captured in the PFA store has the potential to be within surface water run-off from the PFA store and into the drainage channel along the southern perimeter.

The lagoons to the southwest of site were specified as disused pits and dug in 1964 with little information regarding their usage, therefore potential historical contamination cannot be ruled out. Water in the lagoons in the current day is a result of the drainage water captured by the PFA storage, therefore may contain PFAS and other contaminants which are then flowing towards the River Usk and Severn Estuary.

The railway in the north of site was constructed in the early 1900s and heavy metals and other contaminants associated with the construction may be present in the subsoil. The construction of the road and drainage system may have resulted in contaminants entering the soil. There are potential for leaks in the drainage system which may result in captured runoff water entering the ground and migrating to the groundwater table. Ground gas may be present underneath the site from immediately adjacent landfills.

10.2 GEOTECHNICAL

On account of its historic use, a coverage of Made Ground is anticipated across the site. Based on previous works undertaken by TT and others across the wider site, there may be up to 15m of clay overlying highly weathered bedrock and weak competent rock of the Mercia Mudstone Formation.

Potential geotechnical challenges at the site include:

- In ground obstructions;
- Running Sands conditions whilst excavating;
- Poor founding conditions and compressibility of TFD under loads;

- Perched groundwater within TFD.

10.3 RECOMMENDATIONS

It is likely that the recommended works outlined below will be required to support the future development of the site:

- 1) A ground investigation to provide the following:
 - Confirmation of ground conditions
 - Assess presence/absence of contamination, including the presence of any PFAS compounds in shallow soils and groundwater within the area of site indicated to have been used as a fire training ground, as well as in groundwater down hydraulic gradient of site
 - Assess contaminant concentrations within the surface water features on site including drainage, lagoons and exit stream
 - Assess groundwater flow direction through a series of groundwater monitoring boreholes
 - Undertake ground gas monitoring.
 - Undertake permeability testing within Made Ground and TFD strata
 - Assess geotechnical properties of shallow soil and bedrock as required
- 2) An Interpretive Ground Investigation Report including a defined Conceptual Site Model (based on site specific data) and a qualitative risk assessment (Compliant with UK LCRM guidance and CIRIA 552 methodology) within the context of a commercial land use scenario.
- 3) An interpretive geotechnical assessment of ground properties with respect to the proposed development of the site, including assessment of likely solutions for foundations, floor slabs and hard surface areas, and feasibility of drainage.

Based on our understanding of the wider site setting it is considered likely that the follow reports may also be required.

- 4) Ground Investigation Report with a potential recommendation for a Geotechnical Design Report (GDR) and Earthworks Specification
- 5) A Controlled Waters Detailed Quantitative Risk Assessment (CW-DQRA) may be required to assess impacts of contaminants, including PFAS, to the River Usk, Newport Wetlands and Severn Estuary receptors.
- 6) Remediation Strategy and Discovery Strategy to demonstrate the effective removal of pollutant pathways identified as part of the ground investigation and to outline procedures in the event that further contamination is encountered.
- 7) Asbestos management plan to outline procedures to manage risks associated with asbestos containing materials and asbestos fibres during the development phase.

11.0 REFERENCES

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PLATES

APPENDIX A: REPORT CONDITIONS

APPENDIX A – REPORT CONDITIONS

GEO-ENVIRONMENTAL DESKTOP REVIEW

This report is produced solely for the benefit of AW2 Energy Storage Limited and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report is based on a study of readily accessible referenced historical records. Some of the opinions are based on unconfirmed data and information and are presented in good faith without exhaustive clarification. Where ground conditions are discussed but no physical site test results are available to confirm this, the report must be regarded as initial advice only, and further assessment should be undertaken prior to detailed activities related to the site. Where test results undertaken by others have been made available these can only be regarded as a limited sample.

Whilst confident in the findings detailed within this report because there are no exact UK definitions of these matters, we are unable to give categorical assurances that they will be accepted by Authorities or Funds etc. without question, as such bodies may have unpublished, often more stringent objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to Tetra Tech. In time improved practices or amended guidance may necessitate a re-assessment. The opinions expressed cannot be absolute due to the limitations of time and resources within the context of the agreed brief and the possibility of unrecorded previous use and abuse of the site and adjacent sites. The report concentrates on the site as defined in the report and provides an opinion on surrounding sites.

APPENDIX B: GROUNDSURE REPORT

Uskmouth Power Station - Afon WSYG 2

Order Details

Date: 18/12/2024
Your ref: 784-B070804
Our Ref: GS-EU7-KFQ-FZK-SRP

Site Details

Location: 332655 183558
Area: 6.9 ha
Authority: [Casnewydd - Newport City Council](#) ↗



Summary of findings

[p. 2 >](#) **Aerial image**

[p. 9 >](#)

OS MasterMap site plan

[p.14 >](#) **[Insight User Guide](#)** ↗

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	2	1	1	2	-
16 >	1.2 >	Historical tanks >	0	9	18	4	-
17 >	1.3 >	Historical energy features >	2	3	0	0	-
18	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	2	1	1	3	-
20 >	2.2 >	Historical tanks >	0	14	30	5	-
22 >	2.3 >	Historical energy features >	3	3	0	0	-
22	2.4	Historical petrol stations	0	0	0	0	-
23	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
24	3.1	Active or recent landfill	0	0	0	0	-
24	3.2	Historical landfill (BGS records)	0	0	0	0	-
25 >	3.3 >	Historical landfill (LA/mapping records) >	0	0	1	0	-
25 >	3.4 >	Historical landfill (EA/NRW records) >	1	1	0	1	-
26	3.5	Historical waste sites	0	0	0	0	-
26 >	3.6 >	Licensed waste sites >	0	0	5	6	-
29 >	3.7 >	Waste exemptions >	0	0	0	1	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
31 >	4.1 >	Recent industrial land uses >	3	15	32	-	-
34	4.2	Current or recent petrol stations	0	0	0	0	-
34 >	4.3 >	Electricity cables >	0	1	13	0	-
36	4.4	Gas pipelines	0	0	0	0	-
36	4.5	Sites determined as Contaminated Land	0	0	0	0	-



36 >	4.6 >	Control of Major Accident Hazards (COMAH) >	0	0	0	2	-
36	4.7	Regulated explosive sites	0	0	0	0	-
37 >	4.8 >	Hazardous substance storage/usage >	0	0	1	0	-
37 >	4.9 >	Historical licensed industrial activities (IPC) >	8	0	1	2	-
39 >	4.10 >	Licensed industrial activities (Part A(1)) >	0	0	18	0	-
41	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
41	4.12	Radioactive Substance Authorisations	0	0	0	0	-
42 >	4.13 >	Licensed Discharges to controlled waters >	1	1	4	14	-
45 >	4.14 >	Pollutant release to surface waters (Red List) >	0	0	0	3	-
45	4.15	Pollutant release to public sewer	0	0	0	0	-
45 >	4.16 >	List 1 Dangerous Substances >	0	0	0	2	-
46 >	4.17 >	List 2 Dangerous Substances >	0	0	0	1	-
46 >	4.18 >	Pollution Incidents (EA/NRW) >	1	3	4	3	-
47	4.19	Pollution inventory substances	0	0	0	0	-
48	4.20	Pollution inventory waste transfers	0	0	0	0	-
48	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
49 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
50 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
52 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
53	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
53	5.5	Groundwater vulnerability- local information	None (within 0m)				
54	5.6	Groundwater abstractions	0	0	0	0	0
55 >	5.7 >	Surface water abstractions >	0	0	0	0	1
55	5.8	Potable abstractions	0	0	0	0	0
55	5.9	Source Protection Zones	0	0	0	0	-
55	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
57 >	6.1 >	Water Network (OS MasterMap) >	16	14	33	-	-



62 >	6.2 >	Surface water features >	1	4	19	-	-
63 >	6.3 >	WFD Surface water body catchments >	2	-	-	-	-
63 >	6.4 >	WFD Surface water bodies >	0	0	1	-	-
64 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
65 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
66	7.2	Historical Flood Events	0	0	0	-	-
66	7.3	Flood Defences	0	0	0	-	-
66 >	7.4 >	Areas Benefiting from Flood Defences >	1	1	3	-	-
67	7.5	Flood Storage Areas	0	0	0	-	-
68 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
69 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
70 >	8.1 >	Surface water flooding >	1 in 30 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding >					
72 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
73 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	1	0	2	0	6
74 >	10.2 >	Conserved wetland sites (Ramsar sites) >	0	0	1	0	0
76 >	10.3 >	Special Areas of Conservation (SAC) >	0	0	2	0	0
76 >	10.4 >	Special Protection Areas (SPA) >	0	0	1	0	0
77 >	10.5 >	National Nature Reserves (NNR) >	1	0	0	0	1
77	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
77 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	1
78	10.8	Biosphere Reserves	0	0	0	0	0
78	10.9	Forest Parks	0	0	0	0	0
78	10.10	Marine Conservation Zones	0	0	0	0	0
78	10.11	Green Belt	0	0	0	0	0
79	10.12	Proposed Ramsar sites	0	0	0	0	0



79	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
79	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
79	10.15	Nitrate Sensitive Areas	0	0	0	0	0
80	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
81 >	10.17 >	SSSI Impact Risk Zones >	3	-	-	-	-
82	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
83	11.1	World Heritage Sites	0	0	0	-	-
83	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
83	11.3	National Parks	0	0	0	-	-
83	11.4	Listed Buildings	0	0	0	-	-
84	11.5	Conservation Areas	0	0	0	-	-
84	11.6	Scheduled Ancient Monuments	0	0	0	-	-
84	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
85 >	12.1 >	Agricultural Land Classification >	Grade 4 (within 250m)				
86	12.2	Open Access Land	0	0	0	-	-
86	12.3	Tree Felling Licences	0	0	0	-	-
86	12.4	Environmental Stewardship Schemes	0	0	0	-	-
86	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
87	13.1	Priority Habitat Inventory	0	0	0	-	-
87	13.2	Habitat Networks	0	0	0	-	-
87	13.3	Open Mosaic Habitat	0	0	0	-	-
87	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
88 >	14.1 >	10k Availability >	Identified (within 500m)				
89	14.2	Artificial and made ground (10k)	0	0	0	0	-
90	14.3	Superficial geology (10k)	0	0	0	0	-



90	14.4	Landslip (10k)	0	0	0	0	-
91	14.5	Bedrock geology (10k)	0	0	0	0	-
91	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
92 >	15.1 >	50k Availability >	Identified (within 500m)				
93	15.2	Artificial and made ground (50k)	0	0	0	0	-
93	15.3	Artificial ground permeability (50k)	0	0	-	-	-
94 >	15.4 >	Superficial geology (50k) >	1	1	0	0	-
95 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
95	15.6	Landslip (50k)	0	0	0	0	-
95	15.7	Landslip permeability (50k)	None (within 50m)				
96 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
97 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
97	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
98 >	16.1 >	BGS Boreholes >	0	1	16	-	-
Page	Section	Natural ground subsidence >					
100 >	17.1 >	Shrink swell clays >	Low (within 50m)				
101 >	17.2 >	Running sands >	Moderate (within 50m)				
102 >	17.3 >	Compressible deposits >	Moderate (within 50m)				
103 >	17.4 >	Collapsible deposits >	Negligible (within 50m)				
104 >	17.5 >	Landslides >	Very low (within 50m)				
105 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
107 >	18.1 >	BritPits >	0	0	2	0	-
108 >	18.2 >	Surface ground workings >	1	0	0	-	-
108	18.3	Underground workings	0	0	0	0	0
109	18.4	Underground mining extents	0	0	0	0	-
109	18.5	Historical Mineral Planning Areas	0	0	0	0	-



109	18.6	Non-coal mining	0	0	0	0	0
109	18.7	JPB mining areas	None (within 0m)				
109	18.8	The Coal Authority non-coal mining	0	0	0	0	-
110	18.9	Researched mining	0	0	0	0	-
110	18.10	Mining record office plans	0	0	0	0	-
110	18.11	BGS mine plans	0	0	0	0	-
110	18.12	Coal mining	None (within 0m)				
111	18.13	Brine areas	None (within 0m)				
111	18.14	Gypsum areas	None (within 0m)				
111	18.15	Tin mining	None (within 0m)				
111	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
112	19.1	Natural cavities	0	0	0	0	-
112	19.2	Mining cavities	0	0	0	0	0
112	19.3	Reported recent incidents	0	0	0	0	-
112	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
114 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
116 >	21.1 >	BGS Estimated Background Soil Chemistry >	6	2	-	-	-
116	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
117	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
118	22.1	Underground railways (London)	0	0	0	-	-
118	22.2	Underground railways (Non-London)	0	0	0	-	-
119	22.3	Railway tunnels	0	0	0	-	-
119 >	22.4 >	Historical railway and tunnel features >	6	1	9	-	-
120	22.5	Royal Mail tunnels	0	0	0	-	-
120	22.6	Historical railways	0	0	0	-	-



120 >	22.7 >	Railways >	6	1	1	-	-
121	22.8	Crossrail 2	0	0	0	0	-
121	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 20/05/2023

Site Area: 6.9ha



Recent site history - 2020 aerial photograph



Capture Date: 14/04/2020

Site Area: 6.9ha



Recent site history - 2016 aerial photograph



Capture Date: 19/07/2016

Site Area: 6.9ha



Recent site history - 2013 aerial photograph



Capture Date: 14/07/2013

Site Area: 6.9ha



Recent site history - 2000 aerial photograph

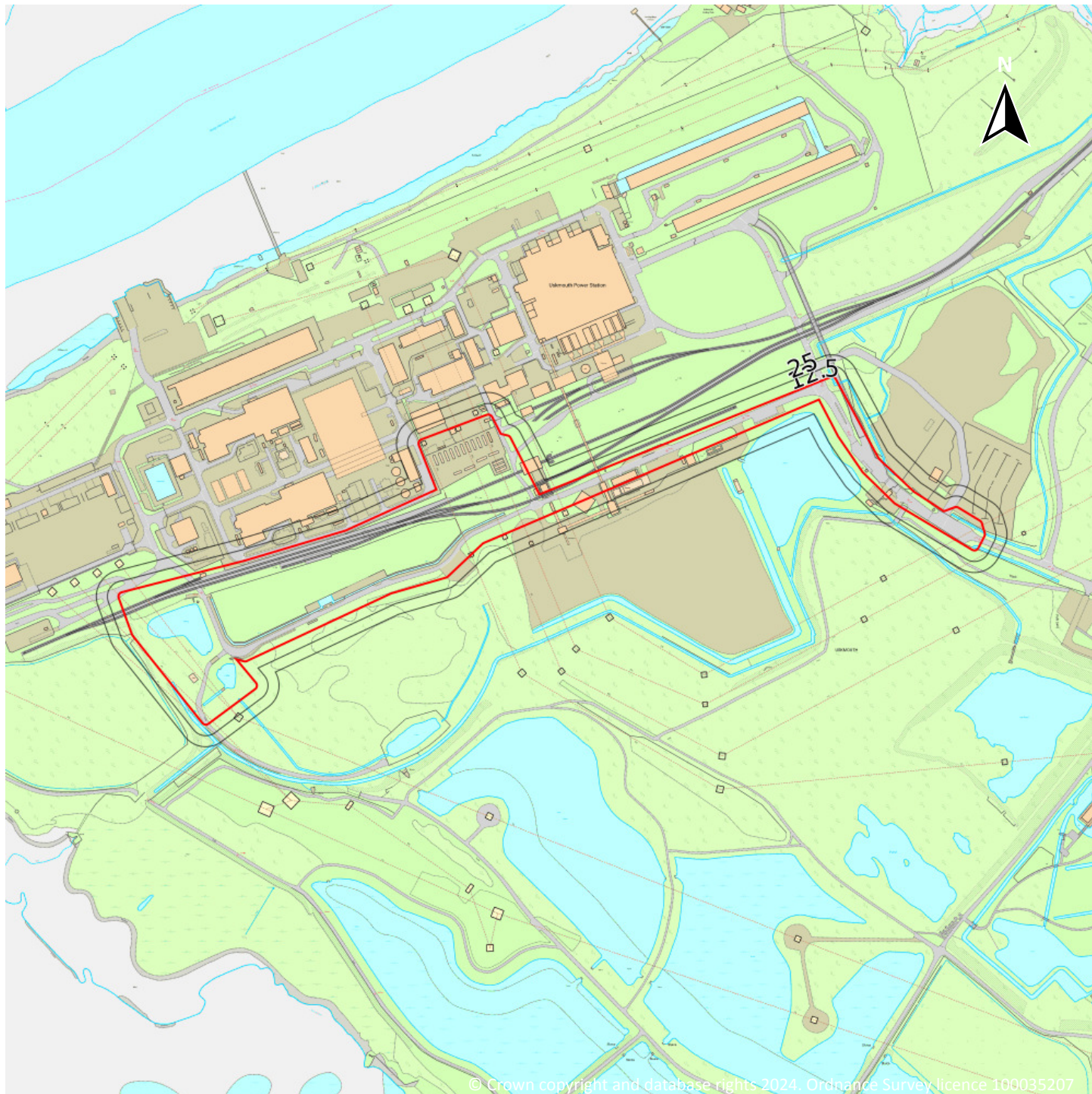


Capture Date: 21/07/2000

Site Area: 6.9ha



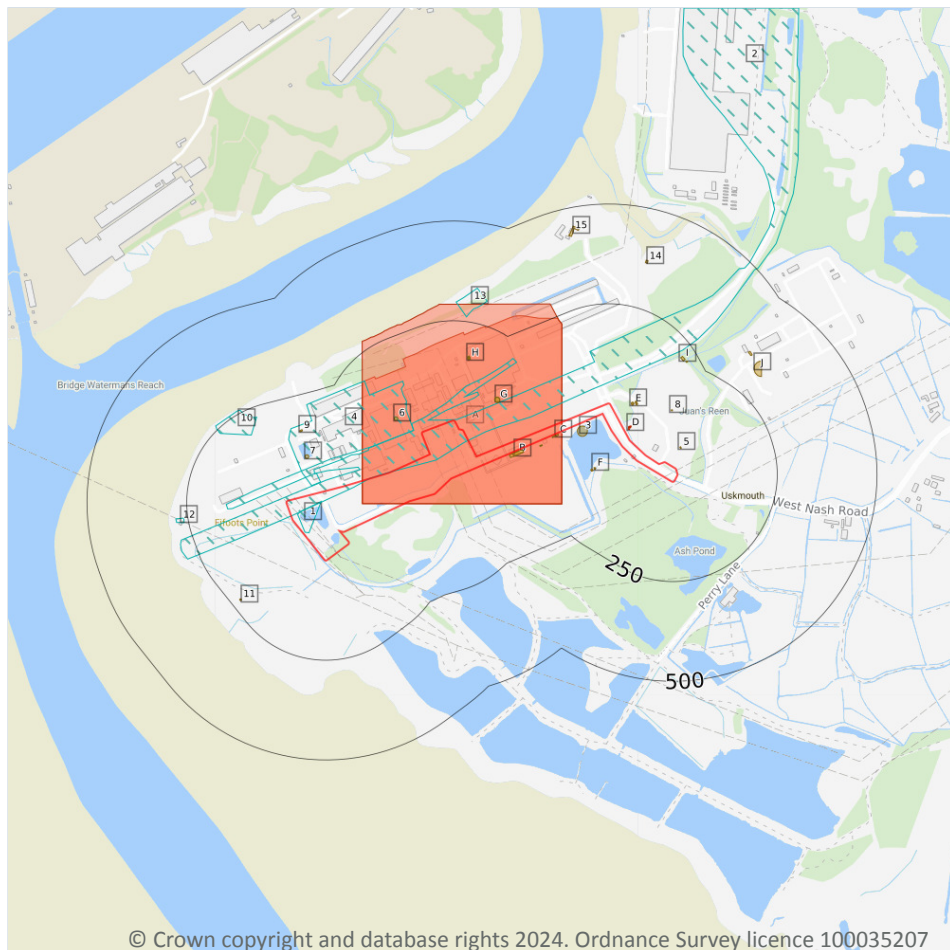
OS MasterMap site plan



Site Area: 6.9ha



1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

1.1 Historical industrial land uses

Records within 500m

6

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
1	On site	Unspecified Disused Pit	1964	1207720



ID	Location	Land use	Dates present	Group ID
2	On site	Railway Sidings	1964	1242848
4	22m W	Unspecified Works	1964	1195677
10	188m W	Magazines	1882	1199879
12	260m W	Unspecified Level	1922	1251992
13	262m N	Magazines	1882	1199878

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	31
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Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
B	3m E	Tanks	1994	199439
B	3m E	Tanks	1975	188535
C	3m E	Tanks	1994	200789
C	3m E	Tanks	1994	202789
3	7m E	Unspecified Tank	1992 - 1994	193747
C	11m E	Unspecified Tank	1975	185195
E	47m E	Unspecified Tank	1971 - 1992	187394
E	48m E	Unspecified Tank	1994	193846
5	50m E	Unspecified Tank	1971	185300
E	57m E	Tanks	1992 - 1994	192846
E	57m E	Unspecified Tank	1971	185299
E	58m E	Unspecified Tank	1971	185298
6	70m NW	Unspecified Tank	1956 - 1958	199375



ID	Location	Land use	Dates present	Group ID
F	86m E	Unspecified Tank	1957	185201
7	91m W	Unspecified Tank	1956 - 1958	201108
F	94m E	Unspecified Tank	1969 - 1971	194809
F	95m E	Sewage Tank	1956	178534
G	106m NE	Unspecified Tank	1969	196473
G	106m NE	Unspecified Tank	1975 - 1994	195827
8	126m E	Unspecified Tank	1969	182904
H	156m N	Tanks	1994	189778
H	158m N	Tanks	1994	186203
9	160m W	Tanks	1956 - 1969	190446
H	161m N	Tanks	1994	199530
I	212m NE	Unspecified Tank	1971	185296
I	218m NE	Unspecified Tank	1971	185297
11	224m SW	Unspecified Tank	1956 - 1969	198014
J	311m E	Unspecified Tank	1992 - 1994	194236
J	340m E	Tanks	1994	178259
14	365m NE	Sewage Tanks	1972	178442
15	429m NE	Cooling Tanks	1972	178550

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

5

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)



ID	Location	Land use	Dates present	Group ID
A	On site	Electricity Generating Station	1975	119849
A	On site	Electricity Generating Station	1994	121909
D	10m E	Electricity Substation	1992	109314
D	13m E	Electricity Transformer	1971	108331
D	16m E	Electricity Substation	1994	124231

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0
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Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0
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Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

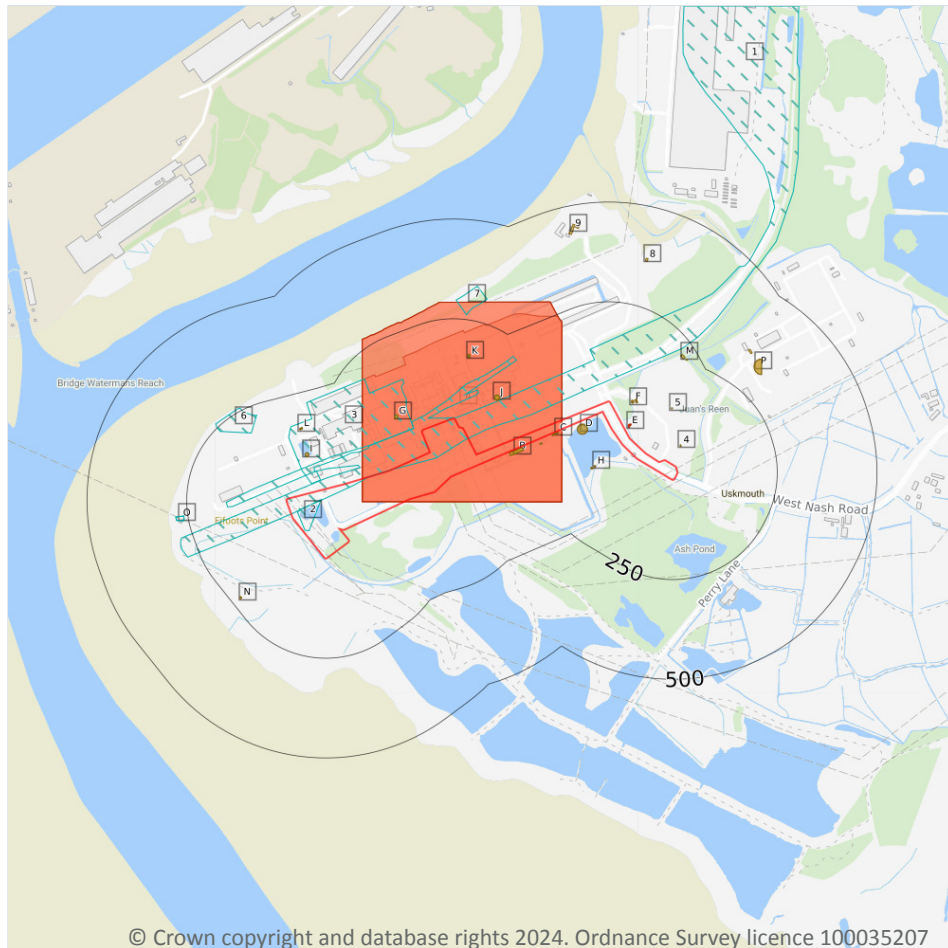
Records within 500m	0
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Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.



2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features

2.1 Historical industrial land uses

Records within 500m

7

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 19](#) >

ID	Location	Land Use	Date	Group ID
1	On site	Railway Sidings	1964	1242848
2	On site	Unspecified Disused Pit	1964	1207720
3	22m W	Unspecified Works	1964	1195677



ID	Location	Land Use	Date	Group ID
6	188m W	Magazines	1882	1199879
O	260m W	Unspecified Level	1922	1251992
O	260m W	Unspecified Level	1922	1251992
7	262m N	Magazines	1882	1199878

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	49
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Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 19 >](#)

ID	Location	Land Use	Date	Group ID
B	3m E	Tanks	1994	199439
B	3m E	Tanks	1994	199439
B	3m E	Tanks	1975	188535
C	3m E	Tanks	1994	200789
C	3m E	Tanks	1994	200789
C	3m E	Tanks	1994	202789
C	3m E	Tanks	1994	202789
D	7m E	Unspecified Tank	1994	193747
D	9m E	Unspecified Tank	1992	193747
C	11m E	Unspecified Tank	1975	185195
F	47m E	Unspecified Tank	1992	187394
F	47m E	Unspecified Tank	1971	187394
F	48m E	Unspecified Tank	1994	193846
4	50m E	Unspecified Tank	1971	185300
F	57m E	Tanks	1992	192846
F	57m E	Unspecified Tank	1971	185299



ID	Location	Land Use	Date	Group ID
F	58m E	Tanks	1994	192846
F	58m E	Unspecified Tank	1971	185298
G	70m NW	Unspecified Tank	1958	199375
G	70m NW	Unspecified Tank	1956	199375
H	86m E	Unspecified Tank	1957	185201
I	91m W	Unspecified Tank	1956	201108
I	91m W	Unspecified Tank	1958	201108
H	94m E	Unspecified Tank	1969	194809
H	95m E	Unspecified Tank	1971	194809
H	95m E	Sewage Tank	1956	178534
J	106m NE	Unspecified Tank	1969	196473
J	106m NE	Unspecified Tank	1975	195827
J	108m NE	Unspecified Tank	1994	195827
J	108m NE	Unspecified Tank	1994	195827
5	126m E	Unspecified Tank	1969	182904
K	156m N	Tanks	1994	189778
K	158m N	Tanks	1994	186203
L	160m W	Tanks	1963	190446
L	160m W	Tanks	1956	190446
L	160m W	Tanks	1969	190446
L	160m W	Tanks	1958	190446
K	161m N	Tanks	1994	199530
M	212m NE	Unspecified Tank	1971	185296
M	218m NE	Unspecified Tank	1971	185297
N	224m SW	Unspecified Tank	1969	198014
N	224m SW	Unspecified Tank	1958	198014
N	224m SW	Unspecified Tank	1963	198014
N	224m SW	Unspecified Tank	1956	198014



ID	Location	Land Use	Date	Group ID
P	311m E	Unspecified Tank	1994	194236
P	311m E	Unspecified Tank	1992	194236
P	340m E	Tanks	1994	178259
8	365m NE	Sewage Tanks	1972	178442
9	429m NE	Cooling Tanks	1972	178550

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

6

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 19 >](#)

ID	Location	Land Use	Date	Group ID
A	On site	Electricity Generating Station	1994	121909
A	On site	Electricity Generating Station	1975	119849
A	On site	Electricity Generating Station	1994	121909
E	10m E	Electricity Substation	1992	109314
E	13m E	Electricity Transformer	1971	108331
E	16m E	Electricity Substation	1994	124231

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



2.5 Historical garages

Records within 500m

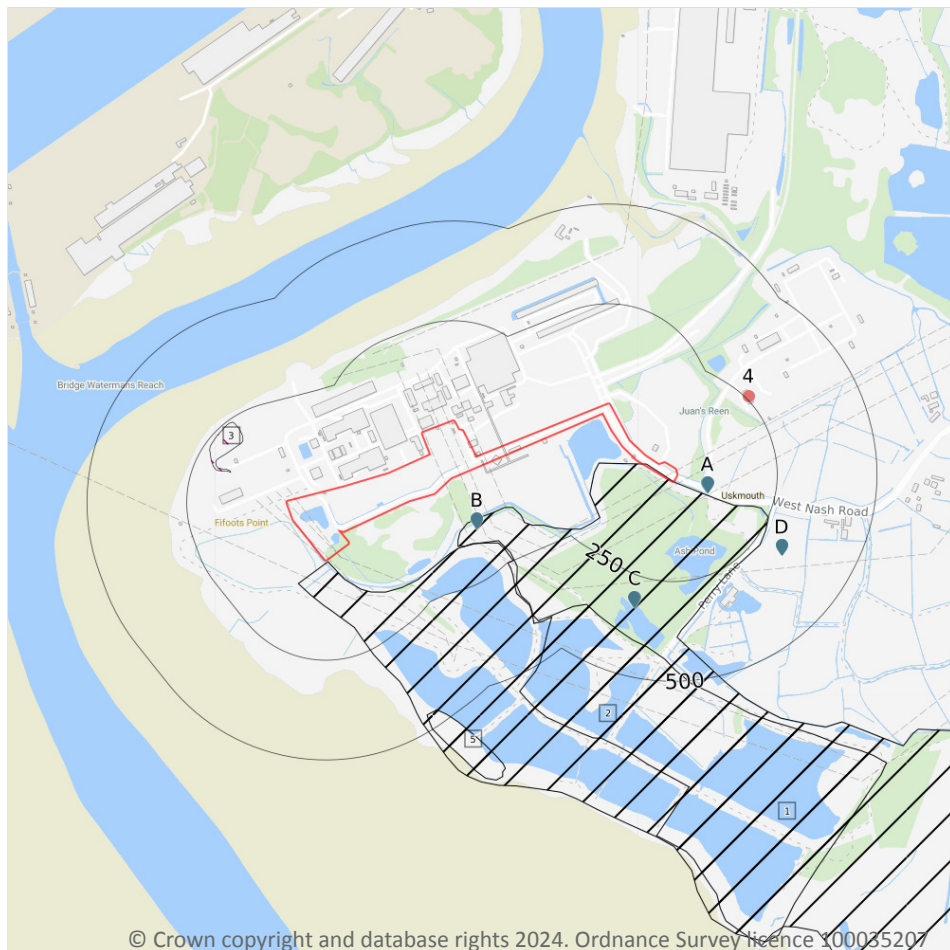
0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical landfill (LA/OS)
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

1

Landfill sites identified from Local Authority records and high detail historical mapping.

Features are displayed on the Waste and landfill map on [page 24 >](#)

ID	Location	Site address	Source	Data type
3	159m W	Refuse Tip	1962 mapping	Polygon

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m

3

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on [page 24 >](#)

ID	Location	Details		
1	On site	Site Address: Uskmouth Power Station West Nash (Ash Lagoon No.5 10-13, Uskmouth Power Station West Nash, West Nash, Newport Licence Holder Address: -	Waste Licence: Yes Site Reference: 009/77 Waste Type: Industrial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: WU1/L/NAT002 Licence Issue: 01/06/1977 Licence Surrender: 13/08/2001	Operator: - Licence Holder: Central Electricity Generating Board First Recorded 31/12/1950 Last Recorded: -
2	5m SW	Site Address: Uskmouth Power Station, Uskmouth, West Nash, Newport Licence Holder Address: 15 - 23 Oakfield Grove, Bristol	Waste Licence: Yes Site Reference: 009/77, 450 Waste Type: Industrial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01/06/1977 Licence Surrender: -	Operator: - Licence Holder: Central Electricity Generating Board South Western Region First Recorded 31/12/1950 Last Recorded: 31/12/1977



ID	Location	Details		
5	462m S	Site Address: Uskmouth Power Station East Nash, Land At South West Of East Usk Lighthouse (landfill), Uskmouth Power Station, West Nash, Newport Licence Holder Address: -	Waste Licence: Yes Site Reference: WDL/020/79, W897 Waste Type: Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: WU1/L/NAT003 Licence Issue: 03/01/1979 Licence Surrender: 22/11/2004	Operator: International Power Plc Licence Holder: National Power Plc First Recorded 31/12/1979 Last Recorded: 31/12/1983

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m	0
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Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m	11
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on [page 24 >](#)

ID	Location	Details		
A	78m E	Site Name: Nash Sewage Treatment Works Site Address: Nash S T W, Nash, Newport, NP18 2YH Correspondence Address: Alexandra Gate, Po Box 824, Rover Way, Cardiff, CF24 2SD	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WEL002 EPR reference: - Operator: United Utilities Green Energy Ltd Waste Management licence No: 30172 Annual Tonnage: 90000	Issue Date: 21/11/1995 Effective Date: - Modified: 13/12/2000 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified

ID	Location	Details		
A	78m E	Site Name: Nash Sewage Treatment Works Site Address: Nash S T W, Nash, Newport, Gwent, NP18 2YH Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: UNI007 EPR reference: EA/EPR/BP3995FP/S004 Operator: United Utilities Industrial Ltd Waste Management licence No: 30172 Annual Tonnage: 31495	Issue Date: 21/11/1995 Effective Date: 04/03/2004 Modified: 13/12/2000 Surrendered Date: 15/12/2005 Expiry Date: - Cancelled Date: - Status: Surrendered
A	79m E	Site Name: Nash Sewage Treatment Works Site Address: Nash S T W, Nash, Newport, Gwent, NP18 2YH Correspondence Address: -	Type of Site: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: UNI007 EPR reference: BP3995FP/S004 Operator: United Utilities Industrial Ltd Waste Management licence No: 30172 Annual Tonnage: 31495	Issue Date: 21/11/1995 Effective Date: 04/03/2004 Modified: 13/12/2000 Surrendered Date: 2.00512e+016 Expiry Date: 0 Cancelled Date: 0 Status: Surrendered
B	121m SE	Site Name: Uskmouth Power Station Landfill Site Address: West Nash, Newport, Gwent, NP18 2BZ Correspondence Address: -	Type of Site: Industrial Waste Landfill (Factory curtilage) Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: AES001 EPR reference: MP3795FG/S003 Operator: A E S East Usk Ltd Waste Management licence No: 30214 Annual Tonnage: 0	Issue Date: 22/03/2000 Effective Date: - Modified: - Surrendered Date: 2.00902e+016 Expiry Date: 0 Cancelled Date: 0 Status: Surrendered



ID	Location	Details		
B	121m SE	Site Name: Uskmouth Power Station Landfill Site Address: West Nash, Newport, Gwent, NP18 2BZ Correspondence Address: -	Type of Site: Industrial Waste Landfill (Factory curtilage) Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AES001 EPR reference: EA/EPR/MP3795FG/S003 Operator: A E S East Usk Ltd Waste Management licence No: 30214 Annual Tonnage: 0	Issue Date: 22/03/2000 Effective Date: - Modified: - Surrendered Date: 25/02/2009 Expiry Date: - Cancelled Date: - Status: Surrendered
C	309m SE	Site Name: Uskmouth Transfer Station Site Address: Uskmouth Transfer Station, Uskmouth Road, Uskmouth Power Station, Uskmouth, Gwent, NP6 2BZ Correspondence Address: -	Type of Site: Transfer Station taking Non-Biodegradable Wastes Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CAR037 EPR reference: MP3495FB/A001 Operator: Cardiff Bay Development Corporation Waste Management licence No: 30208 Annual Tonnage: 30000	Issue Date: 12/03/1998 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 2.00001e+016 Cancelled Date: 0 Status: Surrendered
C	310m SE	Site Name: Uskmouth Transfer Station Site Address: Uskmouth Transfer Station, Uskmouth Road, Uskmouth Power Station, Uskmouth, Gwent, NP6 2BZ Correspondence Address: -	Type of Site: Transfer Station taking Non-Biodegradable Wastes Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CAR037 EPR reference: EA/EPR/MP3495FB/A001 Operator: Cardiff Bay Development Corporation Waste Management licence No: 30208 Annual Tonnage: 30000	Issue Date: 12/03/1998 Effective Date: - Modified: - Surrendered Date: - Expiry Date: 01/01/2000 Cancelled Date: - Status: Surrendered
D	316m E	Site Name: - Site Address: Sonorex Exploration Site, Nash, Newport, NP18 2BZ Correspondence Address: -	Type of Site: Mining Waste Operations Size: - Environmental Permitting Regulations (Waste) Licence Number: NB3593HJ EPR reference: - Operator: Sonorex Oil & Gas Ltd Waste Management licence No: - Annual Tonnage: 0	Issue Date: 30/06/2015 Effective Date: 30/06/2015 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective



ID	Location	Details		
D	316m E	Site Name: Sonorex Exploration Site Site Address: Great House Farm, West Nash Road, Nash, Newport, NP18 2BZ Correspondence Address: -	Type of Site: Mining Waste Operations Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: SON014 EPR reference: NB3593HJ/A001 Operator: Sonorex Oil & Gas Ltd Waste Management licence No: 900109 Annual Tonnage: 0	Issue Date: 30/06/2015 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Issued
D	316m E	Site Name: Sonorex Exploration Site Site Address: Great House Farm, West Nash Road, Nash, Newport, NP18 2BZ Correspondence Address: -	Type of Site: Mining Waste Operations Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SON014 EPR reference: EA/EPR/NB3593HJ/A001 Operator: Sonorex Oil & Gas Ltd Waste Management licence No: 900109 Annual Tonnage: 0	Issue Date: 30/06/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
D	316m E	Site Name: - Site Address: Sonorex Exploration Site, Nash, Newport, Newport, NP18 2BZ Correspondence Address: -	Type of Site: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: NB3593HJ EPR reference: - Operator: Sonorex Oil & Gas Ltd Waste Management licence No: 0 Annual Tonnage: 0	Issue Date: 30/06/2015 Effective Date: 30/06/2015 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m	1
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Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

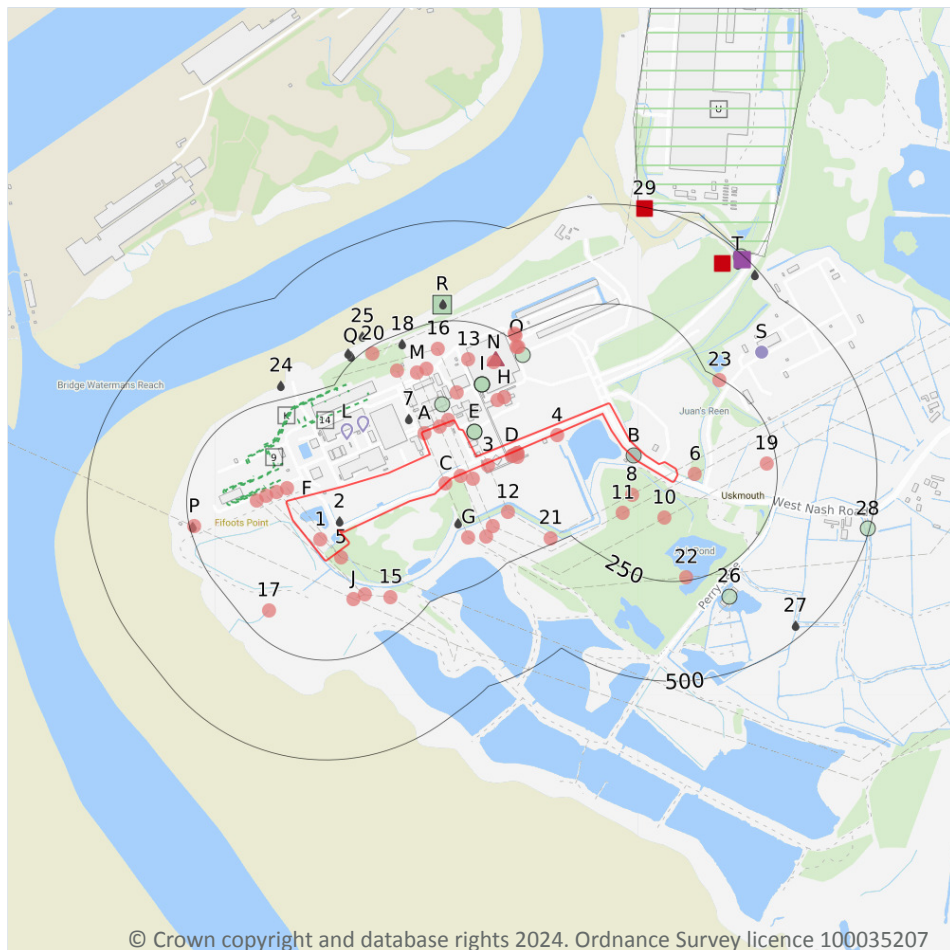
Features are displayed on the Waste and landfill map on [page 24](#) >

ID	Location	Site	Reference	Category	Sub-Category	Description
4	256m E	Jn Bentley Ltd, Nash Treatment Works, Nash, Casnewydd, Newport, Np182yh	NRW- WME010942	Using waste exemption	Not on a farm	Use of waste in construction

This data is sourced from the Environment Agency and Natural Resources Wales.



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Electricity cables
- Control of Major Accident Hazards
- ▲ Hazardous substance storage/usage
- Historical licensed industrial activities
- Part A(1) industrial activities
- Licensed Discharges to controlled waters
- Pollutant release to surface waters
- List 1 Dangerous Substances
- List 2 Dangerous Substances
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

50

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Company	Address	Activity	Category
1	On site	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
A	On site	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
A	On site	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
C	On site	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
C	3m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
3	5m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
4	5m E	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
D	6m E	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
A	7m N	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
D	7m E	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
D	7m E	Tanks	Gwent, NP18	Tanks (Generic)	Industrial Features
D	7m E	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
5	15m SW	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
D	16m E	Travelling Crane	Gwent, NP18	Travelling Cranes and Gantries	Industrial Features
C	22m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
F	32m W	Pylon	Gwent, NP20	Electrical Features	Infrastructure and Facilities
F	34m W	Pylon	Gwent, NP20	Electrical Features	Infrastructure and Facilities
6	44m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
F	52m W	Pylon	Gwent, NP20	Electrical Features	Infrastructure and Facilities
A	71m N	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
F	75m W	Pylon	Gwent, NP20	Electrical Features	Infrastructure and Facilities
8	80m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
10	92m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
H	111m NE	Chimney	Gwent, NP18	Chimneys	Industrial Features
H	112m NE	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
J	117m SW	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
J	125m SW	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
11	130m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
12	134m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
G	138m SE	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
M	143m N	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
M	145m N	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
G	152m SE	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
13	158m N	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
G	166m SE	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
M	166m N	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
15	170m S	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
N	176m NE	Uskmouth Power Station	Gwent, NP18	Energy Production	Industrial Features
16	184m N	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
17	188m SW	Outfall	Gwent, NP18	Waste Storage, Processing and Disposal	Infrastructure and Facilities
O	216m NE	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
O	217m NE	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
19	225m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
20	233m N	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
21	235m SE	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
P	239m W	Pylon	Gwent, NP20	Electrical Features	Infrastructure and Facilities
22	241m E	Pylon	Gwent, NP18	Electrical Features	Infrastructure and Facilities
O	245m NE	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features
23	248m E	Solar Panels	Gwent, NP18	Energy Production	Industrial Features
O	249m NE	Tank	Gwent, NP18	Tanks (Generic)	Industrial Features

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0
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Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	14
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High voltage underground electricity transmission cables.

Features are displayed on the Current industrial land use map on [page 31 >](#)

ID	Location	Cable Set	Cable Route	Details	
F	50m W	WHITSON 1 275KV CABLE	USKMOUTH 275KV GIS S/S	Cable Make: PRYSMIAN GRON Cable Type: A/C Operating Voltage (kV): 275	Year of installation: 2010 Cable in tunnel? Not specified
F	58m W	WHITSON 2 275KV CABLE	USKMOUTH 275KV GIS S/S	Cable Make: PRYSMIAN GRON Cable Type: A/C Operating Voltage (kV): 275	Year of installation: 2010 Cable in tunnel? Not specified
F	69m W	TREMORFA/WHITSON 275KV CABLE	USKMOUTH 275KV GIS S/S	Cable Make: PRYSMIAN GRON Cable Type: A/C Operating Voltage (kV): 275	Year of installation: 2010 Cable in tunnel? Not specified



ID	Location	Cable Set	Cable Route	Details	
F	82m W	SGT1 275KV CABLE	USKMOUTH 275KV GIS S/S	Cable Make: PRYSMIAN GRON Cable Type: A/C Operating Voltage (kV): 275	Year of installation: 2010 Cable in tunnel? Not specified
F	84m W	SGT2A/SGT2B 275KV CABLE	USKMOUTH 275KV GIS S/S	Cable Make: PRYSMIAN GRON Cable Type: A/C Operating Voltage (kV): 275	Year of installation: 2010 Cable in tunnel? Not specified
F	86m W	CARDIFF EAST/WHITSON 275KV CABLE	USKMOUTH 275KV GIS S/S	Cable Make: PRYSMIAN GRON Cable Type: A/C Operating Voltage (kV): 275	Year of installation: 2011 Cable in tunnel? Not specified
9	92m W	STATIC CAPACITOR 1 132KV CABLE	USKMOUTH 275KV AIS S/S	Cable Make: PIRELLI 132KV Cable Type: A/C Operating Voltage (kV): 132	Year of installation: 1997 Cable in tunnel? Not specified
F	101m W	SGT4A/SGT4B 275KV CABLE	USKMOUTH 275KV GIS S/S	Cable Make: PRYSMIAN GRON Cable Type: A/C Operating Voltage (kV): 275	Year of installation: 2010 Cable in tunnel? Not specified
K	124m W	SGT1 132KV CABLE	USKMOUTH 275KV S/S	Cable Make: PIRELLI 132KV Cable Type: A/C Operating Voltage (kV): 132	Year of installation: 2003 Cable in tunnel? Not specified
K	127m W	SGT2A 132KV CABLE	USKMOUTH 275KV S/S	Cable Make: PIRELLI 132KV Cable Type: A/C Operating Voltage (kV): 132	Year of installation: 2003 Cable in tunnel? Not specified
K	134m W	SGT4A 132KV CABLE 1	USKMOUTH 275KV S/S	Cable Make: PRYSMIAN WREXH Cable Type: A/C Operating Voltage (kV): 132	Year of installation: 2010 Cable in tunnel? Not specified
K	136m W	SGT4A 132KV CABLE 2	USKMOUTH 275KV S/S	Cable Make: PRYSMIAN WREXH Cable Type: A/C Operating Voltage (kV): 132	Year of installation: 2010 Cable in tunnel? Not specified
14	160m NW	-	USKMOUTH 132KV S/S	Cable Make: - Cable Type: A/C Operating Voltage (kV): 132	Year of installation: Not specified Cable in tunnel? Not specified
K	176m NW	-	USKMOUTH 132KV S/S	Cable Make: - Cable Type: A/C Operating Voltage (kV): 132	Year of installation: Not specified Cable in tunnel? Not specified

This data is sourced from National Grid.



4.4 Gas pipelines

Records within 500m**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m**0**

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**2**

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

Features are displayed on the Current industrial land use map on [page 31 >](#)

ID	Location	Company	Address	Operational status	Tier
U	495m NE	Solutia UK Limited	Solutia UK Limited, Newport, Corporation Road, Newport, Gwent, NP19 4XF	Current COMAH Site	COMAH Upper Tier Operator
U	495m NE	Simec Oil and Chemical Limited	Simec Oil and Chemical Limited, Newport, Corporation Road, Newport, Gwent, NP19 4XE	Current COMAH Site	COMAH Lower Tier Operator

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.



4.8 Hazardous substance storage/usage

Records within 500m

1

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Details	
N	187m NE	Application reference number: No Details Application status: Approved Application date: No Details Address: SIMEC Oil and Chemical Ltd, Liberty Steel, Corporation Road, Newport, Gwent, Wales, NP19 4XE	Details: No Details Enforcement: No Details Date of enforcement: No Details Comment: No Details

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

11

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Details	
B	On site	Operator: Uskmouth Power Company Ltd Address: Aes Fifoots Point Power Station, West Nash Road, Nash, Newport, Gwent, NP18 2BZ Process: Combustion Processes Permit Number: BA9436	Original Permit Number: IPCAPP Date Approved: 15-10-1998 Effective Date: 19-10-1998 Status: Superseded By Variation
B	On site	Operator: Uskmouth Power Company Ltd Address: Aes Fifoots Point Power Station, West Nash Road, Nash, Newport, Gwent, NP18 2BZ Process: Combustion Processes Permit Number: BE3979	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Superseded By Variation
B	On site	Operator: Uskmouth Power Company Ltd Address: Aes Fifoots Point Power Station, West Nash Road, Nash, Newport, Gwent, NP18 2BZ Process: Combustion Processes Permit Number: BK4561	Original Permit Number: IPCMINVAR Date Approved: 12-7-2001 Effective Date: 16-7-2001 Status: Superseded By Variation



ID	Location	Details	
B	On site	Operator: Uskmouth Power Company Ltd Address: Aes Fifoots Point Power Station, West Nash Road, Nash, Newport, Gwent, NP18 2BZ Process: Combustion Processes Permit Number: BQ3835	Original Permit Number: IPCMINVAR Date Approved: 7-3-2002 Effective Date: 15-3-2002 Status: Superseded By Variation
B	On site	Operator: Uskmouth Power Company Ltd Address: Aes Fifoots Point Power Station, West Nash Road, Nash, Newport, Gwent, NP18 2BZ Process: Combustion Processes Permit Number: BY1310	Original Permit Number: IPCMINVAR Date Approved: 1-9-2004 Effective Date: 1-9-2004 Status: Superseded By Variation
B	On site	Operator: Uskmouth Power Company Ltd Address: Aes Fifoots Point Power Station, West Nash Road, Nash, Newport, Gwent, NP18 2BZ Process: Combustion Processes Permit Number: BY3207	Original Permit Number: IPCMINVAR Date Approved: 27-9-2004 Effective Date: 27-9-2004 Status: Superseded By Variation
B	On site	Operator: Uskmouth Power Company Ltd Address: Aes Fifoots Point Power Station, West Nash Road, Nash, Newport, Gwent, NP18 2BZ Process: Combustion Processes Permit Number: BY9604	Original Permit Number: IPCMINVAR Date Approved: 9-6-2005 Effective Date: 9-6-2005 Status: Superseded By Variation
B	On site	Operator: Uskmouth Power Company Ltd Address: Aes Fifoots Point Power Station, West Nash Road, Nash, Newport, Gwent, NP18 2BZ Process: Combustion Processes Permit Number: BZ2826	Original Permit Number: IPCMINVAR Date Approved: 6-7-2005 Effective Date: 6-7-2005 Status: Revoked - Now Ippc
I	115m NE	Operator: Rwe Npower Plc Address: Uskmouth 'b' Power Station, West Nash, Newport, Gwent, NP6 2YD Process: Combustion Processes Permit Number: AA2640	Original Permit Number: IPCAIRAPP Date Approved: 8-4-1993 Effective Date: 8-4-1993 Status: Surrendered
S	363m E	Operator: Dwr Cymru Cyfyngedig Ltd Address: Nash Wastewater Treatment Works, West Nash, Newport, Gwent, NP6 2YN Process: Combustion Processes Permit Number: BB3450	Original Permit Number: IPCAPP Date Approved: 9-10-1998 Effective Date: 12-10-1998 Status: Superseded By Variation
S	363m E	Operator: Dwr Cymru Cyfyngedig Ltd Address: Nash Wastewater Treatment Works, West Nash, Newport, Gwent, NP6 2YN Process: Combustion Processes Permit Number: BE4827	Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked

This data is sourced from the Environment Agency and Natural Resources Wales.



4.10 Licensed industrial activities (Part A(1))

Records within 500m

18

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Details	
L	129m NW	Operator: Severn Power Ltd Installation Name: Severn Power Station Process: BURNING ANY FUEL IN AN APPLIANCE WITH A RATED THERMAL INPUT OF 50 OR MORE MEGAWATTS Permit Number: HP3737UE Original Permit Number: -	EPR Reference: - Issue Date: 19/07/2021 Effective Date: 19/07/2021 Last date noted as effective: 29/10/2024 Status: Effective
L	129m NW	Operator: SIEMENS PLC Installation Name: SEVERN POWER STATION Process: - Permit Number: HP3737UE Original Permit Number: YP3033WC	EPR Reference: - Issue Date: 22/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 01/12/2016 Status: EFFECTIVE
L	129m NW	Operator: SIEMENS PLC Installation Name: SEVERN POWER STATION EA/EPR/HP3737UE/V003 Process: COMBUSTION; ANY FUEL =>50MW Permit Number: DP3938FS Original Permit Number: HP3737UE	EPR Reference: - Issue Date: 20/09/2011 Effective Date: 20/09/2011 Last date noted as effective: 17/11/2015 Status: SUPERCEDED
L	129m NW	Operator: SIEMENS PLC Installation Name: SEVERN POWER EA/EPR/HP3737UE/A001 Process: COMBUSTION; ANY FUEL =>50MW Permit Number: HP3737UE Original Permit Number: HP3737UE	EPR Reference: - Issue Date: 09/04/2010 Effective Date: 09/04/2010 Last date noted as effective: 17/11/2015 Status: SUPERCEDED
L	129m NW	Operator: SIEMENS PLC Installation Name: SEVERN POWER STATION EA/EPR/HP3737UE/V002 Process: COMBUSTION; ANY FUEL =>50MW Permit Number: WP3636HZ Original Permit Number: HP3737UE	EPR Reference: - Issue Date: 11/07/2011 Effective Date: 11/07/2011 Last date noted as effective: 17/11/2015 Status: SUPERCEDED
L	129m NW	Operator: SIEMENS PLC Installation Name: SEVERN POWER STATION EPR/HP3737UE Process: COMBUSTION; ANY FUEL =>50MW Permit Number: YP3033WC Original Permit Number: HP3737UE	EPR Reference: - Issue Date: 04/12/2014 Effective Date: 04/12/2014 Last date noted as effective: 17/11/2015 Status: EFFECTIVE



ID	Location	Details	
L	129m NW	Operator: SIEMENS PLC Installation Name: SEVERN POWER STATION Process: BURNING ANY FUEL IN AN APPLIANCE Permit Number: HP3737UE Original Permit Number: YP3033WC	EPR Reference: - Issue Date: 22/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 01/04/2018 Status: EFFECTIVE
L	137m NW	Operator: Simec Uskmouth Power Ltd Installation Name: Uskmouth Power Plant Process: - Permit Number: LP3131SW Original Permit Number: -	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 29/10/2024 Status: Effective
L	137m NW	Operator: Simec Uskmouth Power Ltd Installation Name: Uskmouth Power Plant Process: BURNING ANY FUEL IN AN APPLIANCE WITH A RATED THERMAL INPUT OF 50 OR MORE MEGAWATTS Permit Number: LP3131SW Original Permit Number: -	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 29/10/2024 Status: Effective
L	137m NW	Operator: Simec Uskmouth Power Ltd Installation Name: Uskmouth Power Plant Process: - Permit Number: LP3131SW Original Permit Number: -	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 29/10/2024 Status: Effective
L	137m NW	Operator: Simec Uskmouth Power Ltd Installation Name: Uskmouth Power Plant Process: PRODUCING INORGANIC CHEMICALS SUCH AS: (IV) SALTS (FOR EXAMPLE AMMONIUM CHLORIDE, POTASSIUM CHLORATE, POTASSIUM CARBONATE, SODIUM CARBONATE, PERBORATE, SILVER NITRATE, CUPRIC ACETATE, AMMONIUM PHOSPHOMOLYBDATE) Permit Number: LP3131SW Original Permit Number: -	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 29/10/2024 Status: Effective
L	137m NW	Operator: SIMEC USKMOUTH POWER LIMITED Installation Name: USKMOUTH POWER PLANT EPR/LP3131SW Process: COMBUSTION; ANY FUEL =>50MW Permit Number: LP3131SW Original Permit Number: LP3131SW	EPR Reference: - Issue Date: 24/10/2007 Effective Date: 24/10/2007 Last date noted as effective: 17/11/2015 Status: EFFECTIVE
L	137m NW	Operator: SIMEC USKMOUTH POWER LIMITED Installation Name: USKMOUTH POWER PLANT EPR/LP3131SW Process: OTHER MINERAL ACTIVITIES; LOADING, UNLOADING, OR STORING PULVERISED FUEL ASH IN BULK PRIOR TO FURTHER TRANSPORTATION IN BULK Permit Number: LP3131SW Original Permit Number: LP3131SW	EPR Reference: - Issue Date: 24/10/2007 Effective Date: 24/10/2007 Last date noted as effective: 17/11/2015 Status: EFFECTIVE



ID	Location	Details	
L	137m NW	Operator: SIMEC USKMOUTH POWER LTD Installation Name: USKMOUTH POWER PLANT Process: - Permit Number: LP3131SW Original Permit Number: LP3131SW	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 01/12/2016 Status: EFFECTIVE
L	137m NW	Operator: SIMEC USKMOUTH POWER LTD Installation Name: USKMOUTH POWER PLANT Process: BURNING ANY FUEL IN AN APPLIANCE Permit Number: LP3131SW Original Permit Number: LP3131SW	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 01/04/2018 Status: EFFECTIVE
L	137m NW	Operator: SIMEC USKMOUTH POWER LTD Installation Name: USKMOUTH POWER PLANT Process: BURNING ANY FUEL IN AN APPLIANCE Permit Number: LP3131SW Original Permit Number: LP3131SW	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 01/04/2018 Status: EFFECTIVE
L	137m NW	Operator: SIMEC USKMOUTH POWER LTD Installation Name: USKMOUTH POWER PLANT Process: BURNING ANY FUEL IN AN APPLIANCE Permit Number: LP3131SW Original Permit Number: LP3131SW	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 01/04/2018 Status: EFFECTIVE
L	137m NW	Operator: SIMEC USKMOUTH POWER LTD Installation Name: USKMOUTH POWER PLANT Process: BURNING ANY FUEL IN AN APPLIANCE Permit Number: LP3131SW Original Permit Number: LP3131SW	EPR Reference: - Issue Date: 23/12/2015 Effective Date: 01/01/2016 Last date noted as effective: 01/04/2018 Status: EFFECTIVE

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.13 Licensed Discharges to controlled waters

Records within 500m

20

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on [page 31](#) >

ID	Location	Address	Details	
2	On site	USKMOUTHPOWERSTATION,WES TNASHROAD,NEWPORT,GWENT,N P182BZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: NPSWQD005104 Permit Version: 1 Receiving Water: RIVER USK	Status: SURRENDERED UNDER EPR 2010 Issue date: 22/01/2009 Effective Date: 01/02/2009 Revocation Date: 20/12/2011
7	48m N	SevernPowerStation,WESTNASHRO AD,Nash,Newport,SOUTHEASTWAL ES,NP182BZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: AN0260501 Permit Version: 4 Receiving Water: RIVER USK (ESTUARY)	Status: Effective Issue date: 10/11/2014 Effective Date: 17/11/2014 Revocation Date: -
G	95m SE	AREAINFRONTOFUSKMOUTHPOW ERSTN,AREAINFRONTOFUSKMOUT H,POWERSTATIONA,USKMOUTHNE ARNEWPORT	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: AN028420101 Permit Version: 1 Receiving Water: UNNAMED FRESHWATER DITCH	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV Issue date: 13/07/1998 Effective Date: 13/07/1998 Revocation Date: 29/01/2003
18	224m N	SEVERNPOWERSTATION,WESTNAS HROAD,NASH,NEWPORT,SOUTHEA STWALES,NP182BZ	Effluent Type: UNSPECIFIED Permit Number: AN0260501 Permit Version: 1 Receiving Water: RIVER USK (ESTUARY)	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 04/09/1995 Effective Date: 04/09/1995 Revocation Date: 23/12/2008
P	243m W	USKMOUTH275KVSUBSTATIONNAS H,USKMOUTH275KVSUBSTATION, NASH,NEWPORT,GWENT,NP62YD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: AN0335801 Permit Version: 1 Receiving Water: THE RIVER USK ESTUARY	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 03/07/2003 Effective Date: 03/07/2003 Revocation Date: 03/09/2009
P	243m W	USKMOUTH275KVSUBSTATIONNAS H,USKMOUTH275KVSUBSTATION, NASH,NEWPORT,GWENT,NP62YD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: AN0335801 Permit Version: 2 Receiving Water: THE RIVER USK ESTUARY	Status: REVOKED UNDER EPR 2010 Issue date: 04/09/2009 Effective Date: 04/09/2009 Revocation Date: 08/11/2010



ID	Location	Address	Details	
Q	263m NW	SEVERNPOWERSTATION,WESTNASHROAD,NASH,NEWPORT,SOUTHEASTWALES,NP182BZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: AN0260501 Permit Version: 3 Receiving Water: RIVER USK (ESTUARY)	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 16/06/2009 Effective Date: 16/06/2009 Revocation Date: 16/11/2014
Q	263m NW	SEVERNPOWERSTATION,WESTNASHROAD,NASH,NEWPORT,SOUTHEASTWALES,NP182BZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: AN0260501 Permit Version: 2 Receiving Water: RIVER USK (ESTUARY)	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 24/12/2008 Effective Date: 24/12/2008 Revocation Date: 16/06/2009
Q	271m NW	SEVERNPOWERSTATION,WESTNASHROAD,NASH,NEWPORT,SOUTHEASTWALES,NP182BZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: AN0260501 Permit Version: 0 Receiving Water: RIVER USK (ESTUARY)	Status: Effective Issue date: 10/11/2014 Effective Date: 17/11/2014 Revocation Date: -
24	284m NW	USKMOUTHPOWERSTATIONCONST SITE,WESTNASHROAD,NEWPORT,GWENT,NP182BZ	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: NPSWQD004904 Permit Version: 1 Receiving Water: RIVER USK	Status: SURRENDERED UNDER EPR 2010 Issue date: 14/01/2009 Effective Date: 14/01/2009 Revocation Date: 20/12/2011
25	284m NW	USKMOUTHPOWERSTATIONB,USKMOUTH,NEWPORT,WALES	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: AA0024701 Permit Version: 1 Receiving Water: USK ESTUARY	Status: REVOKED AND REPLACED BY IPC AUTHORISATION Issue date: 08/02/1961 Effective Date: 08/02/1961 Revocation Date: 19/10/1998
R	293m N	AESFIFOOTSPPOINTPS,WESTNASH,NEWPORT,NP62YD	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: AN0285201 Permit Version: 0 Receiving Water: RIVER USK ESTUARY	Status: Effective Issue date: 25/07/2019 Effective Date: 25/07/2019 Revocation Date: -
27	473m E	RSPBVISITORCENTRENEWPORT,RSPBVISITORCENTRE,NASHROAD,NASH,NEWPORT	Effluent Type: SEWAGE & TRADE COMBINED - UNSPECIFIED Permit Number: AN0403501 Permit Version: 0 Receiving Water: GREATHOUSE REEN	Status: Effective Issue date: 20/09/2006 Effective Date: 02/10/2006 Revocation Date: -



ID	Location	Address	Details	
T	474m NE	NASHSTWWESTNASHROADNEWPORT,NASHSTW,WESTNASHROAD,NA SHNEWPORT	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: AB0067101 Permit Version: 2 Receiving Water: JULIAN'S PILL	Status: MODIFIED - (WRA 91 SCHD 10 - AS AMENDED BY ENV ACT 1995) Issue date: 07/03/1997 Effective Date: 08/03/1997 Revocation Date: 30/03/2000
T	486m NE	NASHSTWWESTNASHROADNEWPORT,NASHSTW,WESTNASHROAD,NA SHNEWPORT	Effluent Type: UNSPECIFIED Permit Number: AB0067102 Permit Version: 1 Receiving Water: JULIANS PILL	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 27/06/1969 Effective Date: 27/06/1969 Revocation Date: 30/03/2000
T	486m NE	NASHSTWWESTNASHROADNEWPORT,NASHSTW,WESTNASHROAD,NA SHNEWPORT	Effluent Type: UNSPECIFIED Permit Number: AB0045501 Permit Version: 1 Receiving Water: JULIANS REEN	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 08/09/1965 Effective Date: 08/09/1965 Revocation Date: 26/01/1994
T	488m NE	NASHSTWWESTNASHROADNEWPORT,NASHSTW,WESTNASHROAD,NA SHNEWPORT	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: AB0067101 Permit Version: 0 Receiving Water: JULIANS PILL	Status: Effective Issue date: 26/06/2009 Effective Date: 01/01/2010 Revocation Date: -
T	488m NE	NASHSTWWESTNASHROADNEWPORT,NASHSTW,WESTNASHROAD,NA SHNEWPORT	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: AB0067102 Permit Version: 3 Receiving Water: JULIANS PILL	Status: Effective Issue date: 18/12/2000 Effective Date: 31/12/2000 Revocation Date: -
T	492m NE	NashWastewaterTreatmentWorks, WestNashRoad,Nash,NP182BZ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: AB0067101 Permit Version: 0 Receiving Water: Julian's Reen	Status: Effective Issue date: 08/05/2024 Effective Date: 08/05/2024 Revocation Date: -
T	492m NE	NashWastewaterTreatmentWorks, WestNashRoad,Nash,NP182BZ	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: AB0067101 Permit Version: 0 Receiving Water: Julian's Reen	Status: Effective Issue date: 08/05/2024 Effective Date: 08/05/2024 Revocation Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.



4.14 Pollutant release to surface waters (Red List)

Records within 500m	3
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Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

Features are displayed on the Current industrial land use map on [page 31 >](#)

ID	Location	Address	Details	
T	488m NE	DWR CYMRU CYFYNGEDIG, NASH STW WEST NASH ROAD NEWPORT, NASH STW, WEST NASH ROAD, NASH NEWPORT	Permit Number: AB0067101 Permit Version: - Status: Effective Discharge Type: -	Effluent Type: Sewage - Water Undertaker Catchment: JULIANS PILL Approval Date: 26/06/2009
T	488m NE	Dwr Cymru Cyfyngedig, NASH STW WEST NASH ROAD NEWPORT, NASH STW, WEST NASH ROAD, NASH NEWPORT	Permit Number: AB0067101 Permit Version: 0 Status: Effective Discharge Type: -	Effluent Type: Sewage - Water Undertaker Catchment: JULIANS PILL Approval Date: 26/06/2009
T	488m NE	Dwr Cymru Cyfyngedig, Nash Stw West Nash Road Newport, Nash Stw, West Nash Road, Nash Newport	Permit Number: AB0067101 Permit Version: 0 Status: Effective Discharge Type: -	Effluent Type: Sewage - Water Undertaker Catchment: Julians Pill Approval Date: 26/06/2009

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m	0
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Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m	2
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Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

Features are displayed on the Current industrial land use map on [page 31 >](#)

ID	Location	Name	Status	Receiving Water	Authorised Substances
T	448m NE	Uskmouth Power Company Ltd	Not Active	-	Mercury (other), Cadmium
29	497m NE	Alphasteel Ltd	Not Active	-	Mercury (other), Cadmium



This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m

1

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

Features are displayed on the Current industrial land use map on [page 31 >](#)

ID	Location	Name	Status	Receiving Water	Authorised Substances
R	293m N	Rwe Innogy At Fifoots Point	Active	Usk Estuary	Chromium, Copper, Lead, Nickel, Zinc

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m

11

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on [page 31 >](#)

ID	Location	Details	
B	On site	Incident Date: 26/09/2001 Incident Identification: 32995 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
E	23m NE	Incident Date: 13/06/2001 Incident Identification: 8896 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
E	23m NE	Incident Date: 13/06/2001 Incident Identification: 8896 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
A	48m N	Incident Date: 06/12/2001 Incident Identification: 47028 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)



ID	Location	Details	
I	115m NE	Incident Date: 14/05/2001 Incident Identification: 5598 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
I	115m NE	Incident Date: 30/04/2001 Incident Identification: 3881 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
I	115m NE	Incident Date: 09/07/2001 Incident Identification: 15321 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
O	192m NE	Incident Date: 14/06/2013 Incident Identification: 1122507 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Dust	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
26	319m E	Incident Date: 14/08/2013 Incident Identification: 1147833 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
28	495m E	Incident Date: 29/10/2015 Incident Identification: 1384411 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
T	496m NE	Incident Date: 15/12/2023 Incident Identification: 2309685 Pollutant: Sewage Material Pollutant Description: Crude Sewage	Water Impact: Category 2 (Significant) Land Impact: No Details Air Impact: No Details

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



4.20 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory radioactive waste

Records within 500m

0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 49 >](#)

ID	Location	Designation	Description
1	On site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	497m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Bedrock aquifer



- Site Outline**
- Search buffers in metres (m)**
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 50](#) >

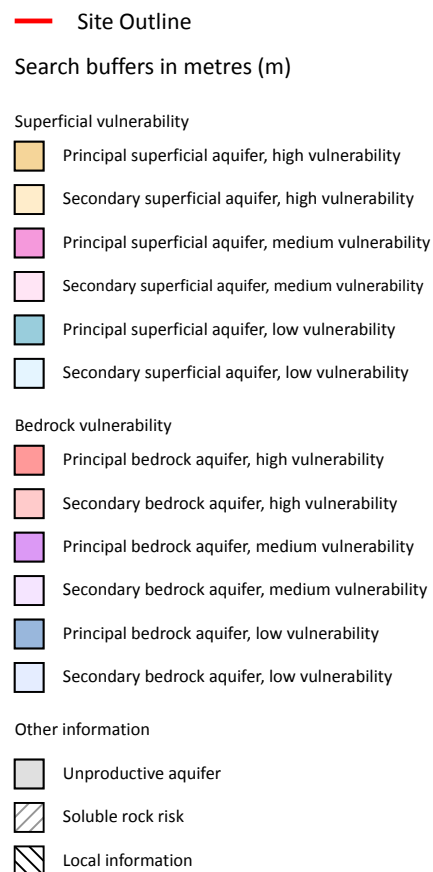
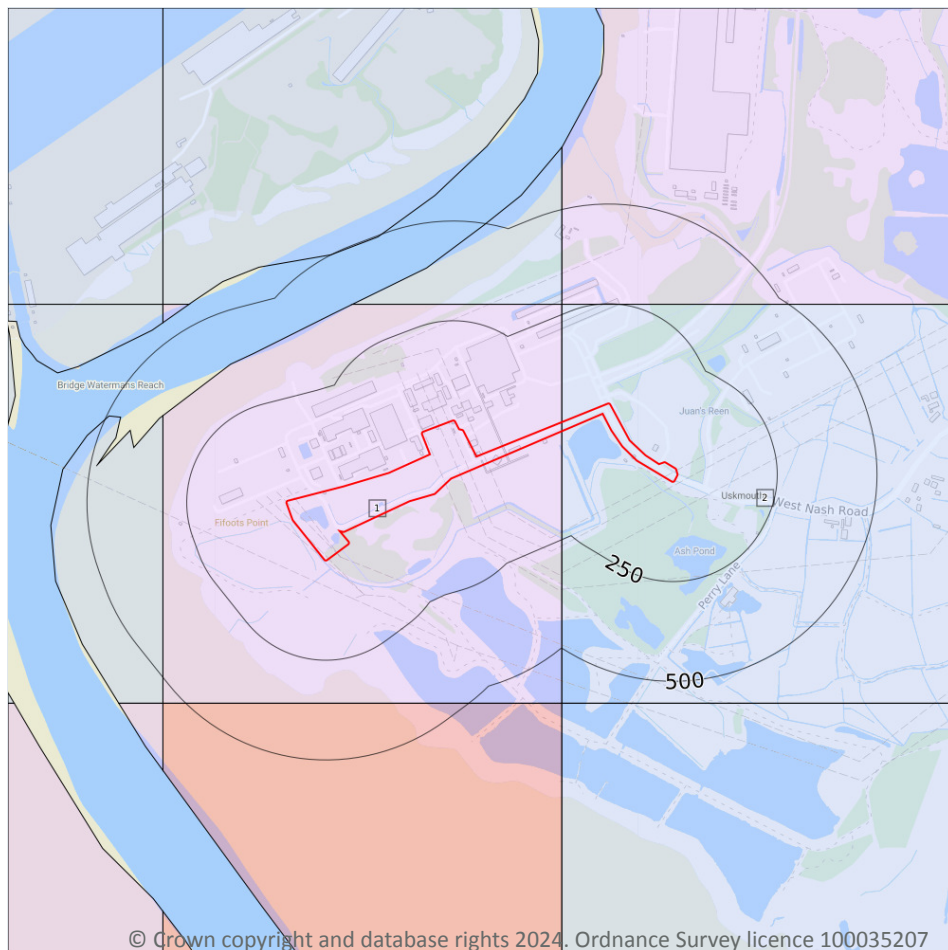
ID	Location	Designation	Description
1	On site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
2	497m N	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers



This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 52](#) >



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0
------------------------	----------

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site	0
------------------------	----------

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

0

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.



5.7 Surface water abstractions

Records within 2000m

1

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 54 >](#)

ID	Location	Details	
-	1131m NE	Status: Historical Licence No: 20/56/72/0040 Details: Evaporative Cooling Direct Source: EAW Surface Water Point: LAGOON AT ALPHASTEEL Data Type: Point Name: Alphasteel Limited Easting: 333650 Northing: 184750	Annual Volume (m ³): 20000 Max Daily Volume (m ³): 320 Original Application No: - Original Start Date: 26/04/1995 Expiry Date: - Issue No: 100 Version Start Date: 25/11/1999 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m

0

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m

0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.



This data is sourced from the Environment Agency and Natural Resources Wales.



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

63

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on [page 57 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
1	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Juan's Reen



ID	Location	Type of water feature	Ground level	Permanence	Name
2	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
C	On site	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
D	On site	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	3m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	4m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	9m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	9m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
C	10m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	10m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	17m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	18m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	23m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	23m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	25m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
G	29m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	40m NE	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
E	41m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	51m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
N	51m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	54m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	55m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	58m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	62m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
G	62m E	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	63m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	67m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	105m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
9	109m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
10	115m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	115m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	115m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	128m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
P	130m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	131m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	132m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
11	139m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
S	143m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	151m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	151m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	176m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
R	186m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
T	189m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
15	191m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
U	200m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
W	210m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
V	211m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	226m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
18	226m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Juan's Reen
R	228m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	248m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

24

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on [page 57](#) >



This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	2
------------------------	----------

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on [page 57 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
4	On site	River WB catchment	Monks Ditch - source to Wainbridge	GB109056026850	East Reens	Usk
1	On site	Coastal catchment	Not part of a river WB catchment	156	Usk below Abergavenny	Usk

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	2
---------------------------	----------

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site.

Features are displayed on the Hydrology map on [page 57 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
20	248m W	Transitional	USK	GB530905415404	Moderate	Good	Moderate	2019
-	3660m E	River	Monks Ditch - source to Wainbridge	GB109056026850	Moderate	Good	Moderate	2016

This data is sourced from the Environment Agency and Natural Resources Wales.



6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place.

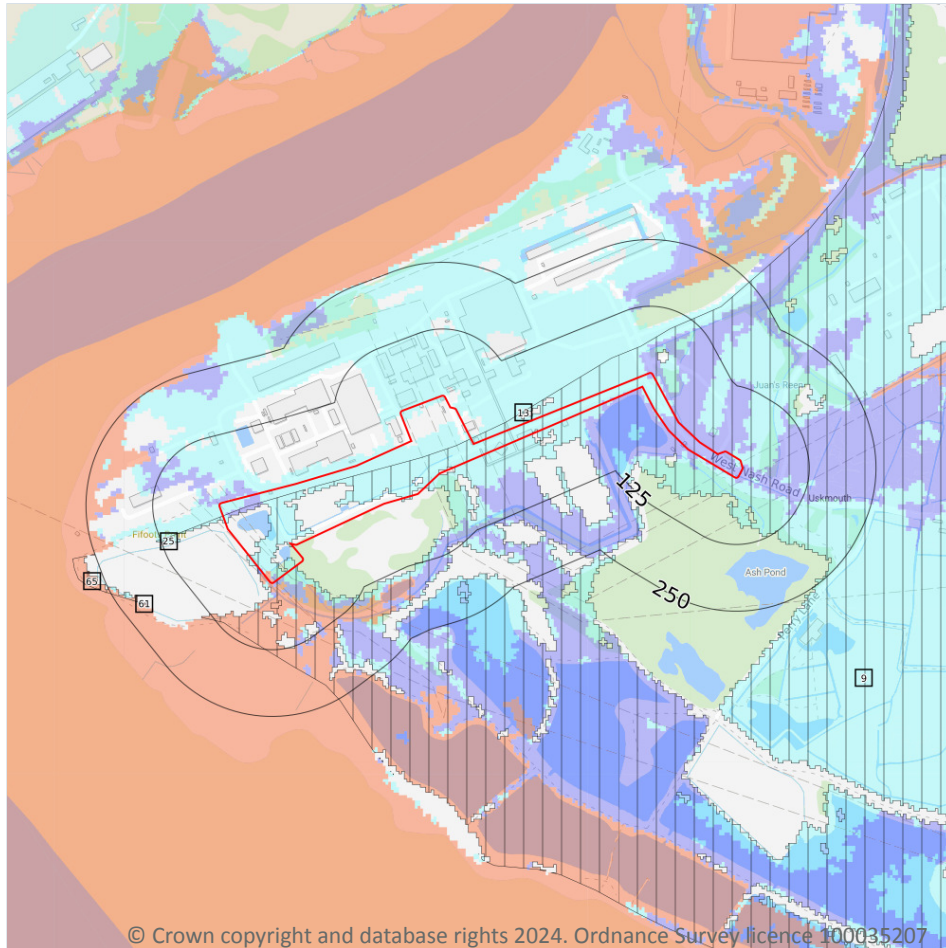
Features are displayed on the Hydrology map on [page 57 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
J	On site	Usk Devonian Old Red Sandstone	GB40902G201700	Good	Good	Good	2017

This data is sourced from the Environment Agency and Natural Resources Wales.



7 River and coastal flooding



- Site Outline
- Search buffers in metres (m)
- River and coastal flooding:
- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

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7.1 Risk of flooding from rivers and the sea

Records within 50m

24

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on [page 65 >](#)



Distance	Flood risk category
On site	High
0 - 50m	High

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m	0
----------------------------	----------

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m	0
----------------------------	----------

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m	5
----------------------------	----------

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on [page 65 >](#)

ID	Location	
9	On site	Area benefiting from flood defences
13	17m NE	Area benefiting from flood defences
25	90m W	Area benefiting from flood defences
61	207m SW	Area benefiting from flood defences
65	210m SW	Area benefiting from flood defences



This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

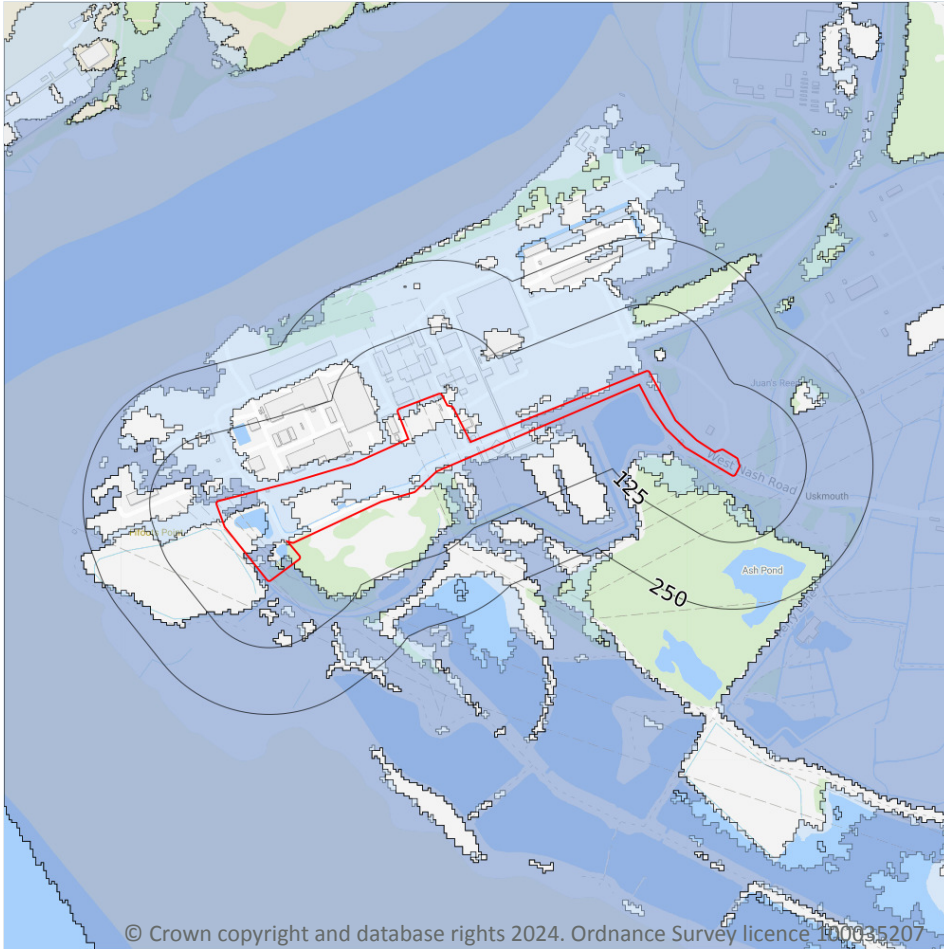
0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

7.6 Flood Zone 2

Records within 50m

1

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

Features are displayed on the River and coastal flooding map on [page 65 >](#)

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

This data is sourced from the Environment Agency and Natural Resources Wales.



7.7 Flood Zone 3

Records within 50m

1

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

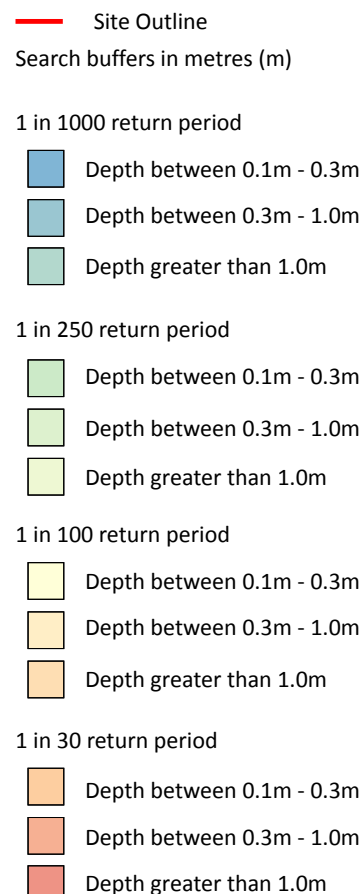
Features are displayed on the River and coastal flooding map on [page 65](#) >

Location	Type
On site	Zone 3 - (Fluvial /Tidal Models)

This data is sourced from the Environment Agency and Natural Resources Wales.



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.1m - 0.3m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 70 >](#)

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

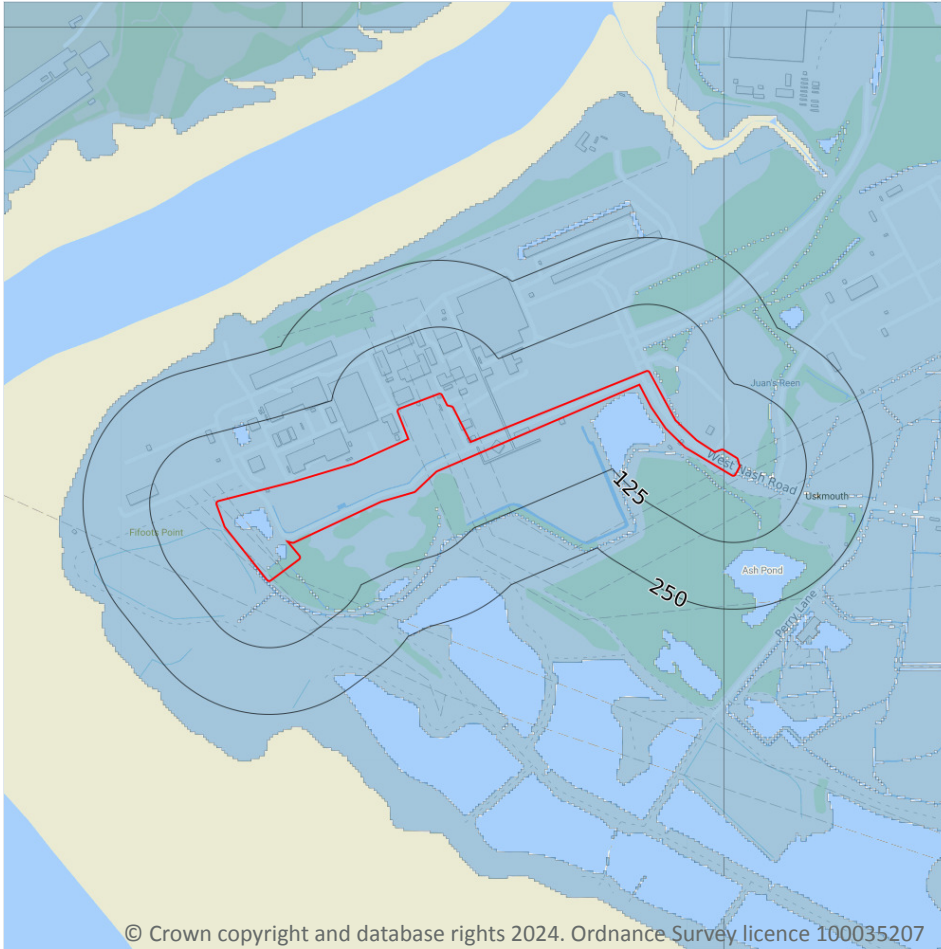
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Between 0.1m and 0.3m

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

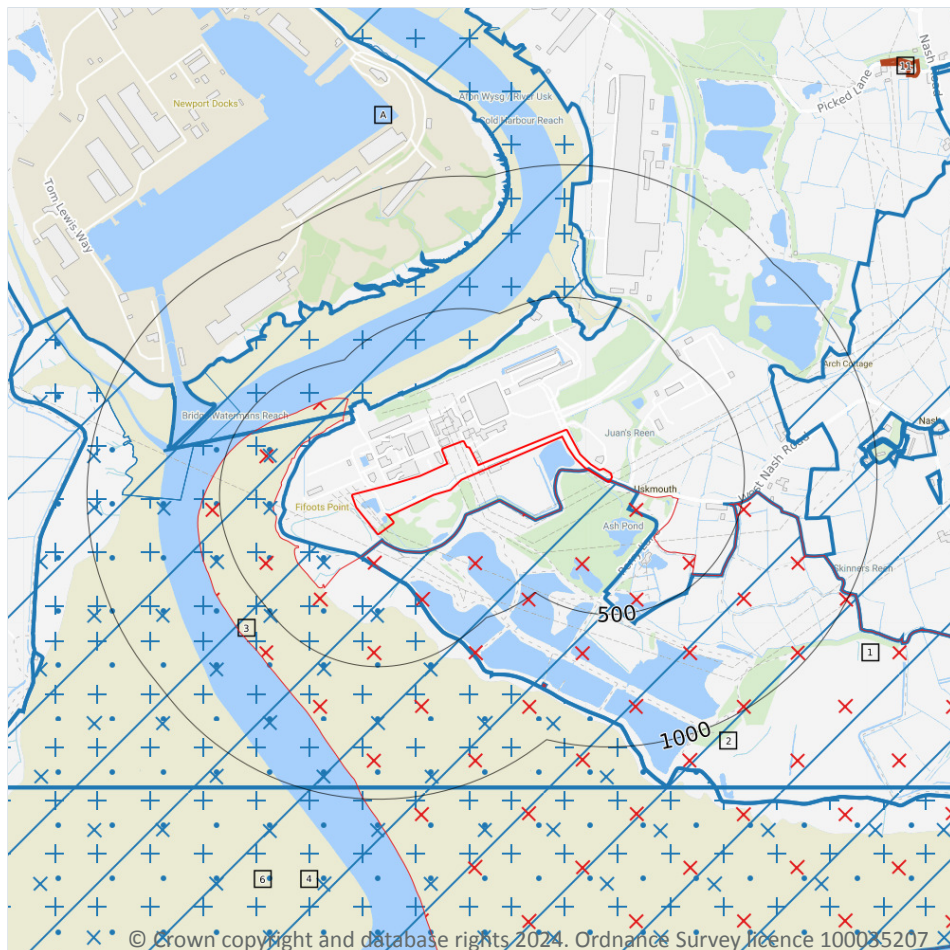
Negligible

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 72 >](#)

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- × Conserved wetland sites (Ramsar sites)
- + Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- × National Nature Reserves (NNR)
- ▨ Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

9

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on [page 73](#) >

ID	Location	Name	Data source
1	On site	Gwlyptiroedd Casnewydd / Newport Wetlands	Natural Resources Wales



ID	Location	Name	Data source
3	108m SW	Severn Estuary	Natural Resources Wales
A	250m N	River Usk (Lower Usk) / Afon Wysg (Wysg Isaf)	Natural Resources Wales
7	680m E	Gwent Levels - Nash and Goldcliff	Natural Resources Wales
8	956m S	Severn Estuary	Natural Resources Wales
9	1027m W	Gwent Levels - St. Brides	Natural Resources Wales
10	1221m SE	Gwlyptiroedd Casnewydd / Newport Wetlands	Natural Resources Wales
-	1841m SW	Gwent Levels - St. Brides	Natural Resources Wales
-	1953m E	Gwent Levels - Nash and Goldcliff	Natural Resources Wales

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

1

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

Features are displayed on the Environmental designations map on [page 73](#) >



ID	Location	Site	Details
4	108m SW	Name: Severn Estuary (Wales) Site status: - Data source: Natural Resources Wales	Overview: The estuary's classic funnel shape, unique in Britain, is a factor causing the Severn to have the second-largest tidal range in the world (after the Bay of Fundy, Canada). This tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide swept sand and rock. The species-poor invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders. A further consequence of the large tidal range is the extensive intertidal zone, one of the largest in the UK, comprising mudflats, sand banks, shingle, and rocky platforms. Glassworts and annual sea-blite colonise the open mud, with beds of all three species of eelgrass <i>Zostera</i> occurring on more sheltered mud and sandbanks. Large expanses of common cord-grass also occur on the outer marshes. Heavily grazed saltmarsh fringes the estuary with a range of saltmarsh types present. The middle marsh sward is dominated by common saltmarsh-grass with typical associated species. In the upper marsh, red fescue and saltmarsh rush become more prominent. Ramsar criteria: Ramsar criterion 1 Due to immense tidal range (second-largest in world), this affects both the physical environment and biological communities. Habitats Directive Annex I features present on the pSAC include: H1110 Sandbanks which are slightly covered by sea water all the time H1130 Estuaries H1140 Mudflats and sandflats not covered by seawater at low tide H1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) Ramsar criterion 3 Due to unusual estuarine communities, reduced diversity and high productivity. Ramsar criterion 4 This site is important for the run of migratory fish between sea and river via estuary. Species include Salmon <i>Salmo salar</i>, sea trout <i>S. trutta</i>, sea lamprey <i>Petromyzon marinus</i>, river lamprey <i>Lampetra fluviatilis</i>, allis shad <i>Alosa alosa</i>, twaite shad <i>A. fallax</i>, and eel <i>Anguilla anguilla</i>. It is also of particular importance for migratory birds during spring and autumn. Ramsar criterion 8 The fish of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded. Salmon <i>Salmo salar</i>, sea trout <i>S. trutta</i>, sea lamprey <i>Petromyzon marinus</i>, river lamprey <i>Lampetra fluviatilis</i>, allis shad <i>Alosa alosa</i>, twaite shad <i>A. fallax</i>, and eel <i>Anguilla anguilla</i> use the Severn Estuary as a key migration route to their spawning grounds in the many tributaries that flow into the estuary. The site is important as a feeding and nursery ground for many fish species particularly allis shad <i>Alosa alosa</i> and twaite shad <i>A. fallax</i> which feed on mysid shrimps in the salt wedge.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.3 Special Areas of Conservation (SAC)

Records within 2000m

2

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

Features are displayed on the Environmental designations map on [page 73 >](#)

ID	Location	Name	Features of interest	Habitat description	Data source
5	108m SW	Severn Estuary (Wales)	Subtidal sandbanks; Estuaries; Intertidal mudflats and sandflats; Reefs; Glasswort and other annuals colonising mud and sand; Cord-grass swards; Atlantic salt meadows; Shifting dunes; Sea lamprey; River lamprey; Allis shad; Twaite shad.	Salt marshes, Salt pastures, Salt steppes; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	Natural Resources Wales
A	250m N	River Usk / Afon Wysg	Estuaries; Intertidal mudflats and sandflats; Atlantic salt meadows; Rivers with floating vegetation often dominated by water-crowfoot; Beech forests on neutral to rich soils; Mixed woodland on base-rich soils associated with rocky slopes; Western acidic oak woodland; Bog woodland; Alder woodland on floodplains; Sea lamprey; Brook lamprey; River lamprey; Allis shad; Twaite shad; Atlantic salmon; Bullhead; Freshwater pearl mussel; White-clawed (or Atlantic stream) crayfish; Lesser horseshoe bat; Otter.	Improved grassland; Dry grassland, Steppes; Inland water bodies (Standing water, Running water); Broad-leaved deciduous woodland; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins); Salt marshes, Salt pastures, Salt steppes; Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Bogs, Marshes, Water fringed vegetation, Fens; Heath, Scrub, Maquis and Garrigue, Phygrana; Humid grassland, Mesophile grassland	Natural Resources Wales

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

1

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

Features are displayed on the Environmental designations map on [page 73 >](#)



ID	Location	Name	Species of interest	Habitat description	Data source
6	108m SW	Severn Estuary (Wales)	Tundra swan; Common shelduck; Gadwall; Common redshank; Greater white-fronted goose; Dunlin	Coastal sand dunes, Sand beaches, Machair; Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins); Improved grassland; Salt marshes, Salt pastures, Salt steppes	Natural Resources Wales

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m	2
-----------------------------	----------

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

Features are displayed on the Environmental designations map on [page 73 >](#)

ID	Location	Name	Data source
2	On site	Newport Wetlands	Natural Resources Wales
-	1949m S	Newport Wetlands	Natural Resources Wales

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m	0
-----------------------------	----------

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m	1
-----------------------------	----------

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on [page 73 >](#)



ID	Location	Name	Woodland Type
11	1823m NE	Unknown	Ancient Semi Natural Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m	0
-----------------------------	----------

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m	0
-----------------------------	----------

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0
-----------------------------	----------

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m	0
-----------------------------	----------

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m**0**

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m**0**

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m**0**

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m**0**

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.



10.16 Nitrate Vulnerable Zones

Records within 2000m

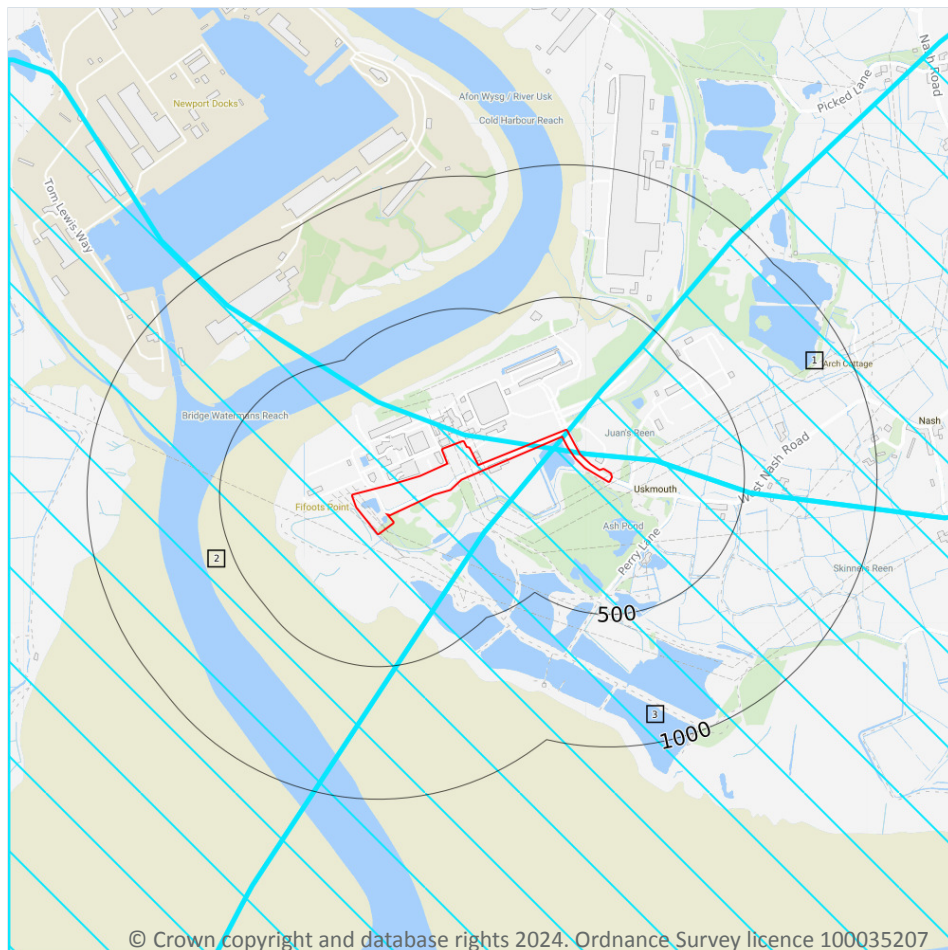
0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

3

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 81](#) >

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m². Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.



ID	Location	Type of developments requiring consultation
2	On site	All applications - All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures. Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 10 units or more. Rural residential - Any residential developments outside of existing settlements/urban areas with a total net gain in residential units. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.
3	On site	All applications - All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures. Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals. Wind and Solar - Solar schemes with footprint > 0.5ha, all wind turbines. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha. Residential - Residential development of 10 units or more. Rural residential - Any residential developments outside of existing settlements/urban areas with a total net gain in residential units. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m². Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

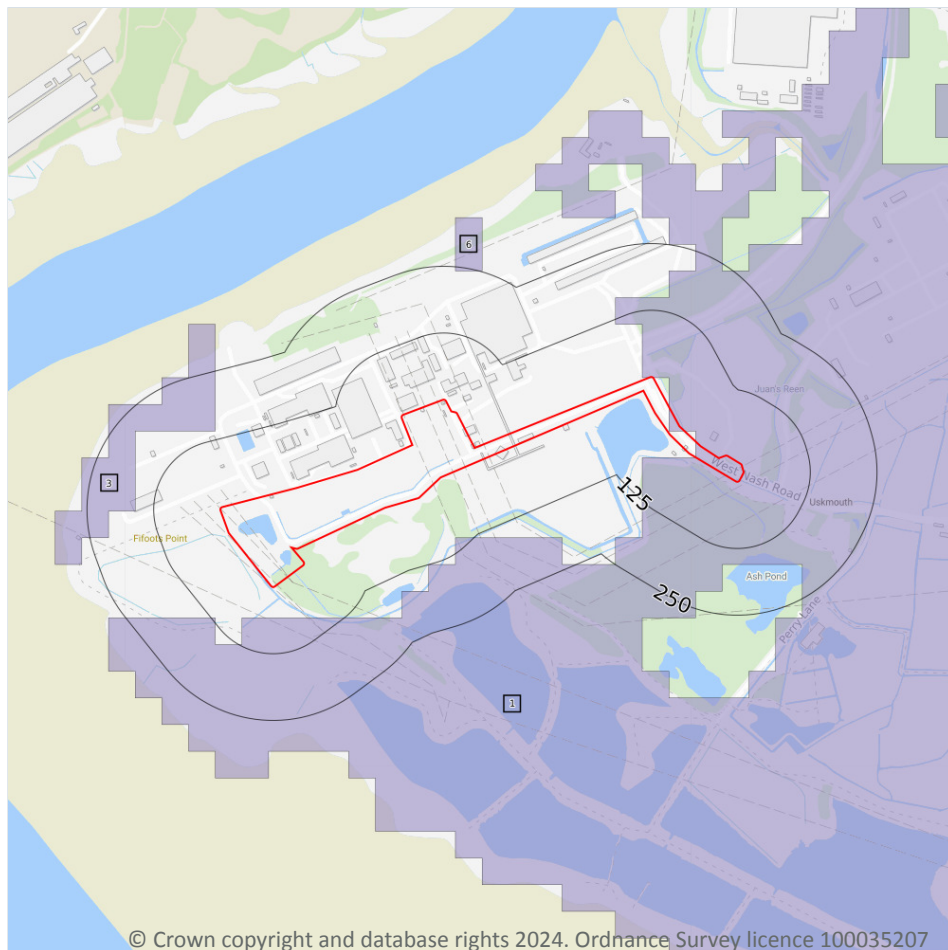
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Timber felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

3

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 85](#) >

ID	Location	Classification	Description
1	On site	Grade 4	Poor quality agricultural land
3	141m W	Grade 4	Poor quality agricultural land
6	242m N	Grade 4	Poor quality agricultural land



This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 88](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	No coverage	No coverage	No coverage	NoCov

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground

14.2 Artificial and made ground (10k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock

14.5 Bedrock geology (10k)

Records within 500m

0

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

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15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme. Where 50k data is not available, this area has been filled in with 625k scale data.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 92](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW249_newport_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

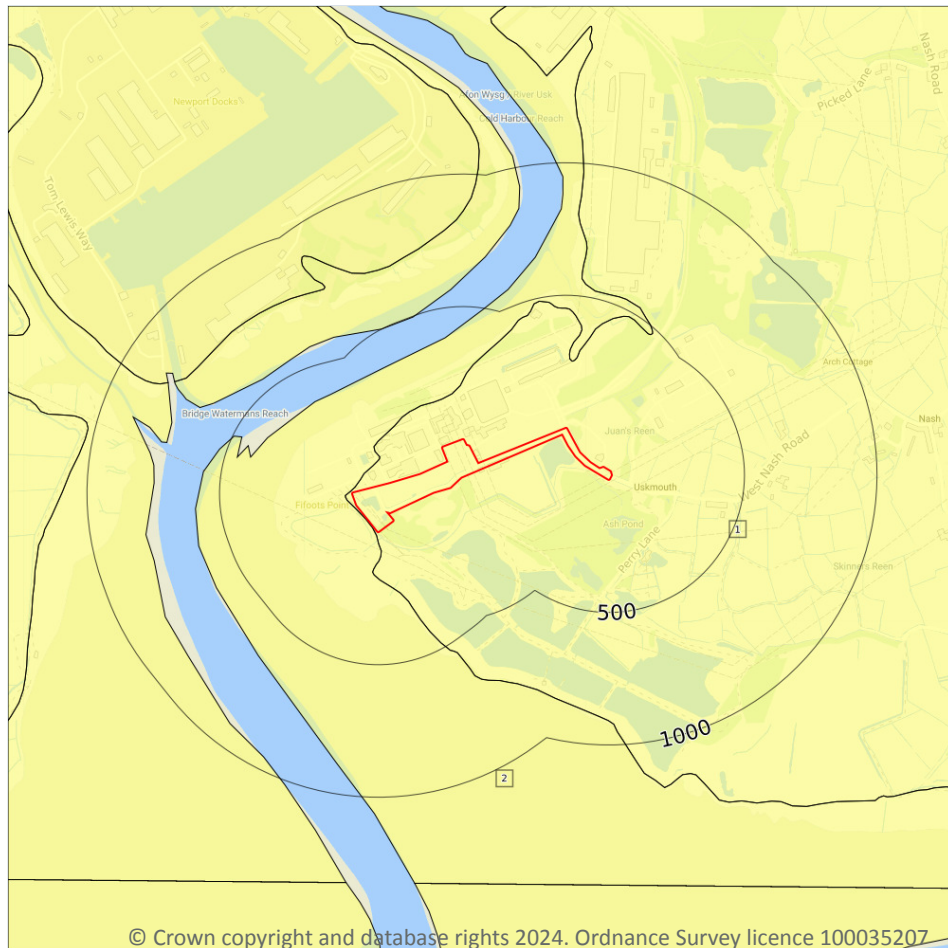
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

☒ Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

2

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 94](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TFD-XCZ	TIDAL FLAT DEPOSITS	CLAY AND SILT
2	4m SW	TFD-XCZ	TIDAL FLAT DEPOSITS	CLAY AND SILT

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	Low	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m**0**

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

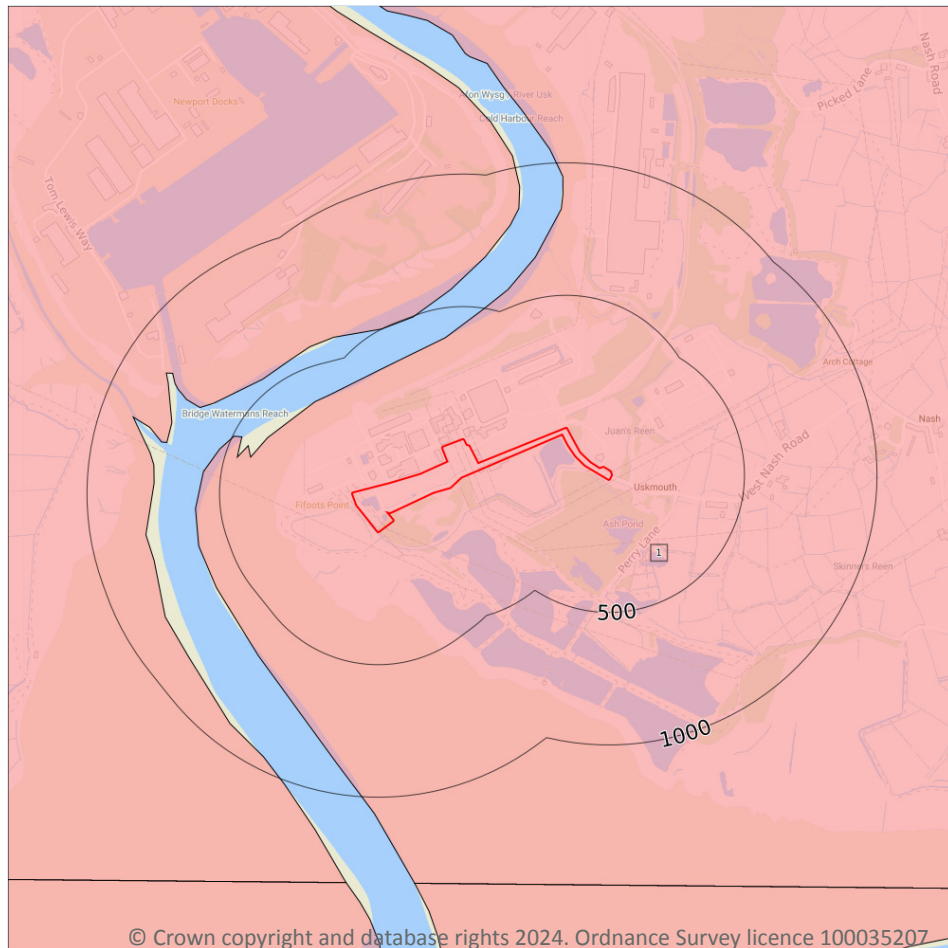
Records within 50m**0**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 96 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Low	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

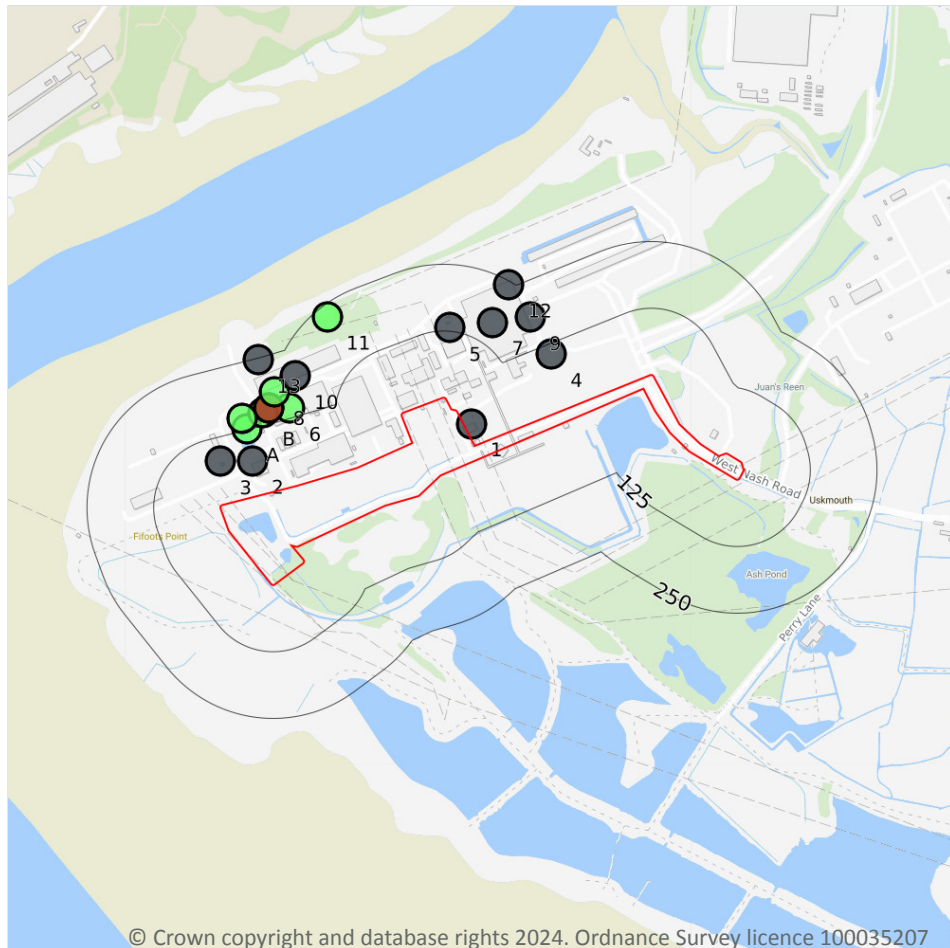
Records within 500m**0**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



16 Boreholes



Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

17

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 98](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	14m NE	332780 183660	USKMOUTH B GENERATING STATION. BORE H	-	Y	N/A
2	66m W	332370 183590	NASH, NEWPORT CORP ELEC DEPT. 4	-	Y	N/A
3	81m W	332310 183590	USKMOUTH 275KV SUBSTATION 1	-	Y	N/A

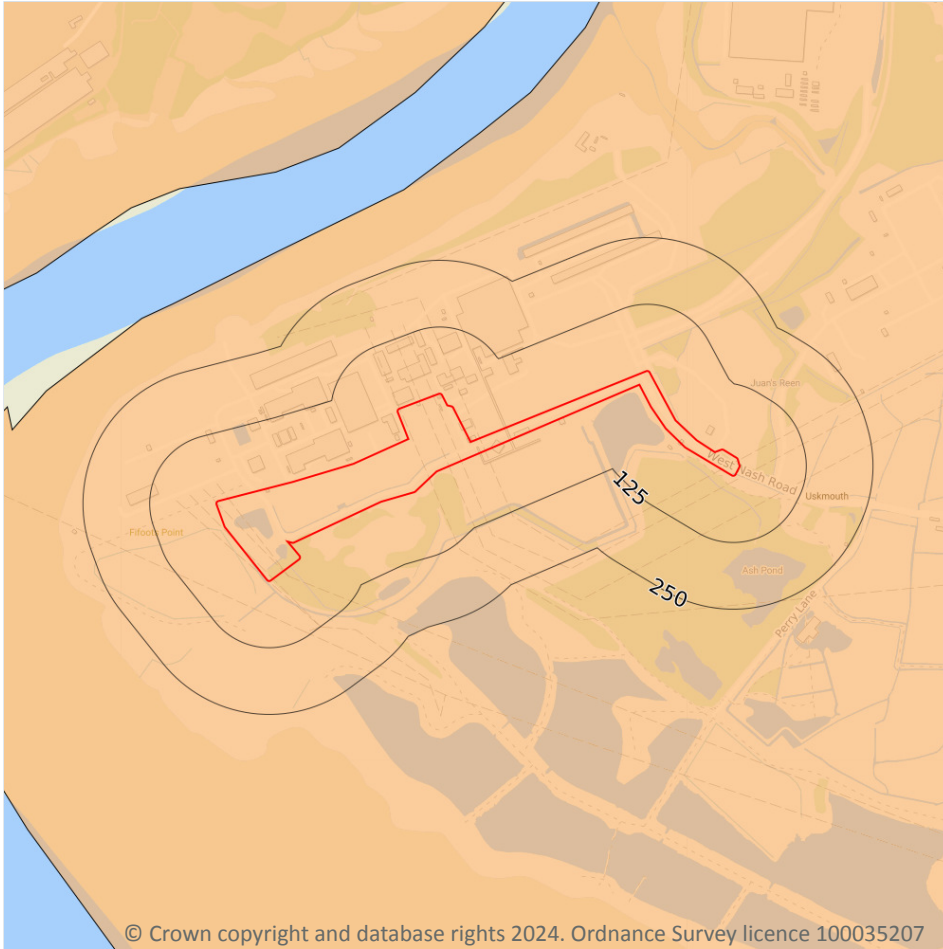


ID	Location	Grid reference	Name	Length	Confidential	Web link
4	105m NE	332930 183790	USKMOUTH B GENERATING STATION. BORE 11	-	Y	N/A
A	126m W	332360 183650	NEWPORT POWER STATION NO.4	19.81	N	385360 ↗
5	132m N	332740 183840	USKMOUTH B GENERATING STATION. BORE 1	-	Y	N/A
6	144m NW	332440 183690	NEWPORT POWER STATION NO.3	20.11	N	385359 ↗
B	148m NW	332390 183680	NEWPORT POWER STATION NO.5	21.03	N	385361 ↗
A	148m W	332350 183670	NEWPORT POWER STATION NO.1	21.51	N	385357 ↗
B	155m NW	332400 183690	NEWPORT POWER STATION NO.6	-1.0	N	385362 ↗
7	168m NE	332820 183850	USKMOUTH B GENERATING STATION. BORE 2	-	Y	N/A
8	181m NW	332410 183720	NEWPORT POWER STATION NO.2	17.55	N	385358 ↗
9	185m NE	332890 183860	USKMOUTH B GENERATING STATION. BORE D	-	Y	N/A
10	199m NW	332450 183750	NEWPORT POWER STATION, LOE.333, 1-5	-	Y	N/A
11	229m NW	332510 183860	USKMOUTH 1	26.55	N	385354 ↗
12	243m NE	332850 183920	USKMOUTH B GENERATING STATION. BORE B	-	Y	N/A
13	247m NW	332380 183780	USKMOUTH B PUMPING STATION, C.E.G.B. 5	-	Y	N/A

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

1

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

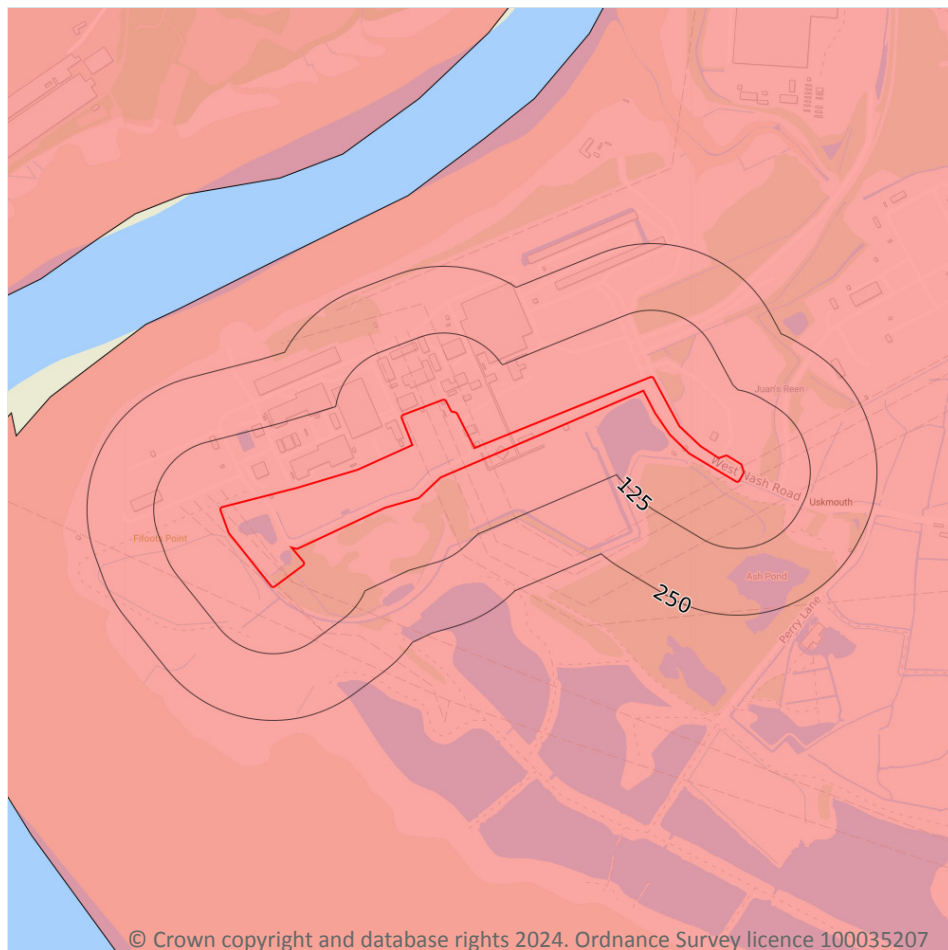
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 100](#) >

Location	Hazard rating	Details
On site	Low	Ground conditions predominantly medium plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

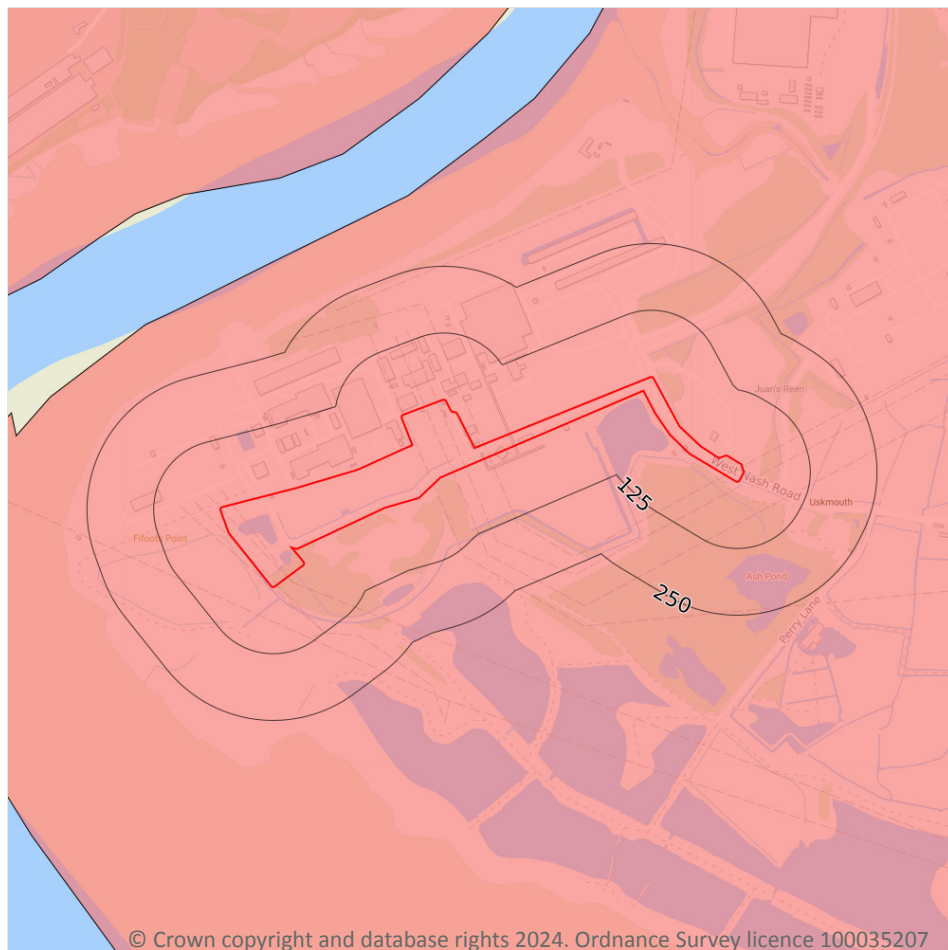
Features are displayed on the Natural ground subsidence - Running sands map on [page 101](#) >

Location	Hazard rating	Details
On site	Moderate	Running sand conditions are probably present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

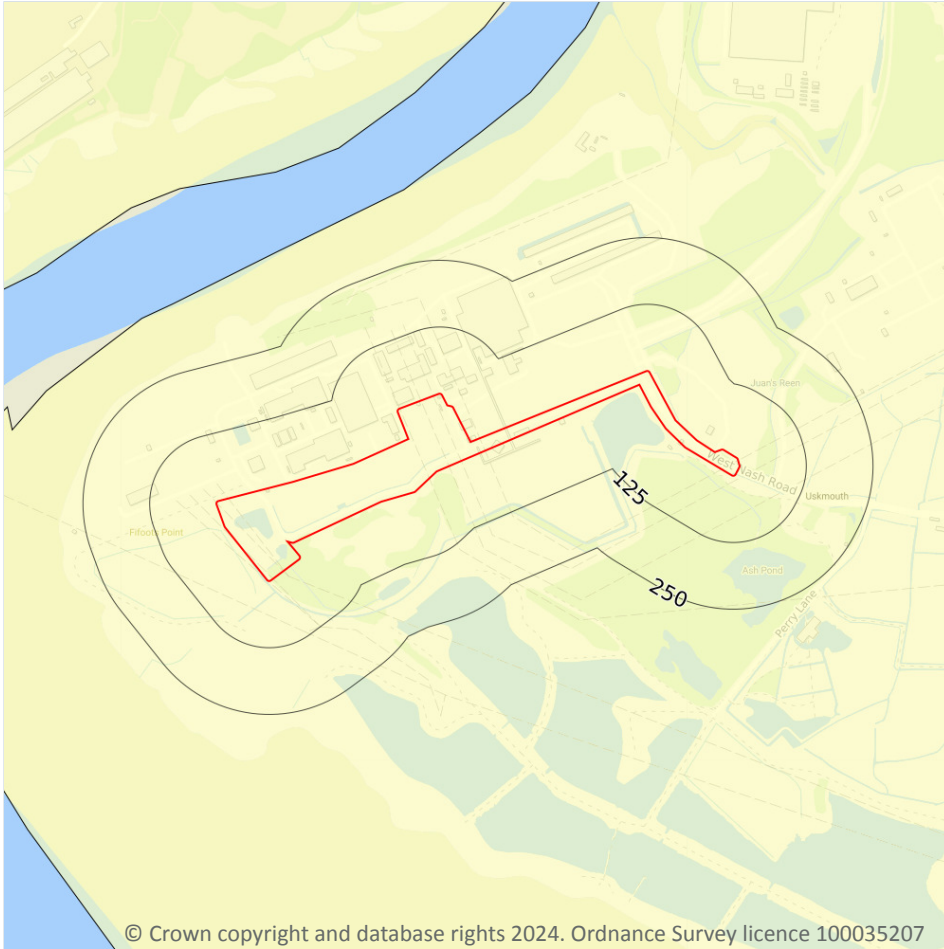
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 102](#) >

Location	Hazard rating	Details
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

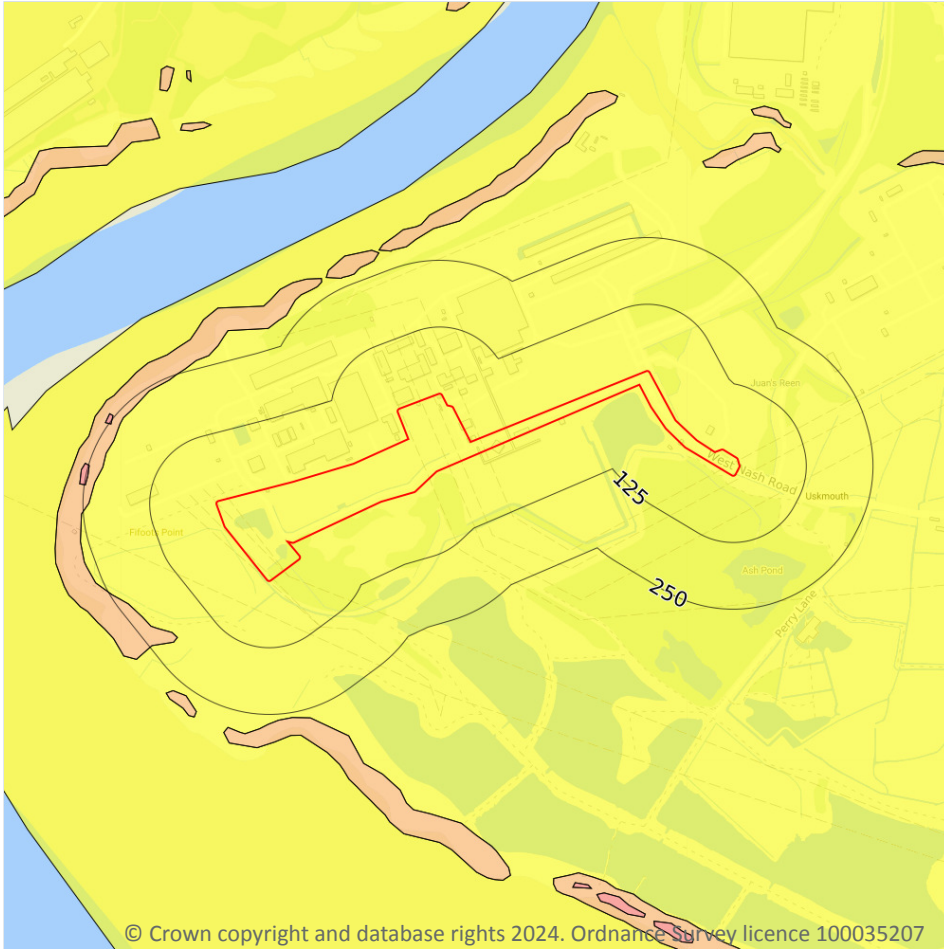
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 103 >](#)

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

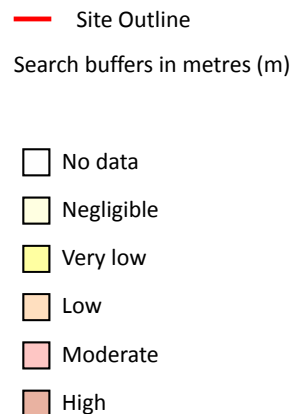
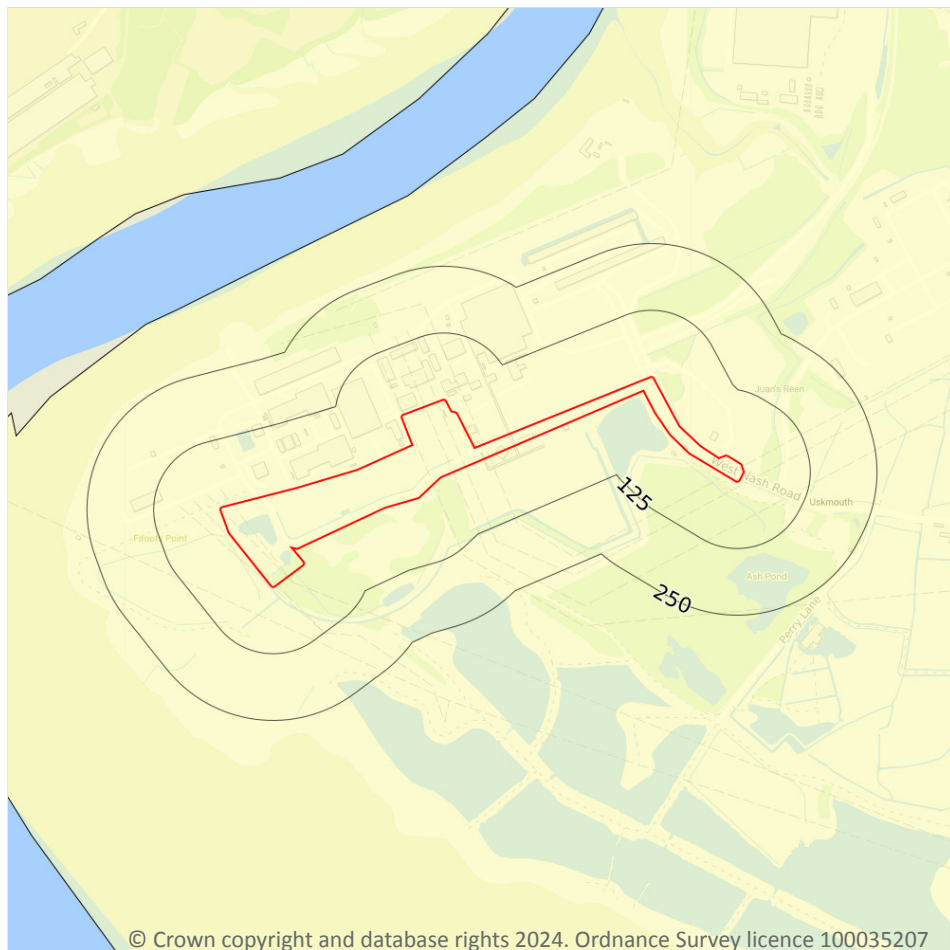
Features are displayed on the Natural ground subsidence - Landslides map on [page 104 >](#)

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

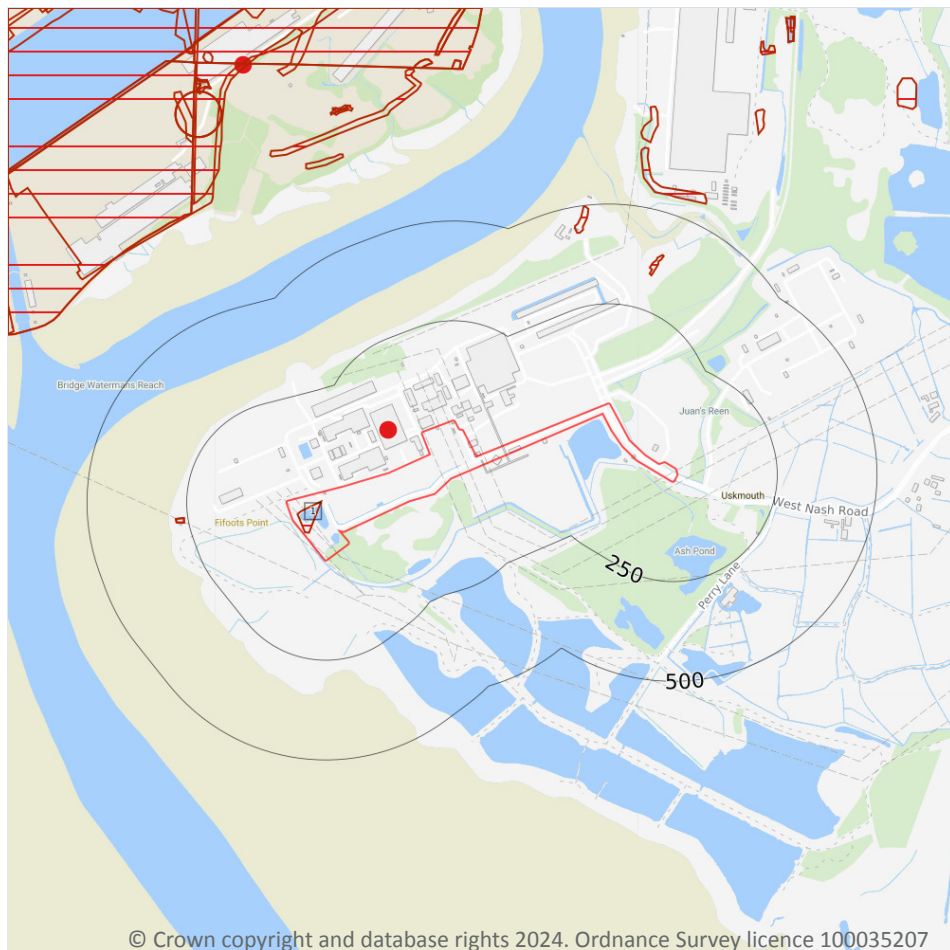
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 105 >](#)

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

2

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 107](#) >

ID	Location	Details	Description
A	84m NW	Name: Uskmouth Power Station Ash Plant Address: Uskmouth, NEWPORT, Gwent Commodity: Pulverised-Fuel Ash Status: Ceased	Type: Power station which produces Desulphogypsum and, or, Pulverised Fuel Ash or Furnace Bottom Ash Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
A	84m NW	Name: Uskmouth Power Station Ash Plant Address: Uskmouth, NEWPORT, Gwent Commodity: Furnace Bottom Ash Status: Ceased	Type: Power station which produces Desulphogypsum and, or, Pulverised Fuel Ash or Furnace Bottom Ash Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

1

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 107](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Unspecified Disused Pit	1964	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This data is sourced from Ordnance Survey/Groundsure.



18.4 Underground mining extents

Records within 500m

0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the



Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site

0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0
-----------------	---

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site	0
-----------------	---

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

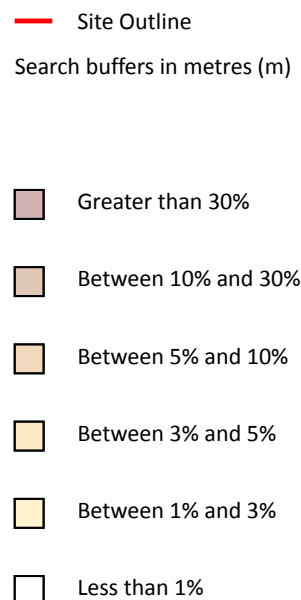
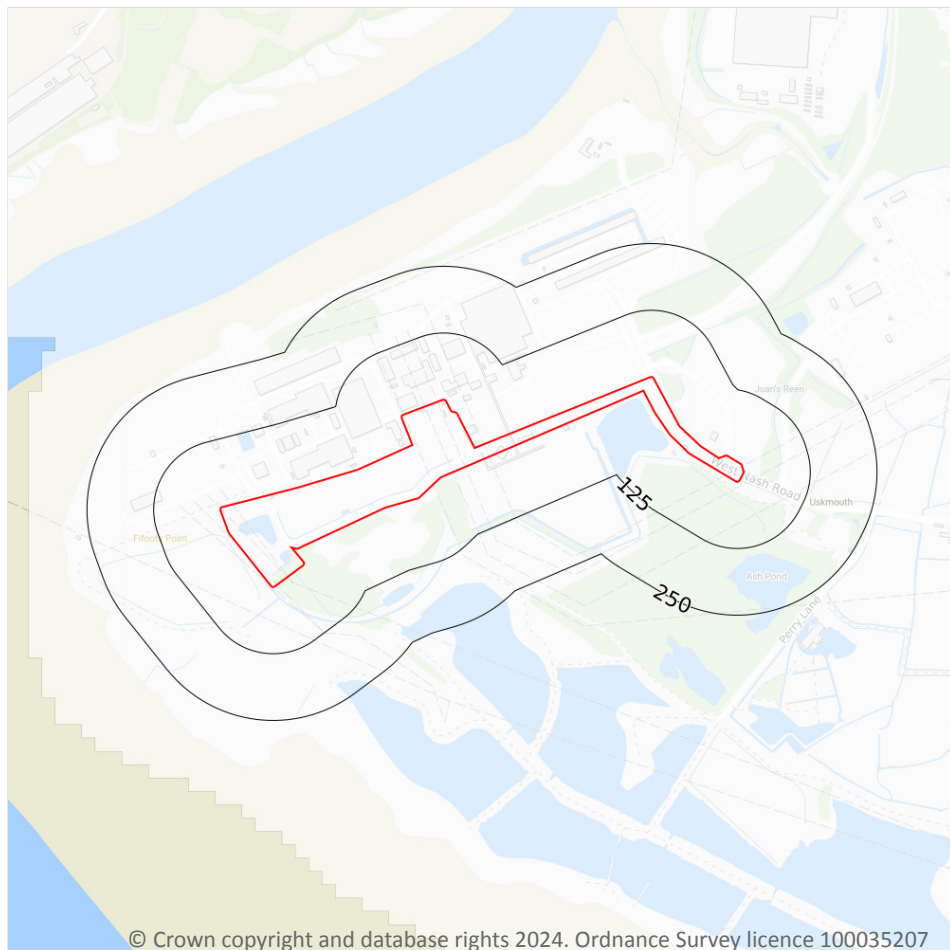
Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 114 >](#)

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None



This data is sourced from the British Geological Survey and UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

8

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
4m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
9m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.



21.3 BGS Measured Urban Soil Chemistry

Records within 50m

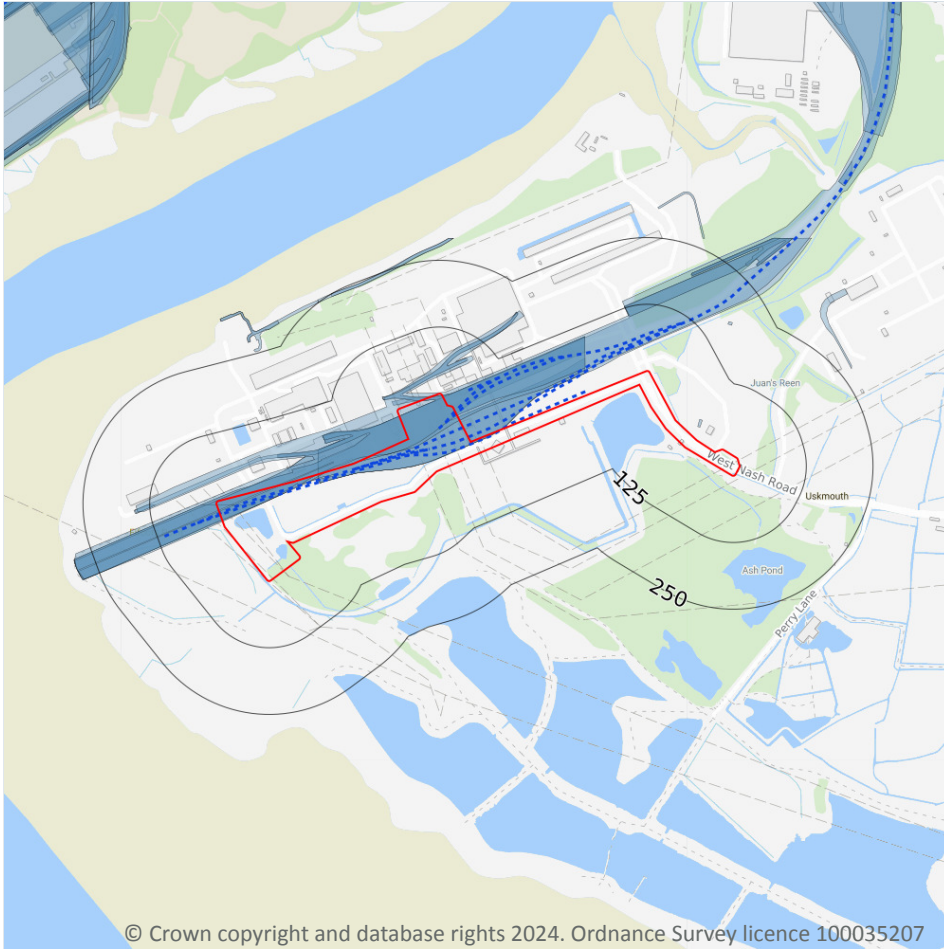
0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

22.1 Underground railways (London)

Records within 250m

0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

16

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on [page 118 >](#)

Location	Land Use	Year of mapping	Mapping scale
On site	Railway Sidings	1975	1250
On site	Railway Sidings	1963	1250
On site	Railway Sidings	1956	1250
On site	Railway Sidings	1969	2500
On site	Railway Sidings	1958	2500
On site	Railway Sidings	1964	10560
20m E	Railway Sidings	1971	1250
107m NE	Railway Sidings	1963	1250
107m NE	Railway Sidings	1971	1250
115m W	Railway Sidings	1956	1250
172m NE	Railway Sidings	1971	1250
195m NE	Railway Sidings	1992	1250
198m NE	Railway Sidings	1969	2500
241m N	Railway Sidings	1969	2500
241m N	Railway Sidings	1963	1250
250m NW	Railway Sidings	1963	1250

This data is sourced from Ordnance Survey/Groundsure.



22.5 Royal Mail tunnels

Records within 250m**0**

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m**0**

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m**8**

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on [page 118 >](#)

Location	Name	Type
On site		rail
On site		rail
On site		rail
On site	Uskmouth branch	rail
On site	Fifoots Power Station	rail
On site	Fifoots Power Station	rail
43m NE	Fifoots Power Station	rail
52m NE		rail

This data is sourced from Ordnance Survey and OpenStreetMap.



22.8 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.



APPENDIX C: PHOTO PLATES



Plate 1

Access into PFA store



Plate 2

Drainage channel to the west (left) and south (right) perimeter of the PFA store

Tetra Tech
5th Floor, Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Tel: 029 20 829200
Fax: 029 20 455321

Environmental Consultancy
Ground Technologies & Investigation



TETRA TECH

Project :-
Afon Wysg 2

Project No.:

784-B070804



Plate 3 Large lagoon to the north



Plate 4 Lagoon to south with ~2.5m diameter pipe connecting to the north lagoon (left) and sampling platform to southwest of southern lagoon (right)

Tetra Tech
5th Floor, Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Tel: 029 20 829200
Fax: 029 20 455321

Environmental Consultancy
Ground Technologies & Investigation



TETRA TECH

Project :-
Afon Wysg 2

Project No.:

784-B070804



Plate 5

Access track road facing east, with closed culvert (Left) and Wheel wash to north of site access track (right)



Plate 6

Site access track to east of site facing south towards the security hut on West Nash Rd

Tetra Tech
 5th Floor, Longcross Court
 47 Newport Road
 Cardiff
 CF24 0AD

Tel: 029 20 829200
Fax: 029 20 455321

Environmental Consultancy
Ground Technologies & Investigation



TETRA TECH

Project :-
Afon Wysg 2

Project No.:

784-B070804



Plate 7 Biofuel storage area - no internal access.



Plate 8 Railway tracks to the northwest of the PFA store (Facing west)

Tetra Tech
5th Floor, Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Tel: 029 20 829200
Fax: 029 20 455321

Environmental Consultancy
Ground Technologies & Investigation



Project :-
Afon Wysg 2

Project No.:

784-B070804



Plate 9

Vegetation growing from top of PFA



Plate 10

Drainage flows under road (left) to Lamellar plate clarifier (not connected) (right)

Tetra Tech
 5th Floor, Longcross Court
 47 Newport Road
 Cardiff
 CF24 0AD

Tel: 029 20 829200
Fax: 029 20 455321

Environmental Consultancy
Ground Technologies & Investigation



TETRA TECH

Project :-
Afon Wysg 2

Project No.:

784-B070804



Plate 11

Surface water sampling platform (left) and stream to Severn Estuary flowing west (right)



Plate 12

11kV electrical substation in NW corner of site

Tetra Tech
5th Floor, Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Tel: 029 20 829200
Fax: 029 20 455321

Environmental Consultancy
Ground Technologies & Investigation



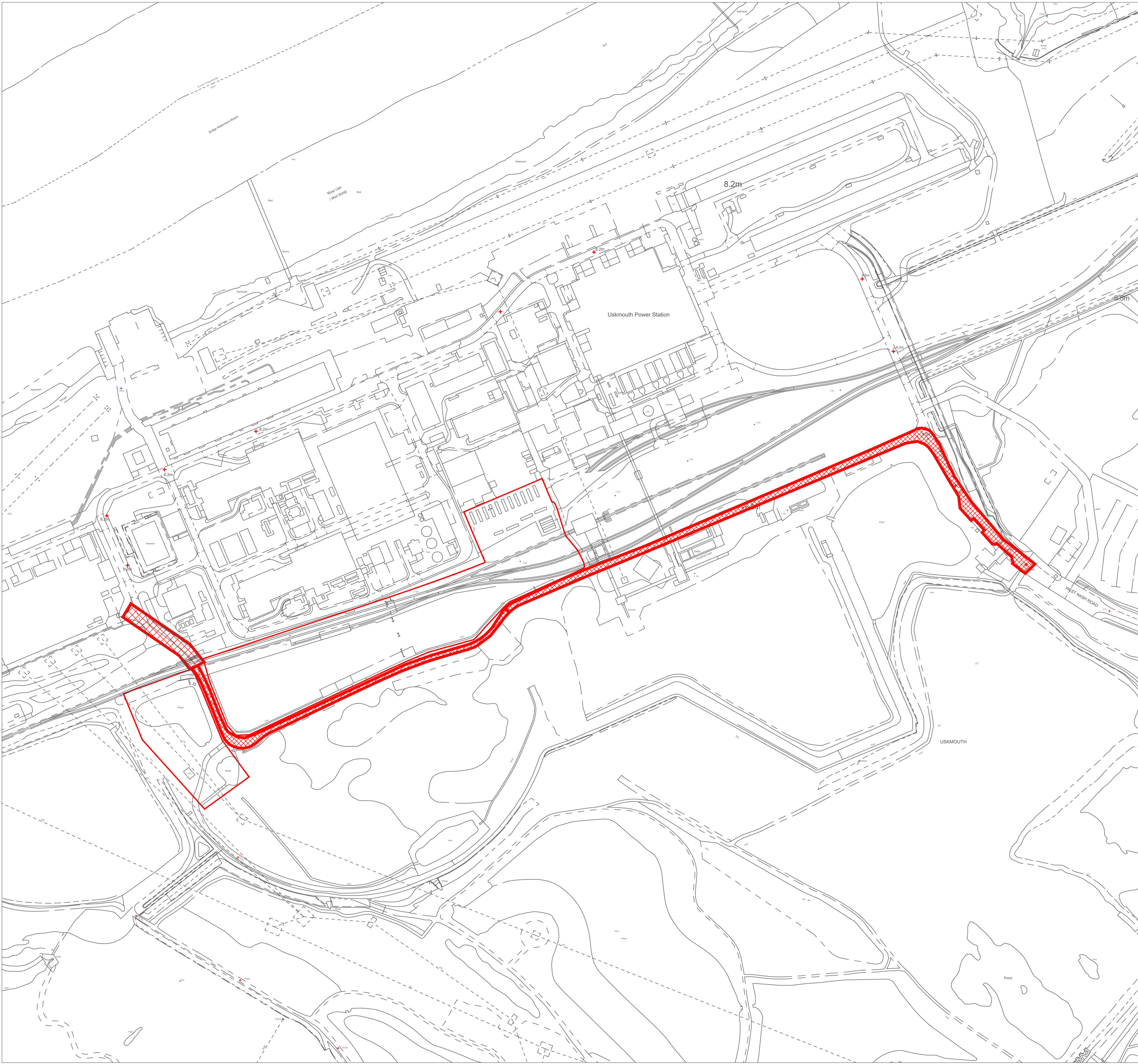
TETRA TECH

Project :-
Afon Wysg 2

Project No.:

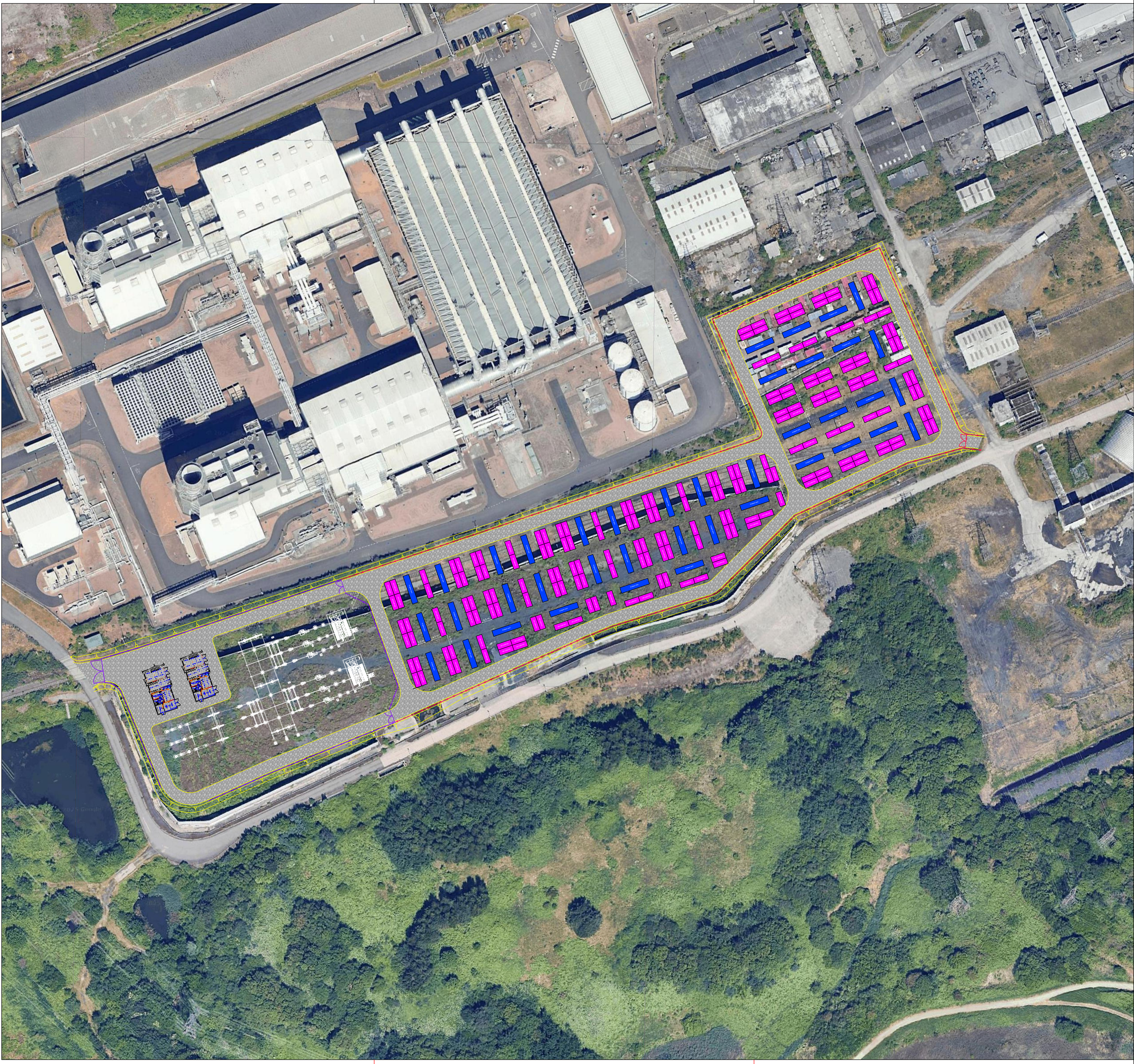
784-B070804

APPENDIX D: SITE LOCATION PLAN



PROJECT NAME:						
Uskmouth						
Company logo						
ecenergy Powering renewables.						
		SECTION GENERAL		DRAWING CODE		
DRAWING		DRAWING TITLE		SCALE		1:1750
		SITE LOCATION PLAN		FILE NAME		
REV	DATA	MODIFIED		DRAWN	CHECKED	APPROVED
00	09-01-2025			E.N.		
01						
02						
03						
04						
05						
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APPENDIX E: GENERAL SITE LAYOUT



LEGEND

PCS&MV Shed

40 x PCS

MC Cube ESS

200 x MC Cube ESS

SWITCH GEAR & CONTROL ROOM

Switchgear and control room

BESS fence

HV palise fence

Access road

O&M building

HV substation gate

BESS gate

PROJECT NAME:

Uskmouth

Company logo

ecenergy

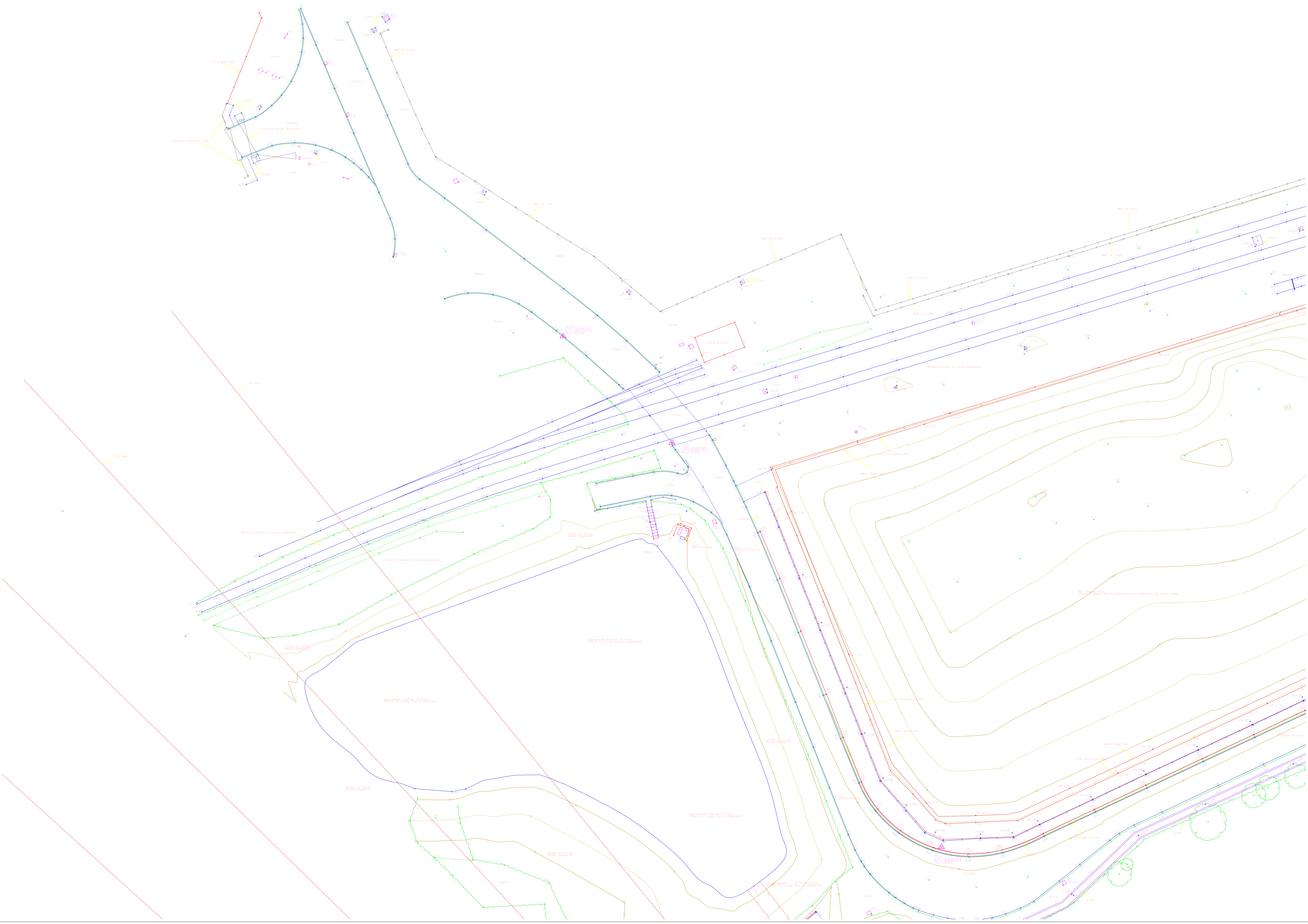
Powering renewables.

This document is to be used for indicative purposes only.

	SECTION	DRAWING CODE			
	GENERAL				
DRAWING	DRAWING TITLE	SCALE	1:750		
	GENERAL LAYOUT	FILE NAME			
REV	DATA	MODIFIED	DRAWN	CHECKED	APPROVED
00	01-04-2025		E.N.		
01					
02					
03					
04					
05					

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APPENDIX F: TOPOGRAPHICAL SURVEY



NOTES

- UNLESS NOTED OTHERWISE, ALL DIMENSIONS ON THIS DRAWING ARE IN METRES.
- ALL LEVELS ARE IN METRES AND RELATED TO CROSS ORDNANCE SURVEY NEWLYN DATUM
- COORDINATES ARE ON A LOCAL PLANE METRIC GRID RELATED TO ORDNANCE SURVEY GRID ABOUT THE CONTROL POINT SCD1

TOPO LEGEND

AB	AIR BRICK	LFB	LITEREITY
AV	AIR VALVE	LP	LAMP POST
BB	BELLOWS BEACON	MB	MOORING BOLLARD
BH	BUILDING HEIGHT	MT	MISCELLANEOUS FENCING
BL	BUILDING EAVES LEVEL	MW	MANHOLE
BM	BENCH MARK	MP	MOORING PILE
BOL	BOLLARD	MRF	METAL RAILING FENCE
BRK	BRICKWORK	MS	MILE STONE
BS	BUS STOP	NS	NOTICE BOARD
BW	BRICK WALL	NB	NOTICE BOARD
BWF	BARRIED WIRE FENCE	NBA	NATURAL DROPS AUTHORITY
CB	CONTROL BOX	OCC	OVERGROUND CONDUIT
CF	CORRUGATED IRON FENCE	OCG	OVERHEAD CANTY
CL	COVER LEVEL	OPR	OPEN STEEL RAILINGS
CLF	CHAIN LINK FENCE	P	POST
CP	SECURITY CAMERA POST	PB	PILLAR BOX
CPL	CORING LEVEL	PM	PARKING METER
CPT	CABLE PIT COVER	PRF	CONC POST & RAIL FENCE
CR	CYCLE RACK	PTM	PARKING TICKET MACHINE
CTV	CABLE T.V. MANHOLE	PV	VERTICAL PIPE
CUL	CULVERT	RC	ROOFING EYE COVER
DK	DECK LEVEL	RP	REFLECTIVE POST
D	DECK LEVEL	RS	ROAD SIGN
DP	DOWNPIPE	RTB	RETAINING WALL
DPC	DAMP PROOF COURSE	RWP	RAINWATER PIPE
DR	GRAN	SC	STOP CODE
DWB	DOG WASTE BIN	SSP	STAND PIPE
EA	ENVIRONMENT AGENCY	SK	SKAMMAY
EB	ELECTRICITY BOX	SL	SOFT LEVEL
ECP	ELECTRIC CABLE FENCE	SMH	SURFACE WATER MANHOLE
ECP	ELECTRICITY CABLE PIT	SMP	SHEET METAL PLING
EMH	ELECTRICITY MANHOLE	SP	SON POST
EP	ELECTRICITY POLE	STU	STUMP
ER	EARTHING ROD	SV	SURVEY
ETL	ELEC. TRANSMISSION LINE	SVP	SOL VENT PIPE
FB	FOOTBRIDGE	SWF	SHEEP WIRE FENCE
FH	FIRE HYDRANT	TBM	TEMPORARY BENCH MARK
FHM	FIRE HYDRANT MARKER	TC	TELECOM CABINET
FL	FLOOR LEVEL	TGB	TELEPHONE CALL BOX
FP	FENCE POST	TGP	TELEPHONE CALL POST
FWM	FULL WATER MANHOLE	TDL	TELECOM MANHOLE
G	GULLY	TAL	THRESHOLD LEVEL
GL	GROUND LIGHT	TL	TRAFFIC LIGHT
GM	GAS MARKER	TLD	TRAFFIC LIGHT BOX
GP	GATE POST	TP	TELEGRAPH POLE
GV	GAS VALVE	TRB	TRIMMER RUBBER SHIP
H	HANDRAIL	TSR	TUBULAR STEEL RAILINGS
HRL	INSPECTION CHAMBER	WB	WASTE BIN
IC	INSERT LEVEL	WL	WATER LEVEL/WATER LINE
IRF	IRON RAILING FENCE	WM	WATER METER
IRF	IRON RAILING FENCE	WMF	WIRE MESH FENCE
JO	JUNCTION BOX	WP	WOODEN POST
KO	KERB OUTLET	WPP	WOODEN POST & RAIL FENCE
LDR	LADDER	WV	WATER VALVE

FINAL ISSUE

LOCATION PLAN

HATCHED AREA SHOWN IN THIS DRAWING - BOLD LINE DEFINES SURVEY EXTENT

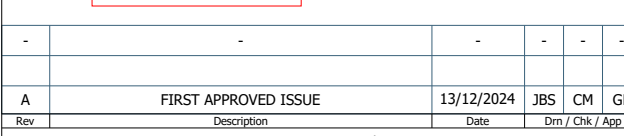
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Project Name		Uskmouth Power Station AW2						
Sheet Title		Uskmouth Power Station AW2 2D Topographical Survey Sheet 1 of 4						
TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A0	Subsidiary
784-8070326	BRS	13/12/24	C.M.	13/12/24	G.P.	13/12/24	1:200	S3
Client Project Number	Coordinate	Value	Dimension	Symbol	Point	Code	Value	Number
784-8070326	TTE	- ZZ	- ZZ	- DR	- G	- 001		A
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2. ALL LEVELS ARE IN METRES AND RELATED TO GNSS ORDNANCE SURVEY NEWLYN DATUM
3. COORDINATES ARE ON A LOCAL PLANE METRIC GRID RELATED TO ORDNANCE SURVEY GRID ABOUT THE CONTROL POINT SC01

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LOCATION PLAN

HATCHED AREA SHOWN IN THIS DRAWING - BOLD LINE DEFINES SURVEY EXTENT



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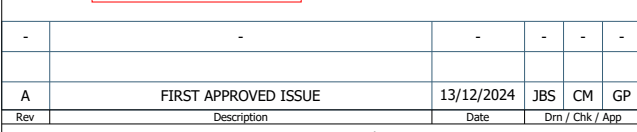
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2D Topographical Survey
Sheet 3 of 4

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LOCATION PLAN

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Sheet Title

Uskmouth Power Station AW2

2D Topographical Survey

Sheet 4 of 4

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A0	Suitability
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784-B070326	JBS	13/12/24	C.M.	13/12/24	G.P.	13/12/24	1:200	S3
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Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Role	Number	Revision
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784-B070326 - TIE - ZZ - ZZ - DR - G - 004 A

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APPENDIX G: CIRIA C552 RISK EVALUATION METHODOLOGY

The following tables are derived from CIRIA C552 and have been used to define the risk rating presented in the Qualitative Risk Assessment matrix.

Classification of consequence

Classification	Definition
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note; Water Resources Act contains no scope for considering significant pollution) of sensitive water resource. Catastrophic damage to building/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Medium	Chronic damage to human health ('significant harm', as defined In DETR, 2000). Pollution of sensitive water resources (note; Water Resources Act contains no scope for considering significant pollution). A significant change in a particular ecosystem, or an organism forming part of such an ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm', as defined In DETR, 2000). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.

Classification of probability

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Likely	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period that such an event would take place, and is even less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Matrix of consequence against probability to gain a risk classification

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk