

**GEOTECHNICAL &
GEO- ENVIRONMENTAL REPORT**
CELSA, ROVER WAY, CARDIFF

Prepared for:
CELSA Manufacturing UK Limited

January 2019

Job No: 14958

REPORT TITLE : **Geotechnical and Geo-environmental**
Report: CELSA, Rover Way, Cardiff

REPORT STATUS : **Final**

JOB NUMBER : **14958**

DATE : **January 2019**

PREPARED BY :
(Mr D Emanuel)

REVIEWED BY :
(Mr T. Walby)

APPROVED BY :
(Dr G. C. Lake)

Executive Summary

CELSA Manufacturing UK Ltd are proposing an industrial development at their scrap yard site on the southern side of rover way, Cardiff.

The site currently comprises an area of made up ground.

The site is underlain by a mantle of made ground over alluvium. The Mercia Mudstone Group lies beneath the alluvium.

A site investigation comprising nine trial pits (of which, three were observed by Terra Firma Wales Ltd) two hand dug trial pits and six rotary probe boreholes (three shallow, three deep). Groundwater wells were installed in the boreholes and the shallow wells were also used for soil gas monitoring.

Soil Chemical Testing of the made ground detected PCBs and asbestos. We understand that the site will have a cap of granular aggregate and hard-standing (concrete floor-slab) and the pathway between the source and receptor will be broken.

Several minor exceedances were recorded in groundwater which are not considered significant. In addition, elevated cyanide was recorded during monitoring on 2nd and 15th January 2019. Soil chemical testing did not identify a cyanide source at the site and we anticipate that the elevated levels originate off-site.

The first two rounds of gas monitoring placed the site in Gas Characteristic Situation 1, requiring no specialist gas protection measures. Photo-Ionisation Detector monitoring did not detect organic vapours.

An Envirocheck Report for the site revealed that No Radon Protection is required for new development at the site.

Given the deposits of made ground and shallow superficial deposits are unsuitable for founding, we would recommend piled foundations extending to the Mercia Mudstone Group. We understand that the ground-slab will be ground-bearing and should, therefore, be designed as structurally independent of the frame of the building.

TABLE OF CONTENTS

Section 1 Introduction and Proposed Development

- 1.1 Limitations and Exceptions of Investigation

Section 2 Review of Existing Data

- 2.1 Physical Setting, Current Use and Site Conditions
- 2.2 Site History
- 2.3 Geological
 - 2.3.1 Geology
 - 2.3.2 Coal Mining
 - 2.3.3 Radon
- 2.4 Environmental Setting
 - 2.4.1 Hydrogeology and Hydrology
 - 2.4.2 Flooding
 - 2.4.3 Waste

Section 3 Preliminary Qualitative Human Health and Environmental Risk Assessment

- 3.1 General
- 3.2 Preliminary Site Conceptual Model
 - 3.2.1 Potential Sources of Contamination and Gas
 - 3.2.2 Potential Receptors, Pathways and Risks

Section 4 Field Investigation

- 4.1 Site Works
- 4.2 Ground Conditions
- 4.3 Groundwater
- 4.4 Laboratory Chemical Testing
 - 4.4.1 Exploratory Strategy and Sampling Regime
 - 4.4.2 Soil Laboratory Analysis
 - 4.4.3 Groundwater Laboratory Analysis

Section 5 Soil and Groundwater Analytical Results

- 5.1 Soil Assessment Methodology
- 5.2 Soil Test Results
- 5.3 Groundwater Test Results
- 5.4 Soil Gas Monitoring

TABLE OF CONTENTS (continued)

Section 6 Quantitative Risk Assessment

- 6.1 Contaminants of Concern in Soil
- 6.2 Contaminants of Concern in Groundwater
- 6.3 Potential Receptors and Pathways
 - 6.3.1 Human Receptors
 - 6.3.2 Aquatic Environment
- 6.4 Mitigation and Remedial Measures
 - 6.4.1 Site Workers
 - 6.4.2 Neighbouring Site Users
 - 6.4.3 Site End Users
 - 6.4.4 Aquatic Environment
- 6.5 Site Conceptual Model

Section 7 Engineering Recommendations

- 7.1 Preparation of Site
- 7.2 Foundation and Floor Slab Solution
- 7.3 Excavations and Formations
- 7.4 Foundation Risk Assessment
- 7.5 Protection of Buried Concrete
- 7.6 Soil Gas Protection

Figures

- Figure 2.1 Site Location
- Figure 4.1 Exploratory Hole Locations
- Figure 6.1 Site Conceptual Model

Tables

- Table 2.1 Summary of Historical Plans
- Table 4.1 Summary of Ground Conditions
- Table 4.2 Sample Locations and Depths
- Table 5.1 Summary of Soil Chemical Test Results - Standard Suite & Asbestos
- Table 5.2 Summary of Soil Chemical Test Results - Speciated PAH
- Table 5.3 Summary of Soil Chemical Test Results - Speciated PH
- Table 5.4 Summary of Soil Chemical test Results – PCBs
- Table 5.5 Summary of Groundwater Chemical Test Results
- Table 5.6 Summary of Gas Monitoring
- Table 6.1 Summary of Soil Exceedances
- Table 6.2 Summary of Shallow Groundwater Exceedances
- Table 6.3 Summary of Deep groundwater Exceedances

Annexes

- Annex A Envirocheck Report
- Annex B Risk Assessment Definitions
- Annex C Machine and Hand Excavated Trial Pit Logs
- Annex D Rotary Borehole Logs
- Annex E Soil Chemical Test Results
- Annex F Groundwater Chemical Test Results
- Annex G Gas Monitoring Results

SECTION 1 Introduction and Proposed Development

CELSA Manufacturing UK Limited are proposing the development of An industrial unit at their site located south of Rover Way, Cardiff.

Terra Firma (Wales) Limited has been commissioned by James and Nicholas, on behalf of CELSA Manufacturing UK Limited, to undertake a geo-environmental assessment and geotechnical investigation of the site.

The main objectives of the geo-environmental assessment programme were to:

- Identify the potential environmental liabilities at the site associated with any soil contamination from past site uses.
- Provide a summary of the environmental conditions at the site, together with any necessary remediation works to render the site fit for its intended use.
- Provide recommendations with regard to radon.

The main objectives of the geotechnical site investigation were to:

- Determine the type, strength and bearing characteristics of the shallow superficial deposits.
- Provide recommendations for a suitable and economic foundation/floor slab solution for the development.
- Provide recommendations with regard to any other geotechnical aspects pertaining to the development.

In order to achieve the above objectives, Terra Firma (Wales) Limited carried out an assessment programme including a review of existing data, followed by a field investigation to determine the prevailing ground conditions and also to collect and analyse soil samples from selected locations around the site.

1.1 Limitations and Exceptions of Investigation

The geo-environmental and geotechnical investigation was conducted and this report has been prepared for the sole internal reliance of CELSA Manufacturing UK Limited and their design and construction team. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Terra Firma (Wales) Limited. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

The report represents the findings and opinions of experienced geo-environmental and geo-technical consultants. Terra Firma (Wales) Limited does not provide legal advice and the advice of lawyers may also be required.

The subsurface geological profiles, any contamination and other plots are generalised by necessity and have been based on the information found at the locations of the exploratory holes and depths sampled and tested.

Machine excavations could not be performed in the far south of the site due to wet weather and very soft clay. It is beyond the scope of this report to assess the demolition material currently stockpiled neat the centre of the site.

SECTION 2 Review of Existing Data

2.1 Physical Setting, Current Use and Site Conditions

The site locates to the south side of Rover Way, Cardiff, centred on an approximate National Grid Reference of 321573, 176413. The proposed development occupies an approximate plan area of 0.14 hectares. The location of the site is presented in **Figure 2.1**.

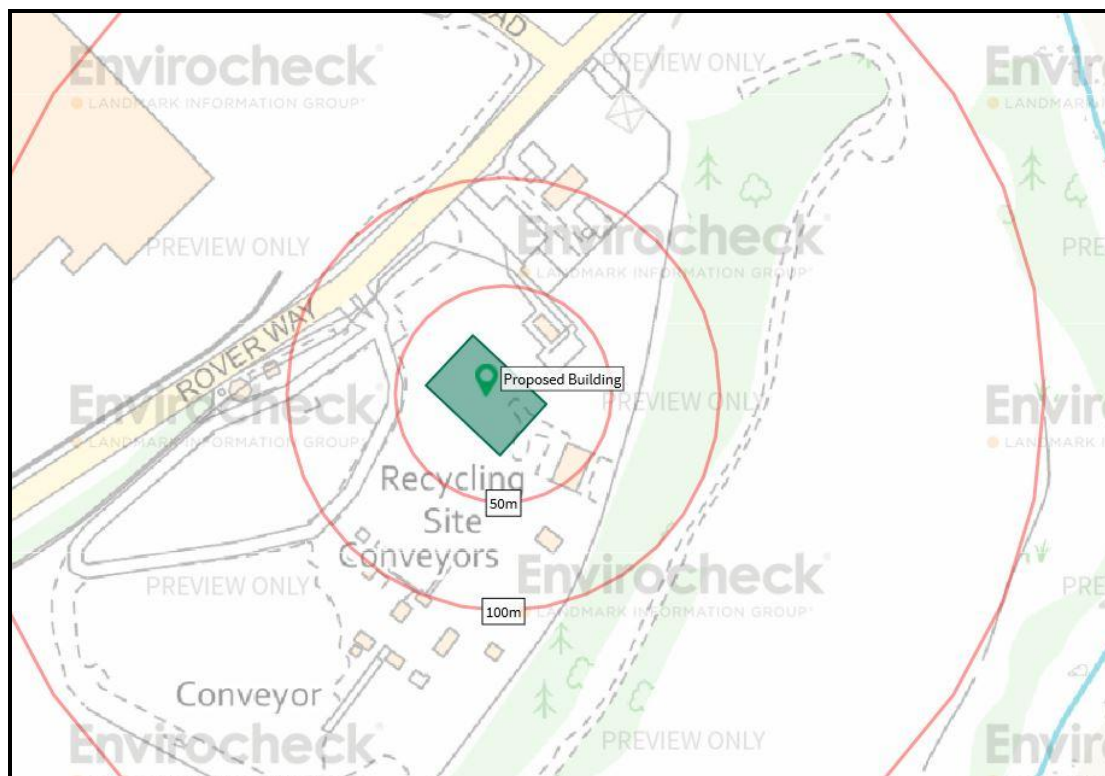


Figure 2.1: Site Location (NTS)

The site was visited in September 2018. The site was seen to comprise a large relatively flat open area comprising recovered land made of slag.

The flat area extends beyond the current study site and the area is surrounded by a high metal security fence. An electricity sub-station locates immediately north of the site and a gantry passes over the entrance to the site.

2.2 Site History

The history of the site has been traced using historical Ordnance Survey maps obtained from Landmark Information Group. The maps are presented in **Annex A**. A summary of the sites history is presented in **Table 2.1**;

| Table 2.1. Summary of Historical Plans | | |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dates | On-Site | Off-Site |
| 1880 | The site locates on a salt marsh in the estuary. A channel crosses the site. The site locates below Mean High Water | Land locates immediately north and west of the site. The land is undeveloped. |
| 1885/1886 | As Previously | Tharsis Copper Works locates 1.43 km southwest of the site. |
| 1900/1901 | As Previously | Urban development and a Railway Line locate over 1km west of the site. |
| 1919/1920 | As Previously | As Previously |
| 1922 | As Previously | As Previously |
| 1938/1947 | As Previously | Further urban expansion is shown 500m northwest of the site in Splott |
| 1947 (Aerial Photo) | Site can be seen to comprise mud flats | Evidence of Cardiff Airport 500m north of the site. |
| 1947/1954 | As Previously | Sewage outfalls locate 150m north and 350m northeast of the site. |
| 1952/1957 | As Previously | Tremorfa Rolling Mill locates 700m southwest of the site. A pumping station locates 370m northeast of the site. |
| 1965 | The site comprises part of a large tip extending onto the flats. Mean High Water locates to the east of the reclaimed land | |
| 1975 | | The tip is shown to have extended southeast. Tracks traverse the tip. A steel rolling mill and other unspecified works locate 450m southwest. Rover Works locate 650m north on Pengam Moor. A school locates 500m northwest. |
| 1982 | Study site is undeveloped.. | Shows buildings on the current CELSA Works site. |
| 1989 | The tips are traversed by railway/tram lines | A substation locates immediately north of the stie. Extensive development of industrial buildings at the current CELSA site. A caravan site locates 500m northeast of the site. |
| 1992 | As Previously | |
| 2003 | As Previously | A superstore locates on Pengam Green 650m northnortheast of the site. |
| 2009 | Study site is labelled as a scrap yard | |
| 2018 | Site labelled as a Recycling Site | |
| Note: Distances are approximate | | |

2.3 Geological

2.3.1 Geology

The 1:50,000-scale geological map (British Geological Survey Sheet 263, (1977)) shows the site to be underlain by rocks of the Mercia Mudstone Group. The bedrock is shown to have a superficial cover of estuarine alluvium.

Made Ground is known to cover the site.

2.3.2 Coal Mining

The study site locates outside the South Wales Coal Field.

2.3.3 Radon

The Envirocheck Report states that No Radon protective measures are necessary in the construction of new dwellings or extensions

A copy of the Envirocheck Report is included in **Annex A**.

2.4 Environmental Setting

2.4.1 Hydrogeology and Hydrology

The Envirocheck Report records that the bedrock deposits are beneath the site are classified as a Secondary B Aquifers. Superficial deposits are recorded as Secondary (Undifferentiated).

The nearest surface water feature recorded by the Envirocheck Report locates 275m northeast of the site.

2.4.2 Flooding

The Envirocheck agency and Hydrological Map shows the study site to be affected by Extreme (i.e. Zone 2) Flooding.

The Surface Water Flood Risk Map shows areas in the vicinity of the site to be affected by low and medium risk (i.e 1,000 yr and 100 yrs return) flooding. A site specific assessment is recommended.

A site specific assessment is recommended to ascertain necessary development levels

2.4.3 Waste

The study site is shown to locate within a landfill operated by British Steel Corporation. The site is shown to have received Inert and Industrial Waste. Numerous other landfills locate within 250m of the study site with wastes including Inert, Household, Industrial and Special Waste.

SECTION 3 Preliminary Qualitative Human Health and Environmental Risk Assessment

3.1 General

The contaminated land regime is set out in Part IIA of the Environmental Protection Act (EPA) 1990 and was introduced on the 1st April 2000 in England and 1st July 2001 in Wales. A similar regime was introduced in Scotland on 14th July 2000. Part IIA was introduced to achieve two aims:

- (1) The identification of contaminated land
- (2) The remediation of contaminated land that poses an unacceptable risk to human health and/or the environment

Under Part IIA the statutory definition of 'contaminated land' is: any land which appears to the local authority in whose area it is situated, to be in such a condition, by reason of substances in, on, or under the land, that:

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

For land to be classified as 'Contaminated Land' there must be a 'pollutant linkage'.

For our definitions of pollution linkage and how we define risk please refer to **Annex B** which includes our classifications of consequence and probability and risk assessment matrix.

3.2 Preliminary Site Conceptual Model

The preceding sections enable a preliminary conceptual model of the site to be drawn up, to illustrate the likely ground conditions beneath the site together with a preliminary assessment of the nature of any underlying aquifer and groundwater movement. The preliminary site conceptual model is used as a model for the design and implementation of the site investigation, whereby areas of potential contamination can be targeted as well as investigating the site as a whole.

3.2.1 Potential Sources of Contamination and Gas

The potential contamination beneath the site, whether in the matrix of soil or any groundwater will be related to site past use and the history of the surrounding area.

Historical map review has revealed that the site comprises recovered land, built up with imported material, most probably from the nearby steel works (i.e. slag). The ground is therefore likely to reflect this origin. The site was more recently described as a scrap yard and recycling site and this is likely to be reflected in the soils chemistry.

There are numerous landfills within 250m of the site and the site itself locates within an area of fill.

We would therefore consider there to be a **high risk** of contamination being present at the site and the risk from soil gas to be **high** on account of the nearby landfills and potential natural peat deposits within the alluvium.

3.2.2 Potential Receptors, Pathways and Risks

There are both human and hydrological receptors to any contamination that may be present on site.

Construction workers will be excavating in soils and will be exposed via dermal contact with soils and dust, ingestion of soil dust and inhalation of soil dust.

Inhalation of asbestos fibres is also a possible risk, if present in the made ground, as is inhalation of vapours.

A commercial end use is proposed. Once developed, future site users will potentially be at risk from the same pathways.

Neighbouring site users and passers-by may potentially be exposed to soil dust, asbestos fibres and vapours during the earthworks phase.

If any contamination is identified this may be leachable, enabling it to mobilise through groundwater within site soils although thick deposits of alluvium are likely to hinder significant migration of dissolved contaminants.

SECTION 4 Field Investigation

4.1 Site Works

A geotechnical and geo-environmental site investigation was carried out between 6th November 2018 and 4th January 2019. James and Nicholas performed nine trial pits across the site, and Terra Firma Wales Ltd were in attendance for three of these. In addition, Terra Firma Wales Ltd took two hand dug samples on 4th January 2018.

Six rotary boreholes were performed at the site between 4th December 2018 and 11th December 2018 to prove the depth of rock-head and to allow the installation of deep and shallow groundwater and gas monitoring wells.

The fieldworks were supervised by Terra Firma (Wales) Limited.

The Machine Excavated and Hand Excavated Trial Pit Logs are presented in **Annex C**.

The Rotary Borehole Logs are presented in **Annex D**.

Exploratory Hole positions are given on **Figure 4.1**.

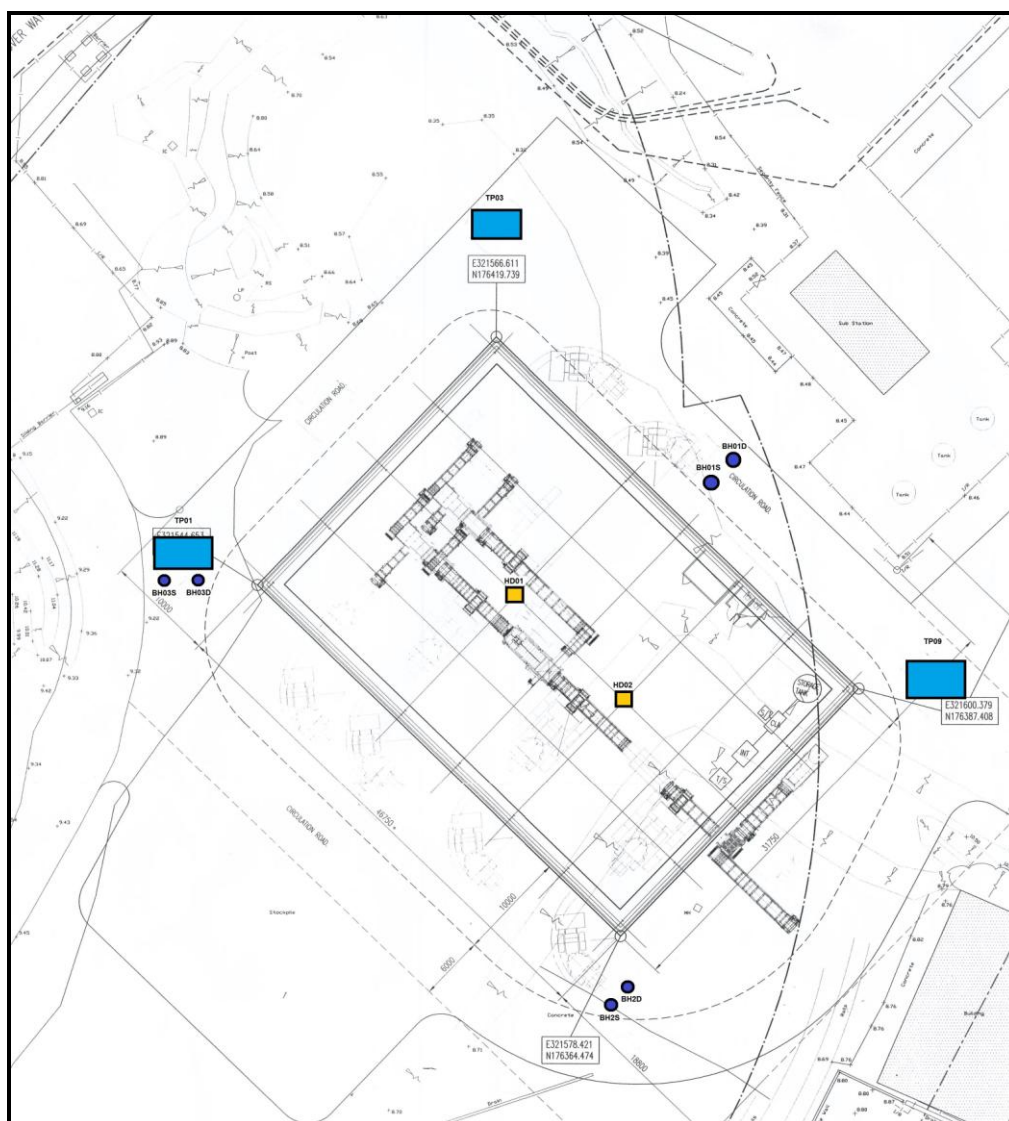


Figure 4.1. Exploratory Hole Locations

4.2 Ground Conditions

A summary of the ground conditions identified in the boreholes is given in **Table 4.1** below.

| Table 4.1 Summary of Ground Conditions | | |
|----------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Depth (m) | Thickness (m) | Stratum |
| 0.00 - 4.70/6.50 | 4.70/6.50 | MADE GROUND: Generally dense to very dense (requiring breaker) sandy GRAVEL to BOULDER including slag, concrete, brick. |
| 4.70/6.50 - 17.60/22.30 | 11.20/17.60 | ALLUVIUM: Grey clay. Gravels noted in some locations. Possible channels deposits noted in BH01D and BH02D (black to brown silty sand with gravel) |
| 18.30 - >19.00 | >0.70 | BASAL GRAVEL (BH01D Only): Silty sandy GRAVEL |
| 17.6/22.30 | - | WEATHERED MARL: . |

4.3 Groundwater

Trial Pits were dry during excavation. Groundwater was encountered within the deep groundwater wells rising to c. 10m below ground level (i.e. sub-artesian pressure). The wells were monitored between 10th December 2108 and 2nd January 2019. Perched groundwater was not initially encountered within the shallow wells although groundwater appeared in the base of BH03S by the second monitoring visit.

4.4 Laboratory Chemical Testing

4.4.1 Exploratory Strategy and Sampling Regime

During the trial pitting, small disturbed soil samples were collected.

The sample locations and depths are listed in **Table 4.2**.

| Table 4.2 Sample Locations and Depths | |
|----------------------------------------------|------------------|
| Sample | Depth (m) |
| TP01 | 1.0 |
| TP03 | 0.4 |
| TP03 | 0.7 |
| TP03 | 1.8 |
| TP09 | 0.3 |
| TP09 | 1.1 |
| HD01 | 0.1 |
| HD02 | 0.1 |

4.4.2 Soil Laboratory Analysis

The soil samples taken were despatched to the laboratories of Derwentside Environmental Testing Services Limited.

The following chemical tests were undertaken:

Metals and Metalloids

Lead
Arsenic
Mercury
Chromium
Copper
Nickel
Zinc
Boron
Beryllium
Antimony

In-Organics

Cyanide
Sulphate

Others

pH (acidity)
Organic Matter
Asbestos

Organic Chemicals

Phenol
Polycyclic Aromatic Hydrocarbons (PAHs)
Petroleum Hydrocarbons

The laboratory soil chemical test results are presented in **Annex E**.

4.4.3 Groundwater Laboratory Analysis

On 10th – 12th December 2018 one round of groundwater monitoring was performed on deep wells BH01D, BH02D and BH03D. Shallow wells were found to be dry during monitoring on 10th to 12th of December 2018. A second round was performed on 2nd January 2019 which included the groundwater which appeared at the base of shallow well BH03S. A third round was performed on 15th January 2019.

Groundwater samples were tested for the following determinants;

Metals and Metalloids

Lead
Arsenic
Mercury
Cadmium
Chromium
Copper
Nickel
Zinc
Selenium
Antimony
Beryllium
Boron
Manganese
Molybdenum

In-Organics

Cyanide
Sulphate
CaCO₃
BOD
Sulphide

Others

pH (acidity)
Organic Matter
COD
Conductivity

Organic Chemicals

Phenols
Polycyclic Aromatic Hydrocarbons (Speciated)
Petroleum Hydrocarbons

The laboratory groundwater chemical test results are presented in **Annex F**.

SECTION 5 Soil and Groundwater Analytical Results

5.1 Soil Assessment Methodology

Comparison of the analytical results have been made with Soil Guideline Values (SGVs) for an Industrial/Commercial setting, sourced from Suitable 4 Use Levels (S4ULs) provided by Land Quality Management Limited, Category 4 Screening Levels (C4SLs) and the Chartered Institute of Environmental Health (CIEH) or CLEA Guidelines. Sulphate results have been compared to British Research Establishment (BRE) guidelines as sulphate levels need only be considered for buried concrete risk assessment only, not human health related.

5.2 Soil Test Results

**Table 5.1 Summary of Soil Chemical Test Results
Standard Suite and Asbestos**

| Substance | SGV/ GAC/ S4UL (mg/kg) | Source | Measured Concentrations of Tested Substances (mg/kg) | | Number of exceedences |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------|------------------------------------------------------------|---------|--------------------------|
| | | | Minimum | Maximum | |
| Antimony | | | 3.2 | 27 | 0 |
| Arsenic | 640 | S4UL | 3.1 | 150 | 0 |
| Beryllium | | | 0.3 | 0.9 | 0 |
| Boron | | | 2.6 | 13 | 0 |
| Cadmium | 190 | S4UL | 0.4 | 20 | 0 |
| Chromium III | 8,600 | S4UL | 82 | 1200 | 0 |
| Chromium VI | 33 | S4UL | <1.0 | <1.0 | 0 |
| Copper | 68,000 | S4UL | 61 | 4300 | 0 |
| Lead | 2,330 | C4SL | 40 | 1700 | 0 |
| Manganese | | | 1000 | 3200 | - |
| Mercury | 1,100 | S4UL | 0.07 | 1.7 | 0 |
| Molybdenum | | | 3.2 | 26 | - |
| Nickel | 980 | S4UL | 29 | 370 | 0 |
| Selenium | 12,000 | S4UL | 2.5 | 11 | 0 |
| Zinc | 730,000 | S4UL | 110 | 8300 | 0 |
| Cyanide | 480 | CLEA | <0.1 | 3.8 | 0 |
| Organic matter | - | S4UL | 0.4 | >25 | - |
| Sulphate | - | - | 1100 | 5500 | - |
| pH | - | S4UL | 9.8 | 11.5 | - |
| Phenol | 440 | S4UL | <0.3 | 1.0 | 0 |
| Total PAH | - | | <6.36 | 21 | - |
| Asbestos | - | | Not Detected | 0.026% | - |
| Notes <ul style="list-style-type: none"> *See speciated PAH results (Table 5.2) 8 samples were tested | | | | | |

5.2 Soil Test Results (Continued)

A summary of the speciated PAH results are given in **Table 5.2** below.

| Table 5.2 Summary of Soil Chemical Test Results Speciated PAH | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|------------------------------------------------------|---------|-------------|
| Substance | GAC (mg/kg) | Source | Measured Concentrations of Tested Substances (mg/kg) | | Exceedences |
| | | | Minimum | Maximum | |
| Naphthalene | 190 | S4UL | <0.03 | 0.44 | 0 |
| Acenaphthylene | 83,000 | S4UL | <0.03 | 0.05 | 0 |
| Acenaphthene | 84,000 | S4UL | <0.03 | 0.05 | 0 |
| Fluorene | 63,000 | S4UL | <0.03 | 0.45 | 0 |
| Phenanthrene | 22,000 | S4UL | 0.11 | 1.00 | 0 |
| Anthracene | 520,000 | S4UL | <0.03 | 4.9 | 0 |
| Fluoranthene | 23,000 | S4UL | 0.15 | 3.10 | 0 |
| Pyrene | 54,000 | S4UL | 0.13 | 2.90 | 0 |
| Benzo(a)anthracene | 170 | S4UL | <0.03 | 1.40 | 0 |
| Chrysene | 350 | S4UL | <0.03 | 1.50 | 0 |
| Benzo(b)fluoranthene | 44 | S4UL | 0.06 | 1.70 | 0 |
| Benzo(k)fluoranthene | 1,200 | S4UL | <0.03 | 0.84 | 0 |
| Benzo(a)pyrene | 35 | S4UL | 0.03 | 1.20 | 0 |
| Indeno(123cd)pyrene | 500 | S4UL | <0.03 | 0.67 | 0 |
| Dibenzo(ah)anthracene | 3.5 | S4UL | <0.03 | 0.15 | 0 |
| Benzo(ghi)perylene | 3,900 | S4UL | 0.04 | 0.87 | 0 |
| Notes: <ul style="list-style-type: none"> GAC based on 1% soil organic matter content (SOM) 8 samples were tested | | | | | |

5.2 Soil Test Results (Continued)

A summary of the speciated Petroleum Hydrocarbon results are given in **Table 5.3** below.

| Table 5.3 Summary of Soil Chemical Test Results Speciated Petroleum Hydrocarbons | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|------------------------------------------------------------|---------|-------------|
| Substance | GAC (mg/kg) | Source | Measured Concentrations of Tested Substances (mg/kg) | | Exceedences |
| | | | Minimum | Maximum | |
| ALIPHATIC | | | | | |
| C5 – C6 | 3,200 | S4UL | <0.01 | <0.01 | 0 |
| C6 – C8 | 7,800 | S4UL | <0.01 | <0.01 | 0 |
| C8 – C10 | 2,000 | S4UL | <0.01 | <0.01 | 0 |
| C10 – C12 | 9,700 | S4UL | <1.5 | 1.6 | 0 |
| C12 – C16 | 59,000 | S4UL | <1.2 | 7.2 | 0 |
| C16 – C21 | 1,600,000 | S4UL | <1.5 | 59 | 0 |
| C21 – C35 | 1,600,000 | S4UL | <3.4 | 360 | 0 |
| C35 – C44 | 1,600,000 | S4UL | <3.4 | 33 | 0 |
| AROMATIC | | | | | |
| C5 – C7 | 26,000 | S4UL | <0.01 | <0.01 | 0 |
| C7 – C8 | 56,000 | S4UL | <0.01 | 0.01 | 0 |
| C8 – C10 | 3,500 | S4UL | <0.01 | <0.01 | 0 |
| C10 – C12 | 16,000 | S4UL | <0.9 | 1.8 | 0 |
| C12 – C16 | 36,000 | S4UL | <0.5 | 11 | 0 |
| C16 – C21 | 28,000 | S4UL | <0.6 | 51 | 0 |
| C21 – C35 | 28,000 | S4UL | <1.4 | 310 | 0 |
| C35 – C44 | 28,000 | S4UL | <1.4 | 47 | 0 |
| Notes: | | | | | |
| <ul style="list-style-type: none"> GAC based on 1% soil organic matter content (SOM) 8 samples were tested | | | | | |

5.2 Soil Test Results (Continued)

A summary of the Polychlorinated Biphenyl results are given in **Table 5.4** below.

| Table 5.4 Summary of Soil Chemical Test Results Polychlorinated Biphenyls | | | | | |
|-----------------------------------------------------------------------------------|----------------|--------|------------------------------------------------------------|---------|-------------|
| Substance | GAC (mg/kg) | Source | Measured Concentrations of Tested Substances (mg/kg) | | Exceedences |
| | | | Minimum | Maximum | |
| PCB 28 + PCB 31 | - | CLEA | <0.01 | 1.10 | 1 |
| PCB 52 | - | | <0.01 | 0.57 | |
| PCB 101 | - | | <0.01 | 0.42 | |
| PCB 118 | - | | <0.01 | 0.27 | |
| PCB 153 | - | | <0.01 | 0.20 | |
| PCB 138 | - | | <0.01 | 0.34 | |
| PCB 180 | - | | <0.01 | 0.07 | |
| Total PCB | 0.240 | | <0.01 | 2.9 | |
| Notes: | | | | | |
| ● 8 samples were tested | | | | | |

In the absence of Toxic Equivalence Factor (TEF) data for the specific compounds encountered at the site it has been necessary to employ the generic CLEA Soil Guideline Value (SGV) for a commercial setting.

5.3 Groundwater Test Results

A water sample was recovered from BH03D on 11/12/2018. A round was performed on 2nd January 2019 involving all deep wells and BH03S. The results of these rounds of groundwater testing are presented in **Table 5.5** along with the corresponding Water Framework Directive (WFD) Guidelines or, in their absence, WHO Drinking Water Standards.

| Test | Method | LOD | Units | Guideline | Source | 1435398 | 1441557 | 1441558 | 1441559 | 1441560 | 1445474 | 1445475 | 1445476 | 1445477 |
|----------------------------------|-------------|-------|-------|-----------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | | | | | BH03 D | BH01 D | BH02 D | BH03 D | BH03 S | BH01 D | BH02 D | BH03 D | BH03 S |
| | | | | | | | | | | | | | | |
| | | | | | | WATER | WATER | WATER | WATER | WATER | WATER | WATER | WATER | WATER |
| | | | | | | 11/12/18 | 02/01/19 | 02/01/19 | 02/01/19 | 02/01/19 | 15/01/19 | 15/01/19 | 15/01/19 | 15/01/19 |
| Test | Method | LOD | Units | Guideline | Source | n/s | n/s | n/s | n/s | n/s | n/s | n/s | n/s | n/s |
| Metals | | | | | | | | | | | | | | |
| Arsenic, Dissolved | DETSC 2306 | 0.16 | ug/l | 25 | Saltwater WFD | 14 | 48 | 10 | 16 | 21 | 25 | 12 | 18 | 22 |
| Cadmium, Dissolved | DETSC 2306 | 0.03 | ug/l | 0.25 | Surface Water (Hardness >200) | 0.07 | < 0.03 | < 0.03 | < 0.03 | 0.04 | < 0.03 | < 0.03 | 0.04 | < 0.03 |
| Chromium, Dissolved | DETSC 2306 | 0.25 | ug/l | | | 15 | < 0.25 | 0.85 | 0.37 | 0.74 | < 0.25 | < 0.25 | 11 | < 0.25 |
| Chromium III, Dissolved | DETSC 2306* | 1 | ug/l | 4.7 | Freshwater WFD | 15 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 11 | < 1.0 |
| Chromium, Hexavalent | DETSC 2203 | 0.007 | mg/l | 0.0006 | Saltwater WFD | < 0.007 | < 0.007 | < 0.007 | < 0.007 | < 0.007 | < 0.007 | < 0.007 | < 0.007 | < 0.007 |
| Copper, Dissolved | DETSC 2306 | 0.4 | ug/l | 3.76 | Saltwater WFD | 4.4 | 1.3 | 1.9 | 1.4 | 0.8 | < 0.4 | < 0.4 | 2.2 | < 0.4 |
| Lead, Dissolved | DETSC 2306 | 0.09 | ug/l | 1.2 | Freshwater WFD | 1.2 | 0.60 | 0.10 | < 0.09 | 1.1 | < 0.09 | < 0.09 | 0.40 | 0.41 |
| Mercury, Dissolved | DETSC 2306 | 0.01 | ug/l | 0.07 | Inland Surface Water | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Nickel, Dissolved | DETSC 2306 | 0.5 | ug/l | 4 | Inland Surface Water | 23 | 3.1 | 1.6 | 1.4 | 4.7 | 2.6 | 0.8 | 4.2 | 2.2 |
| Selenium, Dissolved | DETSC 2306 | 0.25 | ug/l | 10 | DWD | 1.9 | 1.0 | 16 | 6.8 | 8.4 | 0.25 | 0.34 | 6.4 | 2.3 |
| Zinc, Dissolved | DETSC 2306 | 1.3 | ug/l | 6.8 | Saltwater WFD | 270 | 16 | 12 | 9.2 | 4.3 | 16 | 150 | 30 | 1.8 |
| Inorganics | | | | | | | | | | | | | | |
| Conductivity | DETSC 2009 | 1 | uS/cm | | | 27500 | 2510 | 2210 | 2240 | 1820 | 2550 | 2150 | 885 | 1500 |
| pH | DETSC 2008 | | | | | 7.4 | 6.5 | 8.3 | 8.1 | 11.7 | 7.0 | 10.3 | 7.0 | 11.6 |
| Biochemical Oxygen Demand, Total | DETSC 2031 | 1 | mg/l | | | 36 | 5.4 | 5.7 | 12 | 13 | 7.3 | 5.5 | 5.5 | 46 |
| Chemical Oxygen Demand, Total | DETSC 2032 | 10 | mg/l | | | 890 | 25 | 72 | 42 | 150 | 59 | 10 | 11 | 310 |
| Cyanide, Total | DETSC 2130 | 40 | ug/l | 1 | Saltwater WFD | < 40 | 93 | 220 | 320 | 220 | 46 | 420 | 80 | 190 |
| Hardness | DETSC 2303 | 0.1 | mg/l | | | 2760 | 337 | 425 | 456 | 225 | 413 | 487 | 157 | 206 |
| Sulphate as SO4 | DETSC 2055 | 0.1 | mg/l | | | 500 | 300 | 450 | 490 | 150 | 230 | 450 | 120 | 120 |
| Sulphide | DETSC 2208 | 10 | ug/l | | | < 10 | < 10 | < 10 | < 10 | 60 | 13 | < 10 | < 10 | 410 |
| Petroleum Hydrocarbons | | | | | | | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3322 | 0.1 | ug/l | 15000 | WHO DWS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C6-C8 | DETSC 3322 | 0.1 | ug/l | 15000 | WHO DWS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C8-C10 | DETSC 3322 | 0.1 | ug/l | 300 | WHO DWS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C10-C12 | DETSC 3072* | 1 | ug/l | 300 | WHO DWS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C12-C16 | DETSC 3072* | 1 | ug/l | 300 | WHO DWS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C16-C21 | DETSC 3072* | 1 | ug/l | | | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C21-C35 | DETSC 3072* | 1 | ug/l | | | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | ug/l | | | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3322 | 0.1 | ug/l | 10 | WHO DWS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C7-C8 | DETSC 3322 | 0.1 | ug/l | 700 | WHO DWS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C8-C10 | DETSC 3322 | 0.1 | ug/l | 300 | WHO DWS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C10-C12 | DETSC 3072* | 1 | ug/l | 90 | WHO DWS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C12-C16 | DETSC 3072* | 1 | ug/l | 90 | WHO DWS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C16-C21 | DETSC 3072* | 1 | ug/l | 90 | WHO DWS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C21-C35 | DETSC 3072* | 1 | ug/l | 90 | WHO DWS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C5-C35 | DETSC 3072* | 10 | ug/l | | | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| TPH Al/Aro Total | DETSC 3072* | 10 | ug/l | | | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311 | 10 | ug/l | | | < 10 | 180 | 87 | 83 | 140 | 110 | < 10 | 150 | 38 |
| PAHs | | | | | | | | | | | | | | |
| Naphthalene | DETSC 3304 | 0.05 | ug/l | | | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.95 | 0.07 | 0.10 | 0.16 | 0.41 |
| Acenaphthylene | DETSC 3304 | 0.01 | ug/l | | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.01 | < 0.01 | 0.05 | < 0.01 | 0.06 |
| Acenaphthene | DETSC 3304 | 0.01 | ug/l | | | 0.04 | 0.12 | < 0.01 | < 0.01 | 3.5 | 0.12 | 0.04 | 0.57 | 0.34 |
| Fluorene | DETSC 3304 | 0.01 | ug/l | | | 0.03 | 0.06 | < 0.01 | < 0.01 | 3.3 | 0.08 | 0.03 | 0.09 | 0.32 |
| Phenanthrene | DETSC 3304 | 0.01 | ug/l | | | 0.07 | 0.03 | < 0.01 | 0.02 | 5.0 | 0.12 | 0.04 | < 0.01 | 0.62 |
| Anthracene | DETSC 3304 | 0.01 | ug/l | 0.1 | Inland Surface Water | 0.01 | 0.02 | < 0.01 | < 0.01 | 7.0 | 0.02 | < 0.01 | < 0.01 | 0.12 |
| Fluoranthene | DETSC 3304 | 0.01 | ug/l | 0.0063 | Inland Surface Water | 0.02 | 0.02 | < 0.01 | < 0.01 | 0.90 | 0.03 | 0.02 | 0.03 | 0.28 |
| Pyrene | DETSC 3304 | 0.01 | ug/l | | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.50 | < 0.01 | 0.02 | < 0.01 | 0.19 |
| Benzo(a)anthracene | DETSC 3304 | 0.01 | ug/l | | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.16 | < 0.01 | < 0.01 | < 0.01 | 0.12 |
| Chrysene | DETSC 3304 | 0.01 | ug/l | | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.24 | < 0.01 | < 0.01 | < 0.01 | 0.13 |
| Benzo(b)fluoranthene | DETSC 3304 | 0.01 | ug/l | 0.017 | Inland Surface Water | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.27 | < 0.01 | < 0.01 | < 0.01 | 0.18 |
| Benzo(k)fluoranthene | DETSC 3304 | 0.01 | ug/l | 0.017 | Inland Surface Water | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.37 | < 0.01 | < 0.01 | < 0.01 | 0.09 |
| Benzo(a)pyrene | DETSC 3304 | 0.01 | ug/l | 0.00017 | Inland Surface Water | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.14 | < 0.01 | < 0.01 | < 0.01 | 0.13 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3304 | 0.01 | ug/l | | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.15 | < 0.01 | < 0.01 | < 0.01 | 0.09 |
| Dibenzo(a,h)anthracene | DETSC 3304 | 0.01 | ug/l | | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(g,h,i)perylene | DETSC 3304 | 0.01 | ug/l | 0.0082 | Inland surface Water | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.15 | < 0.01 | < 0.01 | < 0.01 | 0.09 |
| PAH Total | DETSC 3304 | 0.2 | ug/l | | | 0.23 | 0.28 | < 0.20 | < 0.20 | 23 | 0.44 | 0.30 | 0.85 | 3.2 |
| PCBs | | | | | | | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3402 | 0.3 | ug/l | | | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| PCB 52 | DETSC 3402 | 0.2 | ug/l | | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 101 | DETSC 3402 | 0.3 | ug/l | | | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| PCB 118 + PCB 123 | DETSC 3402 | 0.6 | ug/l | | | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| PCB 138 | DETSC 3402 | 0.2 | ug/l | | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 153 | DETSC 3402 | 0.2 | ug/l | | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 180 | DETSC 3402 | 0.2 | ug/l | | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 7 Total | DETSC 3402 | 1 | ug/l | | | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Phenols | | | | | | | | | | | | | | |
| Phenol | DETSC 3451* | 0.1 | ug/l | 7.7 | Saltwater WFD | < 0.10 | < 0.10 | < 0.10 | < 0.13 | < 0.10 | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 4-Chloro-3-methylphenol | DETSC 3451* | 0.1 | ug/l | | | < 0.10 | < 0.10 | < 0.10 | < 0.13 | < 0.10 | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,4-Dichlorophenol | DETSC 3451* | 0.1 | ug/l | | | < 0.10 | < 0.10 | < 0.10 | < 0.13 | < 0.10 | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,4-Dimethylphenol | DETSC 3451* | 0.1 | ug/l | | | < 0.10 | < 0.10 | < 0.10 | < 0.13 | < 0.10 | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| p-cresol | DETSC 3451* | 0.1 | ug/l | | | < 0.10 | < 0.10 | < 0.10 | < 0.13 | < 0.10 | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,6-Dimethylphenol | DETSC 3451* | 0.1 | ug/l | | | < 0.10 | < 0.10 | < 0.10 | < 0.13 | < 0.10 | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,6-Dichlorophenol | DETSC 3451* | 0.1 | ug/l | | | < 0.10 | < 0.10 | < 0.10 | < 0.13 | < 0.10 | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,4,6-Trichlorophenol | DETSC 3451* | 0.1 | ug/l | | | < 0.10 | < 0.10 | < 0.10 | < 0.13 | < 0.10 | < 0.20 | < 0.20 | < 0.50 | < 0.20 |

Table 5.5. Groundwater

5.4 Soil Gas Monitoring

Two rounds of Soil Gas Monitoring were performed prior to the issue of this report. The results are summarise in **Table 5.6** and are presented in **Annex G**.

| Table 5.6. Summary of Gas Monitoring | | | | | | | |
|---------------------------------------------|--------------------|--------------------|-------------------|-------------------|--------------------|------------------------|--------------------|
| | CH4 (%) | CO2 (%) | O2 (%) | CO ppm | H2S ppm | FLOW (l/hr) | AP (mb) |
| Minimum | 0.0 | 0.0 | 8.7 | 0 | 0 | 0 | 1021 |
| Maximum | 0.2 | 0.2 | 20.1 | 0 | 0 | 0 | 1041 |

With reference to Table 8.5 of CIRIA C665, the site falls into Gas Characteristic Situation 1, requiring no special gas protection measures. Further rounds of gas monitoring should be performed, under low-air pressure scenarios, to confirm the Characteristic Situation.

Organic material within the alluvium can form a potential natural sources for soil gas and monitoring should be performed during and after the piling to confirm that the piling has not created pathways.

SECTION 6 Quantitative Risk Assessment

6.1 Contaminants of Concern in Soil

It can be seen from Section 5 that all determinants tested were present at concentrations below the published Generic Assessment Criteria for a Commercial/Industrial Setting with the exception of PCB s being encountered at an elevated level in TP09 at 1.10m depth.

Asbestos was encountered in TP09 at 0.30m and 1.10m. Quantification revealed that the asbestos was at a concentration of between <0.001% and 0.026%.

Determinants of interest are presented in **Table 6.1**.

| Table 6.1. Summary of Soil Exceedances | | | |
|-----------------------------------------------|--------------------------------------------|-------------------------------|-----------------|
| Determinant | Generic Assessment Criteria (mg/kg) | Recorded Concentration | Location |
| PCB's (Total) | 0.240 | 2.90 | TP09, 1.10m |
| Asbestos | - | <0.001% | TP09, 0.30m |
| | - | 0.026% | TP09, 1.10m |

Vapour monitoring during trial pitting, using a Photo-Ionisation Detector (P.I.D.), did not detect and organic vapours. Gas wells BH01S to BH03S were also analysed with a P.I.D. on 11/12/2018. No vapours were detected.

6.2 Contaminants of Concern in Groundwater

During the 11/12/2018 round of monitoring slightly elevated chromium (15 ug/l), nickel (23 ug/l) and fluoranthene (0.02 ug/l) were detected in BH03D. Petroleum hydrocarbons, PCBs and phenols were not detected.

During the second round on monitoring (02/01/2019) the shallow well BH03S recorded slightly elevated nickel (4.7 ug/l) elevated cyanide (220 ug/l) and elevated anthracene (7.0 ug/l) fluoranthene (0.90 ug/l) benzo(b)fluoranthene (0.27 ug/l) benzo(k)fluoranthene (0.37 ug/l) benzo(a)pyrene (0.14 ug/l) and benzo(ghi)perylene (0.15 ug/l). Petroleum hydrocarbons, PCBs and phenols were not detected.

During the second round of monitoring (02/01/2019) the deep wells recorded slightly elevated selenium in BH02D (16 ug/l), elevated cyanide in all deep wells (93 ug/l, 220 ug/l and 320 ug/l in BH01D, BH02D and BH03D respectively). Petroleum hydrocarbons, PCBs and phenols were not detected.

During the third round (15/01/2019) shallow borehole BH03S recorded elevated fluoranthene (0.28 ug/l) benzo(b)fluoranthene (0.18 ug/l) benzo(k)fluoranthene (0.09 ug/l) benzo(a)pyrene (0.13 ug/l) and benzo(ghi)perylene (0.09 ug/l). Elevated cyanide (190 ug/l) was also detected. Petroleum hydrocarbons, PCBs and phenols were not detected.

During the third round (15/01/2019) deep boreholes recorded slightly elevated Cr III and nickel in one location (BH03D at 11 ug/l and 4.2 ug/l respectively). Slightly elevated zinc was recorded in all deep boreholes, (16ug/l, 150 ug/l and 30 ug/l in BH01D, BH02D and BH03D respectively). Elevated fluoranthene was recorded in all deep boreholes (0.02 – 0.03 ug/l). Elevated cyanide was recorded in all deep boreholes (46ug/l, 420 ug/l and 80 ug/l in BH01D, BH02D and BH03D respectively).

6.2 Contaminants of Concern in Groundwater (Continued)

A summary of exceedances in shallow groundwater is presented in **Table 6.2**.

| Table 6.2. Summary of Shallow Groundwater Exceedances | | | |
|--------------------------------------------------------------|-----------------------------------|--------------------------------------|-----------------|
| Determinant | Assessment Criteria (ug/l) | Recorded Concentration (ug/l) | Location |
| Round 02/01/2019 | | | |
| Nickel | 4 | 4.7 | BH03S |
| Cyanide | 1 | 220 | BH03S |
| Anthracene | 0.1 | 7.0 | BH03S |
| Fluoranthene | 0.0063 | 0.90 | BH03S |
| Benzo(b)fluoranthene | 0.017 | 0.27 | BH03S |
| Benzo(k)fluoranthene | 0.017 | 0.37 | BH03S |
| benzo(a)pyrene | 0.00017 | 0.14 | BH03S |
| benzo(ghi)perylene | 0.0082 | 0.15 | BH03S |
| Round 15/01/2019 | | | |
| Cyanide | 1 | 190 | BH03S |
| Fluoranthene | 0.0063 | 0.28 | BH03S |
| Benzo(b)fluoranthene | 0.017 | 0.18 | BH03S |
| Benzo(k)fluoranthene | 0.017 | 0.09 | BH03S |
| benzo(a)pyrene | 0.00017 | 0.13 | BH03S |
| benzo(ghi)perylene | 0.0082 | 0.09 | BH03S |

A summary of exceedances in deep groundwater is presented in **Table 6.3**.

| Table 6.3. Summary of Deep Groundwater Exceedances | | | |
|----------------------------------------------------|----------------------------|-------------------------------|----------|
| Determinant | Assessment Criteria (ug/l) | Recorded Concentration (ug/l) | Location |
| Round 11/12/2018 | | | |
| Chromium III | 4.7 | 15 | BH03D |
| Nickel | 4 | 23 | BH03D |
| Fluoranthene | 0.0063 | 0.02 | BH03D |
| Round 02/01/2019 | | | |
| Selenium | 10 | 16 | BH02D |
| Cyanide | 1 | 93 | BH01D |
| | | 220 | BH02D |
| | | 320 | BH03D |
| Round 15/01/2018 | | | |
| Chromium III | 4.7 | 11 | BH03D |
| Nickel | 4 | 4.2 | BH03D |
| Zinc | 6.8 | 16 | BH01D |
| | | 150 | BH02D |
| | | 30 | BH03D |
| Cyanide | 1 | 46 | BH01D |
| | | 420 | BH02D |
| | | 80 | BH03D |
| Fluoranthene | 0.0063 | 0.03 | BH01D |
| | | 0.02 | BH02D |
| | | 0.03 | BH03D |

6.3 Potential Receptors and Pathways

6.3.1 Human Receptors

Construction workers may be in intimate contact with the site soils and are potentially at risk from exposure to determinants within the made ground through dermal contact, ingestion and inhalation pathways.

Neighbouring site users and passers-by are potentially exposed to soil dust during earthworks.

Future site users are potentially at risk from determinants exceeding the Generic Assessment Criteria via dermal contact with soils, inhalation of soils and asbestos. Development offers an opportunity to address the issues.

6.3 2 Aquatic Environment

Shallow groundwater was only encountered in BH03S. The wells of BH01S and BH02S were dry during the monitoring. Slightly elevated nickel was encountered. This is not considered significant given the sites setting. Several exceedances of PAH guidelines were also recorded although the guidelines are very stringent. The High Molecular Weight PAHs have very low solubilities and low mobility characteristics and are unlikely to impact significantly beyond their source. Elevated cyanide (220 ug/l) was noted in the shallow groundwater.

During the first round of monitoring slightly elevated chromium III and nickel were recorded in BH03D although these did not appear during the 02/01/2019 round. Slightly elevated selenium was recorded in BH02D during the second water monitoring round. These are not considered to be significant given the levels and the site setting. Elevated PAHs were recorded in BH01D although the guidelines are very stringent and the High Molecular Weight PAHs have very low solubilities and low mobility characteristics and are unlikely to impact significantly beyond their source. Elevated cyanide (93 ug/l to 320 ug/l) was recorded in all deep wells.

Slightly elevated Cr III, and nickel was recorded in BH03D by the round on 15/01/2019 and zinc was recorded in all deep boreholes (up to 150 ug/l). This is not considered significant given the sites setting. Elevated PAH's were recorded in all boreholes during the round on 15/01/2019 although the High Molecular Weight PAHs have low mobility characteristics. Elevated cyanide was recorded in all wells on 15/01/2019, ranging from 46 ug/l to 420 ug/l.

6.4 Mitigation and Remedial Measures

6.4.1 Site Workers

In order to protect construction workers good site management, COSHH, good standards of hygiene and appropriate health & safety on site should be adhered to, with personal protection equipment (PPE) and dust suppression where appropriate. The elected contractor should provide their own risk assessment to mitigate these risks including asbestos.

6.4.2 Neighbouring Site Users

Appropriate dust suppression should be employed to prevent the migration of soil dust and asbestos during the earthworks phase. Consideration should be given to personal and perimeter asbestos monitoring if deemed necessary.

6.4.3 Site End Users

Elevated levels of PCBs, in excess of the published Generic Assessment Criteria for a Commercial setting, were detected at one location. In addition, asbestos was detected in one location.

We understand that the proposed development will include the installation of hard standing cover in the development area and this should interrupt the pathway between the contaminants and the site end users.

Some of the lower molecular weight PCBs are considered potentially volatile although vapour monitoring during the trial pitting, and later monitoring of the shallow wells, using a Photo-Ionisation Detector (P.I.D.) did not detect organic vapours.

A Potable Water Supply Pipe Material Assessment should be carried out by the water provider.

If during development works any other unexpected ground conditions or evidence of contamination is found, inspection by a geo-environmental engineer should be made, and any required testing or investigation carried out prior to continuation of works.

6.4.4 Aquatic Environment

Several minor exceedances of metals and PAH were noted during the initial groundwater monitoring although these are not considered to be significant given their magnitude and also the low mobility characteristics of the PAHs.

Elevated cyanide was noted in the deep and shallow groundwater during monitoring on 02/01/2019 and 15/01/2019. However, during soil chemical testing cyanide was either not detected or detected at low levels (i.e. up to 3.8 mg/kg) and all cyanide detected on-site was in a complex form. We therefore anticipate that the cyanide in the groundwater is from an off-site source.

There are not considered to be significant risks to the aquatic environment from site soils.

During the construction period, there is a risk to the environment/adjacent sites from de-watering, digging foundations, moving soil, drainage misconnections, discharges to local surface waters or the ground, runoff from construction materials and/or exposed ground, wheel washings and oil or chemical spills.

The risk is considered to be negligible as any adverse effects will be easily preventable by due diligence to good construction practise and housekeeping in preventing surface runoff and the spillage of materials.

The basic measures that should be taken are as follows:

- Prepare a drainage plan and mark the manholes to prevent pollutants accidentally reaching the surface water sewers;
- Carry out any activities that could cause pollution in a designated, bunded area, away from rivers or boreholes. Where possible it should drain to the foul sewer;
- Use settlement ponds or separators to remove silty water;
- Store all oils and chemicals in a fully bunded area to prevent leaks or spills;
- Get advice on whether you need an environmental permit and apply in good time

6.5 Site Conceptual Model

A Site Conceptual Model is presented below;

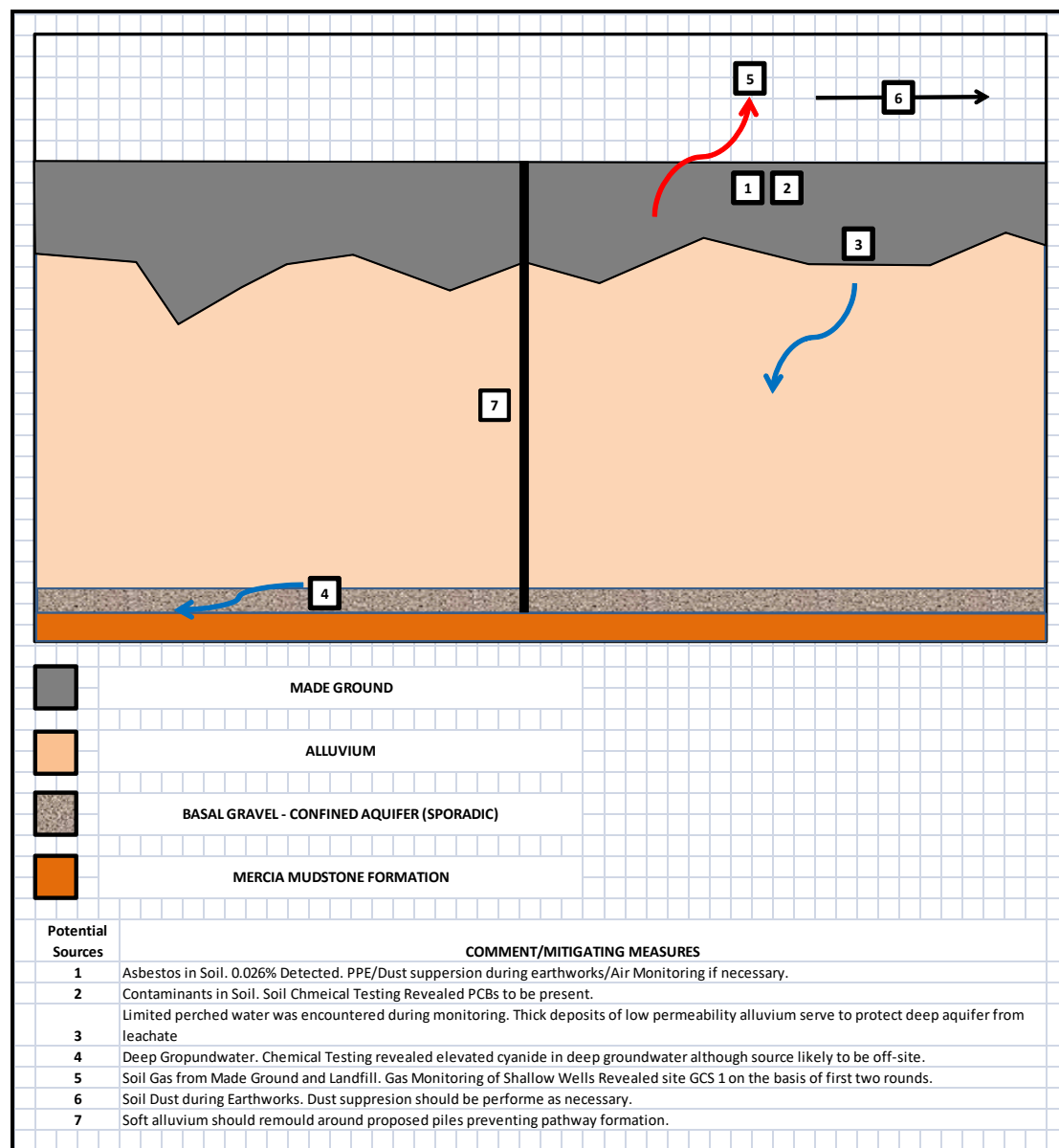


Figure 6.1. Site Conceptual Model (note: Not to Scale)

SECTION 7 Engineering Recommendations

7.1 Preparation of Site

Allowances should be made for removing any 'soft spots/areas' as well as any buried obstructions that may remain.

Contingencies should be made for the protection/diversion of any underground services present beneath the site brought about as a result of the proposed works.

Contingencies should also be made for the protection and any necessary temporary/permanent support of structures adjacent to the site.

Any reduced levels should be brought up to the required levels with well compacted imported granular materials. Department of Transport (DoT) Type 2 sub-base or similar may be used and should be compacted in layers, in accordance with the Specification for Highway Works.

All materials to be removed from site should be taken to an appropriately licensed landfill facility. In accordance with EC Regulation 1272/2008 and Environment Agency Guidance WM3 (v. 1.1/2018) soils and other materials destined for off-site disposal should be classified on the basis of their hazard phrases prior to disposal.

7.2 Foundation and Floor Slab Solution

Ground Investigations have encountered a generally dense horizon of made ground over a thick deposit of alluvium. The alluvium in the region is generally soft to very soft silt/clay. Given the settlement characteristics of the alluvium, and the present of a proposed variable load due to a gantry crane, a raft foundation is not recommended at the site as the width of the raft would mean loads transferred to the alluvium.

Foundation loads should be transferred to competent horizons within the Mercia Mudstone Group.

It is understood that hollow round section steel piles are proposed for the site. Piles driven to a suitable set would be expected to perform satisfactorily with loads of 400kN per pile, at which intensity total settlement should not exceed 10mm and differential settlement between adjacent piles should not exceed half this value. Due to the presence of dense made ground deposits and buried obstructions beneath the site piles are likely to require pre-bored holes or trial pits through the made ground.

Vibrations should be monitored during piling and if vibrations cannot be kept within limits consideration should be given to deeper pre-drilling or end-driven piles.

We understand that the ground floor slab will be ground-bearing, constructed on a bed of compacted granular fill. The settlement characteristics of the floor-slab has not been calculated by Terra Firma although it is likely to differ from the frame of the building which is piled. Therefore, the floor slab should be designed as structurally independent of the building frame. We recommend that differential settlement between the floor slab and the structure be kept below 25mm to limit disruption to the building.

7.2 Foundation and Floor Slab Solution

All foundation formations should be inspected by a suitably qualified Engineer before pouring. The piling contractor may request additional site specific testing/boreholes to confirm the piling design.

7.3 Excavations and Formations

Due to the density of the made ground breakers have been necessary for excavation at the site. Buried obstructions may be encountered within the made ground and provision should be made for the use of a breaker to deal with such obstructions.

The sides of any excavations deeper than 1.0m should be supported by planking and strutting or other proprietary means.

The sub-formations/formations will be susceptible to loosening, softening and deterioration by exposure to weather (rain, frost and drying conditions), the action of water (flood water or removal of groundwater) and site traffic.

Formations should never be left unprotected and continuously exposed to rain causing degradation, or left exposed/uncovered overnight, unless permitted by a qualified engineer. All formations should be inspected by a suitably qualified engineer before pouring.

Construction plant and other vehicular traffic should not be operated on unprotected formations. Allowances should be made for special precautions to prevent formation deterioration in addition to the above.

7.4 Foundation Risk Assessment

The soft alluvial clays should remould around the round section piles, thus maintaining the current status quo in respect to hydrological protection. This should be confirmed by groundwater monitoring during and after the piling works.

Gas monitoring should also be performed during and after the piling operations to confirm that the piling has not affected the gas regime.

If hollow piles are employed any void space in the centre of the pile should be backfilled with a bentonite cement to achieve a hydrological seal.

A detailed Piling Risk Assessment is presented in a separate document.

7.5 Protection of Buried Concrete

Six samples of soil were subject to Total Sulphate (as SO₄) Aqueous Sulphate (as SO₄) and pH analysis.

Total Sulphate ranged from 1100 mg/kg to 5500 mg/kg and pH values ranged from 9.8 to 11.5. Sulphate Aqueous Extract ranged from 59 mg/l to 270 mg/l.

Based on the highest level of sulphate recorded and with reference to Table C2 of BRE Special Digest 1:2005, these soils fall into Design Sulphate Class AC-1s.

Chemical Test Results are presented in **Annex E**.

7.6 Soil Gas Protection

Two rounds have been performed since well installation. The following assessment is based on the testing performed thus far.

The site currently falls into Gas Characteristic Situation (GCS) 1 requiring no specialist gas protection measures.

Peat horizons within the alluvium present a potential source of soil gas and monitoring should be performed during and after piling to confirm that the piles have not created a preferential pathway for the gas.

Gas Monitoring Results are presented in **Annex G**.

ANNEX A
Envirocheck Report

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

188504369_1_1

Customer Reference:

14958-DE

National Grid Reference:

321580, 176390

Slice:

A

Site Area (Ha):

0.01

Search Buffer (m):

1000

Site Details:

Site at 321570, 176410

Client Details:

Mr D Emanuel
Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

| Report Section | Page Number |
|-----------------------|-------------|
| Summary | - |
| Agency & Hydrological | 1 |
| Waste | 15 |
| Hazardous Substances | 34 |
| Geological | 35 |
| Industrial Land Use | 39 |
| Sensitive Land Use | 58 |
| Data Currency | 59 |
| Data Suppliers | 65 |
| Useful Contacts | 66 |

Introduction

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

Copyright Notice

© Landmark Information Group Limited 2018. The Copyright on the information and data and its format as contained in this Envirocheck® Report ("Report") is the property of Landmark Information Group Limited ("Landmark") and several other Data Providers, including (but not limited to) Ordnance Survey, British Geological Survey, the Environment Agency/Natural Resources Wales and Natural England, and must not be reproduced in whole or in part by photocopying or any other method. The Report is supplied under Landmark's Terms and Conditions accepted by the Customer. A copy of Landmark's Terms and Conditions can be found with the Index Map for this report. Additional copies of the Report may be obtained from Landmark, subject to Landmark's charges in force from time to time. The Copyright, design rights and any other intellectual rights shall remain the exclusive property of Landmark and /or other Data providers, whose Copyright material has been included in this Report. © Environment Agency & United Kingdom Research and Innovation 2018. © Natural Resources Wales & United Kingdom Research and Innovation 2018.

Natural England Copyright Notice

Site of Special Scientific Interest, National Nature Reserve, Ramsar, Special Protection Area, Special Conservation Area, Marine Nature Reserve data (derived from Ordnance Survey 1:10000 raster) is provided by, and used with the permission of, Natural England who retain the copyright and Intellectual Property Rights for the data.

Scottish Natural Heritage Copyright

Contains SNH information licensed under the Open Government Licence v3.0.

Ove Arup Copyright Notice

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Peter Brett Associates Copyright Notice

The cavity data presented has been extracted from the PBA enhanced version of the original DEFRA national cavity databases. PBA/DEFRA retain the copyright & intellectual property rights in the data. Whilst all reasonable efforts are made to check that the information contained in the cavity databases is accurate we do not warrant that the data is complete or error free. The information is based upon our own researches and those collated from a number of external sources and is continually being augmented and updated by PBA. In no event shall PBA/DEFRA or Landmark be liable for any loss or damage including, without limitation, indirect or consequential loss or damage arising from the use of this data.

Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and Public Health England.

Natural Resources Wales Copyright Notice

Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Contains Ordnance Survey Data. Ordnance Survey Licence number 100019741. Crown Copyright and Database Right. Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Some features of this information are based on digital spatial data licensed from the Centre for Ecology & Hydrology © NERC (CEH). Defra, Met Office and DARD Rivers Agency © Crown copyright. © Cranfield University. © James Hutton Institute. Contains OS data © Crown copyright and database right 2018. Land & Property Services © Crown copyright and database right.

Report Version v53.0

| Data Type | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|---------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| Agency & Hydrological | | | | | |
| BGS Groundwater Flooding Susceptibility | pg 1 | Yes | Yes | Yes | n/a |
| Contaminated Land Register Entries and Notices | | | | | |
| Discharge Consents | pg 1 | | | 2 | 6 |
| Prosecutions Relating to Controlled Waters | | | n/a | n/a | n/a |
| Enforcement and Prohibition Notices | pg 3 | | | | 1 |
| Integrated Pollution Controls | pg 3 | | | | 12 |
| Integrated Pollution Prevention And Control | pg 5 | | | 2 | 13 |
| Local Authority Integrated Pollution Prevention And Control | | | | | |
| Local Authority Pollution Prevention and Controls | pg 8 | | | 1 | 8 |
| Local Authority Pollution Prevention and Control Enforcements | | | | | |
| Nearest Surface Water Feature | pg 10 | | | Yes | |
| Pollution Incidents to Controlled Waters | pg 10 | | | 3 | |
| Prosecutions Relating to Authorised Processes | | | | | |
| Registered Radioactive Substances | | | | | |
| River Quality | pg 10 | | 1 | | |
| River Quality Biology Sampling Points | | | | | |
| River Quality Chemistry Sampling Points | | | | | |
| Substantiated Pollution Incident Register | pg 10 | | | 1 | 2 |
| Water Abstractions | pg 11 | | | 3 | 2 (*2) |
| Water Industry Act Referrals | pg 13 | | | | 1 |
| Groundwater Vulnerability | pg 13 | Yes | n/a | n/a | n/a |
| Drift Deposits | | | n/a | n/a | n/a |
| Bedrock Aquifer Designations | pg 13 | Yes | n/a | n/a | n/a |
| Superficial Aquifer Designations | pg 13 | Yes | n/a | n/a | n/a |
| Source Protection Zones | | | | | |
| Extreme Flooding from Rivers or Sea without Defences | pg 13 | Yes | Yes | n/a | n/a |
| Flooding from Rivers or Sea without Defences | pg 13 | | Yes | n/a | n/a |
| Areas Benefiting from Flood Defences | | | | n/a | n/a |
| Flood Water Storage Areas | | | | n/a | n/a |
| Flood Defences | | | | n/a | n/a |
| OS Water Network Lines | pg 13 | | | 5 | 3 |

| Data Type | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|---------------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| Waste | | | | | |
| BGS Recorded Landfill Sites | pg 15 | 1 | | | |
| Historical Landfill Sites | pg 15 | 1 | 3 | 3 | 6 |
| Integrated Pollution Control Registered Waste Sites | | | | | |
| Licensed Waste Management Facilities (Landfill Boundaries) | | | | | |
| Licensed Waste Management Facilities (Locations) | pg 18 | | 2 | | 15 |
| Local Authority Landfill Coverage | pg 22 | 1 | n/a | n/a | n/a |
| Local Authority Recorded Landfill Sites | | | | | |
| Potentially Infilled Land (Non-Water) | pg 22 | | | 2 | |
| Potentially Infilled Land (Water) | pg 22 | | 3 | 13 | 40 |
| Registered Landfill Sites | pg 25 | | 2 | 3 | 4 |
| Registered Waste Transfer Sites | pg 28 | | 2 | | 4 |
| Registered Waste Treatment or Disposal Sites | pg 31 | 1 | 1 | | 3 |
| Hazardous Substances | | | | | |
| Control of Major Accident Hazards Sites (COMAH) | pg 34 | | | | 1 |
| Explosive Sites | | | | | |
| Notification of Installations Handling Hazardous Substances (NIHHS) | pg 34 | | | 1 | |
| Planning Hazardous Substance Consents | pg 34 | | | | 2 |
| Planning Hazardous Substance Enforcements | | | | | |

| Data Type | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|-------------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| Geological | | | | | |
| BGS 1:625,000 Solid Geology | pg 35 | Yes | n/a | n/a | n/a |
| BGS Estimated Soil Chemistry | pg 35 | Yes | | | Yes |
| BGS Recorded Mineral Sites | pg 35 | | | | 1 |
| BGS Urban Soil Chemistry | pg 35 | | Yes | Yes | Yes |
| BGS Urban Soil Chemistry Averages | pg 37 | Yes | | | |
| CBSCB Compensation District | | | n/a | n/a | n/a |
| Coal Mining Affected Areas | | | n/a | n/a | n/a |
| Mining Instability | | | n/a | n/a | n/a |
| Man-Made Mining Cavities | | | | | |
| Natural Cavities | | | | | |
| Non Coal Mining Areas of Great Britain | | | | n/a | n/a |
| Potential for Collapsible Ground Stability Hazards | | | | n/a | n/a |
| Potential for Compressible Ground Stability Hazards | pg 37 | Yes | Yes | n/a | n/a |
| Potential for Ground Dissolution Stability Hazards | | | | n/a | n/a |
| Potential for Landslide Ground Stability Hazards | pg 37 | Yes | Yes | n/a | n/a |
| Potential for Running Sand Ground Stability Hazards | pg 37 | Yes | Yes | n/a | n/a |
| Potential for Shrinking or Swelling Clay Ground Stability Hazards | pg 37 | Yes | | n/a | n/a |
| Radon Potential - Radon Affected Areas | | | n/a | n/a | n/a |
| Radon Potential - Radon Protection Measures | | | n/a | n/a | n/a |
| Industrial Land Use | | | | | |
| Contemporary Trade Directory Entries | pg 39 | | 2 | 2 | 66 |
| Fuel Station Entries | pg 45 | | | | 1 |
| Points of Interest - Commercial Services | pg 45 | | 7 | | 34 |
| Points of Interest - Education and Health | | | | | |
| Points of Interest - Manufacturing and Production | pg 48 | | 9 | 10 | 78 |
| Points of Interest - Public Infrastructure | pg 56 | | 1 | 3 | 2 |
| Points of Interest - Recreational and Environmental | pg 57 | | | | 1 |
| Gas Pipelines | | | | | |
| Underground Electrical Cables | | | | | |

| Data Type | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|--------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| Sensitive Land Use | | | | | |
| Ancient Woodland | | | | | |
| Areas of Adopted Green Belt | | | | | |
| Areas of Unadopted Green Belt | | | | | |
| Areas of Outstanding Natural Beauty | | | | | |
| Environmentally Sensitive Areas | | | | | |
| Forest Parks | | | | | |
| Local Nature Reserves | | | | | |
| Marine Nature Reserves | | | | | |
| National Nature Reserves | | | | | |
| National Parks | | | | | |
| Nitrate Sensitive Areas | | | | | |
| Nitrate Vulnerable Zones | | | | | |
| Ramsar Sites | pg 58 | | | 1 | |
| Sites of Special Scientific Interest | pg 58 | | | 1 | |
| Special Areas of Conservation | pg 58 | | | 1 | |
| Special Protection Areas | pg 58 | | | 1 | |
| World Heritage Sites | | | | | |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| | BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur | A13NE (NE) | 0 | 1 | 321580 176392 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level | A13NW (W) | 30 | 1 | 321550 176392 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur | A13NE (E) | 71 | 1 | 321650 176392 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level | A13NW (W) | 130 | 1 | 321450 176400 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur | A13SW (S) | 208 | 1 | 321500 176200 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface | A13NW (W) | 230 | 1 | 321350 176392 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur | A13SW (SW) | 263 | 1 | 321400 176200 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level | A13SW (W) | 295 | 1 | 321300 176300 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level | A13NE (NE) | 304 | 1 | 321800 176600 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level | A13SW (SW) | 340 | 1 | 321300 176200 |
| | BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level | A13NE (NE) | 340 | 1 | 321800 176650 |
| 1 | Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Cardiff Eastern District, Pumping Station Short Outfall, Rover Way, Cardiff Authority: Natural Resources Wales Catchment Area: SEVERN LOWER Reference: An0308601 Permit Version: 1 Effective Date: 26th March 2002 Issued Date: 26th March 2002 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Saline Estuary Receiving Water: Severn Estuary Status: Effective Positional Accuracy: Located by supplier to within 10m | A14NW (NE) | 403 | 2 | 321950 176550 |
| 1 | Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Cardiff Eastern District, Pumping Station Short Outfall, Rover Way, Cardiff Authority: Natural Resources Wales Catchment Area: SEVERN LOWER Reference: An0308601 Permit Version: 1 Effective Date: 26th March 2002 Issued Date: 26th March 2002 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Saline Estuary Receiving Water: Severn Estuary Status: Effective Positional Accuracy: Located by supplier to within 10m | A14NW (NE) | 403 | 2 | 321950 176550 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 2 | Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Cardiff Eastern Ps Sso Authority: Natural Resources Wales Catchment Area: River Rhymney Reference: AN0045002 Permit Version: 2 Effective Date: 1st January 1991 Issued Date: 1st January 1991 Revocation Date: 28th March 2002 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Rhymney Estuary Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m | A14NW (E) | 524 | 2 | 322100 176450 |
| 2 | Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Cardiff Eastern Ps Sso Authority: Natural Resources Wales Catchment Area: River Rhymney Reference: An0045002 Permit Version: 1 Effective Date: 1st January 1990 Issued Date: 1st January 1990 Revocation Date: 31st December 1990 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Rhymney Estuary Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m | A14NW (E) | 524 | 2 | 322100 176450 |
| 3 | Discharge Consents Operator: John Laing Construction Ltd Property Type: Water Treatment Works Location: Project Offices Construction Site O, Construction Site Of Cardiff Wwt, Wwtw Cardiff Authority: Natural Resources Wales Catchment Area: Boundary Of HA 57 & HA 58 Reference: AN027740101 Permit Version: 1 Effective Date: 22nd September 1997 Issued Date: 22nd September 1997 Revocation Date: 24th June 2002 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Underground Strata Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m | A7NE (SW) | 688 | 2 | 321100 175900 |
| 4 | Discharge Consents Operator: Byzak Contractors Ltd Property Type: Undefined Or Other Location: Treatment Area 'A' Rover Way Cardi, Rover Way Cardiff Authority: Natural Resources Wales Catchment Area: River Rhymney Reference: An0273901 Permit Version: 2 Effective Date: 31st July 1997 Issued Date: 30th July 1997 Revocation Date: 14th October 1997 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: River Rhymney Estuary Status: Consent expired Positional Accuracy: Located by supplier to within 10m | A19SW (NE) | 743 | 2 | 322070 176950 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 4 | Discharge Consents Operator: Byzak Contractors Ltd Property Type: Undefined Or Other Location: Treatment Area 'A' Rover Way Cardi, Rover Way Cardiff Authority: Natural Resources Wales Catchment Area: River Rhymney Reference: An0273901 Permit Version: 1 Effective Date: 18th June 1997 Issued Date: 18th June 1997 Revocation Date: 30th July 1997 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: River Rhymney Estuary Status: Authorisation revoked Positional Accuracy: Located by supplier to within 100m | A19SW (NE) | 743 | 2 | 322070 176950 |
| 5 | Discharge Consents Operator: Hyder Consulting Ltd Property Type: General Construction Work Location: Cardiff Wastewater Trtmnt Plnt Tide, Tide Fields Road Cardiff Authority: Natural Resources Wales Catchment Area: Boundary Of HA 57 & HA 58 Reference: AN027770101 Permit Version: 1 Effective Date: 13th November 1997 Issued Date: 13th November 1997 Revocation Date: 13th November 2000 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Severn Estuary Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m | A7SE (S) | 986 | 2 | 321230 175470 |
| 6 | Enforcement and Prohibition Notices Location: Tremorfa Steel Works, CARDIFF, South Glamorgan, CF2 2YX Permit Reference: Not Given Enforcement Date: 18th January 1996 Details: Press Release HM360, Release of primary fume to the atmosphere due to a failure in the fume extraction system under EPA90 Positional Accuracy: Unknown | A12NW (W) | 875 | 3 | 320705 176395 |
| 7 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: Cardiff Rod and Bar Mill, Castle Works, CARDIFF, SOUTH GLAMORGAN, CF24 5XQ Authority: Environment Agency, Welsh Region Permit Reference: BG4879 Dated: 31st August 1999 Process Type: IPC minor (non-substantial) variation to previous variation Description: 1.3 A (A) Combustion processes within the Fuel & Power Industry Status: Revoked - Now IPPC Positional Accuracy: Automatically positioned to the address | A12SE (W) | 647 | 3 | 320938 176317 |
| 7 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: Cardiff Rod and Bar Mill, P O Box 83, Castle Works, CARDIFF, South Glamorgan, CF24 5XQ Authority: Environment Agency, Welsh Region Permit Reference: AF7932 Dated: 28th October 1992 Process Type: IPC new application Description: 1.3 A (A) Combustion processes within the Fuel & Power Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Automatically positioned to the address | A12SE (W) | 651 | 3 | 320933 176322 |
| 7 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: Cardiff Rod and Bar Mill, Castle Works, CARDIFF, South Glamorgan, CF24 5XQ Authority: Environment Agency, Welsh Region Permit Reference: BC5393 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 1.3 A (A) Combustion processes within the Fuel & Power Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Automatically positioned to the address | A12SE (W) | 652 | 3 | 320933 176317 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: Cardiff Medium Section Mill, P O Box 16 Tremorfa Works, Seawall Road, CARDIFF, South Glamorgan, CF2 2YW Authority: Environment Agency, Welsh Region Permit Reference: BG4852 Dated: 31st August 1999 Process Type: IPC minor (non-substantial) variation to previous variation Description: 1.3 A (A) Combustion processes within the Fuel & Power Industry Status: Revoked - Now IPPC Positional Accuracy: Manually positioned within the geographical locality | A12NW (W) | 721 | 3 | 320859 176397 |
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: Po Box 37 Tremorfa Works, CARDIFF, Cardiff, CF2 2YX Authority: Environment Agency, Welsh Region Permit Reference: BD9831 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.2 A (I) Non-ferrous Metal processes within the Metal Industry Status: Authorisation revoked Positional Accuracy: Manually positioned within the geographical locality | A12SW (W) | 721 | 3 | 320859 176387 |
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: Cardiff Medium Section Mill, Po Box 16, Tremorfa Works, CARDIFF, South Glamorgan, CF2 2YW Authority: Environment Agency, Welsh Region Permit Reference: BC5474 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 1.3 A (A) Combustion processes within the Fuel & Power Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned within the geographical locality | A12NW (W) | 721 | 3 | 320859 176392 |
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: P O Box 37, Tremorfa Works, CARDIFF, South Glamorgan, CF2 2TH Authority: Environment Agency, Welsh Region Permit Reference: AY8727 Dated: 21st October 1997 Process Type: IPC new application Description: 2.2 A (I) Non-ferrous Metal processes within the Metal Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned within the geographical locality | A12SW (W) | 726 | 3 | 320854 176387 |
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: P O Box 37, Tremorfa Works, CARDIFF, CF2 2YX Authority: Environment Agency, Welsh Region Permit Reference: AR0322 Dated: 29th July 1995 Process Type: IPC application for process that was regulated by HMIP for air releases under previous legislation Description: 2.1 A (A) Iron and Steel processes within the Metal Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned within the geographical locality | A12NW (W) | 726 | 3 | 320854 176397 |
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: Cardiff Medium Section Mill, P O Box 16 Tremorfa Works, Seawall Road, CARDIFF, South Glamorgan, CF2 2YW Authority: Environment Agency, Welsh Region Permit Reference: AF8688 Dated: 28th October 1992 Process Type: IPC new application Description: 1.3 A (A) Combustion processes within the Fuel & Power Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned within the geographical locality | A12NW (W) | 726 | 3 | 320854 176392 |
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: P O Box 37, Tremorfa Works, CARDIFF, CF2 2YX Authority: Environment Agency, Welsh Region Permit Reference: BH4378 Dated: 28th February 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (A) Iron and Steel processes within the Metal Industry Status: Revoked - Now IPPC Positional Accuracy: Manually positioned within the geographical locality | A12SW (W) | 731 | 3 | 320849 176387 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: P O Box 37, Tremorfa Works, CARDIFF, CF2 2YX Authority: Environment Agency, Welsh Region Permit Reference: BE4991 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (A) Iron and Steel processes within the Metal Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned within the geographical locality | A12NW (W) | 731 | 3 | 320849 176392 |
| 8 | Integrated Pollution Controls Name: Celsa Manufacturing (Uk) Ltd Location: P O Box 37, Tremorfa Works, CARDIFF, Mid Glamorgan, CF2 2YX Authority: Environment Agency, Welsh Region Permit Reference: BB4430 Dated: 6th August 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (A) Iron and Steel processes within the Metal Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned within the geographical locality | A12NW (W) | 731 | 3 | 320849 176397 |
| 9 | Integrated Pollution Prevention And Control Name: Celsa Manufacturing Uk Ltd Location: Tremorfa Steel Works, Melt Shop, Tremorfa Works, Seawall Road, Tremorfa,, Cardiff, South Wales, CF24 5YX Authority: Natural Resources Wales Permit Reference: BP3237FK Original Permit Ref: BI9372iu Effective Date: 22nd April 2012 Status: Superseded By Variation Application Type: Variation App. Sub Type: Standard Positional Accuracy: Located by supplier to within 100m Activity Code: 2.1 A(1) (B) Activity Description: Ferrous Metals; Producing, Melting Or Refining Primary Activity: Y | A13NW (NW) | 264 | 2 | 321340 176500 |
| 10 | Integrated Pollution Prevention And Control Name: Celsa Manufacturing Uk Ltd Location: Tremorfa Melt Shop Ea/Epr/Tp3639bh/V002, New Melt Shop, Tremorfa Works, Seawall Road, Tremorfa,, Cardiff, South Wales, CF24 5TH Authority: Natural Resources Wales Permit Reference: BP3537FN Original Permit Ref: Tp3639bh Effective Date: 24th April 2012 Status: Effective Application Type: Variation App. Sub Type: Standard Positional Accuracy: Located by supplier to within 100m Activity Code: 2.1 A(1) (B) Activity Description: Ferrous Metals; Producing, Melting Or Refining Primary Activity: Y | A12SE (W) | 391 | 2 | 321200 176300 |
| 11 | Integrated Pollution Prevention And Control Name: Allied Steel And Wire Ltd Location: Cardiff Medium Section Mill, Tremorfa Works, Seawall Road, Cardiff, Cf24 2yw Authority: Environment Agency, Welsh Region Permit Reference: Bs9636 Original Permit Ref: Bs9636 Effective Date: Not Supplied Status: Valid Application Type: Not Supplied App. Sub Type: Not Supplied Positional Accuracy: Manually positioned to the address or location Activity Code: 2.1 A(1) (C) Activity Description: Ferrous Metals; Hot Rolling Greater Than 20T/Hr Primary Activity: Not Supplied | A12NE (W) | 507 | 3 | 321073 176393 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 12 | Integrated Pollution Prevention And Control Name: Dwr Cymru Cyfyngedig (Welsh Water) Location: Cardiff Chp Facility Epr/Fp3232kg/V002, Dwr Cymru Cyfyngedig, Cardiff East Wastewater Treatment Works, Tide Fields Road, Rover Way, Tremorfa, CARDIFF, South Glamorgan, CF24 2RX Authority: Environment Agency, Welsh Region Permit Reference: DP3330ZA Original Permit Ref: Fp3232kg Effective Date: Not Supplied Status: Valid Application Type: Variation App. Sub Type: Simple Standard Variation Positional Accuracy: Automatically positioned to the address Activity Code: 1.1 A(1) (B) (I) Activity Description: Combustion; Recovered Oil Greater Or Equal To 3Mw But Less Than 50Mw Primary Activity: Y | A8NW (S) | 513 | 3 | 321421 175905 |
| 13 | Integrated Pollution Prevention And Control Name: Tremorfa Anaerobic Digestion Facility Location: Tide Fields Road, Tremorfa, Cardiff, CF24 5SB Authority: Natural Resources Wales Permit Reference: AB3093CA Original Permit Ref: Not Supplied Effective Date: 25th January 2016 Status: Effective Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Located by supplier to within 10m Activity Code: 5.4 A(1) b) (i) Activity Description: Not Supplied Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Not Supplied Primary Activity: N | A7NE (SW) | 610 | 2 | 321116 175997 |
| 14 | Integrated Pollution Prevention And Control Name: Tremorfa Melt Shop Location: Tremorfa Works New Melt Shop Seawall Road, Tremorfa, Cardiff, South Wales, CF24 5TH Authority: Natural Resources Wales Permit Reference: Tp3639bh Original Permit Ref: Bp3537fn Effective Date: 20th June 2017 Status: Effective Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Automatically positioned to the address Activity Code: 2.1 A(1) (B) Activity Description: Not Supplied Primary Activity: Y Activity Code: 5.4 PART A (1) B) (III) Activity Description: Not Supplied Primary Activity: N | A12SE (W) | 628 | 2 | 320954 176343 |
| 14 | Integrated Pollution Prevention And Control Name: Carrington Wire Ltd Location: Pengam Wire Works, Po Box 56, Pengam Works, Tremorfa,, Cardiff, South Wales, CF24 2WR Authority: Natural Resources Wales Permit Reference: MP3934XY Original Permit Ref: Bx9447in Effective Date: 9th July 2008 Status: Surrender Effective Application Type: Surrender App. Sub Type: Whole Positional Accuracy: Manually positioned to the address or location Activity Code: 2.3 A(1) (A) Activity Description: Surface Treating Metals And Plastics; Electrolytic/Chemical Greater Than 30 Cubic Metres Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N | A12SE (W) | 632 | 2 | 320949 176359 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 15 | Integrated Pollution Prevention And Control Name: Dwr Cymru Cyfyngedig (Welsh Water) Location: Cardiff East Wastewater Treatment Works Ea/Epr/Fp3232kg/A001, Cardiff East Wwtw, Martin Road, Tremorfa Ind. Estate, Tremorfa,, Cardiff, CF24 5SD Authority: Natural Resources Wales Permit Reference: FP3232KG Original Permit Ref: Fp3232kg Effective Date: 26th May 2010 Status: Superseded By Variation Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 10m Activity Code: 1.1 A(1) (B) (I) Activity Description: Combustion; Recovered Oil Greater Or Equal To 3Mw But Less Than 50Mw Primary Activity: Y | A8NW (S) | 664 | 2 | 321410 175750 |
| 16 | Integrated Pollution Prevention And Control Name: Unit 11 Location: Unit 11, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Authority: Natural Resources Wales Permit Reference: Pp3739bk Original Permit Ref: Not Supplied Effective Date: 21st October 2015 Status: Effective Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Automatically positioned to the address Activity Code: 5.3 PART A (1) A) (IV) Activity Description: Not Supplied Primary Activity: Y | A8NW (SW) | 679 | 2 | 321250 175799 |
| 16 | Integrated Pollution Prevention And Control Name: Silverdell (Uk) Ltd Location: Martin Road Hazardous Waste Transfer Station Ea/Epr/Pp3739bk/V002, Martin Road, Unit 11, Tremorfa Industrial Estate, Tremorfa,, Cardiff, South Wales, CF24 5SD Authority: Natural Resources Wales Permit Reference: EP3831ZG Original Permit Ref: Pp3739bk Effective Date: 25th March 2013 Status: Superseded By Variation Application Type: Variation App. Sub Type: Minor Positional Accuracy: Automatically positioned to the address Activity Code: 5.3 A(1) a) (iv) Activity Description: DISPOSAL OR RECOVERY OF HAZ WASTE WITH CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING REPACKAGING PRIOR TO SUBMISSION TO ANY OF THE OTHER ACTIVITIES LISTED IN THIS SECTION OR IN SECTION 5.1 Primary Activity: Y | A8NW (SW) | 679 | 2 | 321250 175799 |
| 16 | Integrated Pollution Prevention And Control Name: Euro Dismantling Services Ltd Location: Martin Road Hazardous Waste Transfer Station Ea/Epr/Pp3739bk/V002, Martin Road, Unit 11, Tremorfa Industrial Estate, Tremorfa,, Cardiff, South Wales, CF24 5SD Authority: Natural Resources Wales Permit Reference: MP3135EC Original Permit Ref: Mp3135ec Effective Date: 15th November 2013 Status: Effective Application Type: Transfer App. Sub Type: Whole with Fit and Proper Person Positional Accuracy: Located by supplier to within 10m Activity Code: 5.3 A(1) a) (iv) Activity Description: DISPOSAL OR RECOVERY OF HAZ WASTE WITH CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING REPACKAGING PRIOR TO SUBMISSION TO ANY OF THE OTHER ACTIVITIES LISTED IN THIS SECTION OR IN SECTION 5.1 Primary Activity: Y | A8NW (SW) | 687 | 2 | 321250 175790 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 17 | Integrated Pollution Prevention And Control Name: Celsa Manufacturing Uk Ltd Location: Tremorfa Steel Works, Melt Shop, Tremorfa Works, Seawall Road, Tremorfa, Cardiff, South Wales, CF24 5YX Authority: Natural Resources Wales Permit Reference: Bu2098ip Original Permit Ref: Bl9372iu Effective Date: 20th June 2003 Status: Superseded By Variation Application Type: Transfer App. Sub Type: Whole without Fit and Proper Person Positional Accuracy: Manually positioned to the road within the address or location Activity Code: 2.1 A(1) (B) Activity Description: Ferrous Metals; Producing, Melting Or Refining Primary Activity: Y | A12NW (W) | 695 | 2 | 320886 176414 |
| 18 | Integrated Pollution Prevention And Control Name: Celsa Manufacturing Uk Ltd Location: Cardiff Section Mill, Section Mill, Tremorfa Works, Seawall Road, Cardiff, CF24 5TH Authority: Natural Resources Wales Permit Reference: Bv0767it Original Permit Ref: Bv0767it Effective Date: 28th November 2003 Status: Effective Application Type: Application App. Sub Type: New Positional Accuracy: Manually positioned to the address or location Activity Code: 1.1 B (A) Activity Description: Combustion; Any Fuel Greater Or Equal To 20Mw But Less Than 50Mw (Unless 1.1 A(1) B) Primary Activity: N Activity Code: 2.1 A(1) (C) Activity Description: Ferrous Metals; Hot Rolling Greater Than 20T/Hr Primary Activity: Y | A12SW (W) | 761 | 2 | 320834 176244 |
| 19 | Integrated Pollution Prevention And Control Name: Carrington Wire Ltd Location: Po Box 56, Pengam Wire Works, Tremorfa, Cardiff, South Wales, CF24 2WR Authority: Natural Resources Wales Permit Reference: Bx9447in Original Permit Ref: Bx9447in Effective Date: 1st March 2005 Status: Superseded By Variation Application Type: Application App. Sub Type: New Positional Accuracy: Manually positioned to the address or location Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N Activity Code: 2.3 A(1) (A) Activity Description: Surface Treating Metals And Plastics; Electrolytic/Chemical Greater Than 30 Cubic Metres Primary Activity: Y | A12NW (W) | 822 | 2 | 320759 176417 |
| 20 | Integrated Pollution Prevention And Control Name: Celsa Manufacturing (Uk) Ltd Location: Po Box 37, Tremorfa Works, Seawall Road, Cardiff, Cf2 2yx Authority: Environment Agency, Welsh Region Permit Reference: Bl9372 Original Permit Ref: Bl9372 Effective Date: 7th January 2003 Status: Superseded By Variation Application Type: PPC APPLICATION App. Sub Type: Not Supplied Positional Accuracy: Manually positioned to the address or location Activity Code: 2.1 A(1) (B) Activity Description: Ferrous Metals; Producing, Melting Or Refining Primary Activity: Not Supplied | A12SW (W) | 897 | 3 | 320688 176297 |
| 21 | Local Authority Pollution Prevention and Controls Name: Celsa Manufacturing (Uk) LtdCardiff Mill Services Location: Rover Way, CARDIFF, South Glamorgan, CF24 5UX Authority: Cardiff Council, Pollution Control Division Permit Reference: Ppc/27/3.5 Dated: 6th August 1992 Process Type: Local Authority Pollution Prevention and Control Description: PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete Status: Permitted Positional Accuracy: Located by supplier to within 10m | A12SE (SW) | 486 | 4 | 321188 176105 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 22 | Local Authority Pollution Prevention and Controls Name: Castle Nails Location: PO Box 4, Tremorfa Nail Works, CARDIFF, South Glamorgan, CF24 5YS Authority: Cardiff Council, Pollution Control Division Permit Reference: Epa90/20/2.2 Dated: 14th April 1993 Process Type: Local Authority Air Pollution Control Description: PG2/2 Hot dip galvanising processes Status: Authorisation revoked Positional Accuracy: Manually positioned to the address or location | A12SE (SW) | 637 | 4 | 321005 176118 |
| 23 | Local Authority Pollution Prevention and Controls Name: National Engine Centre Location: Unit 16c Martin Road, Tremorfa Industrial Estate, Cardiff, CF24 5SD Authority: Cardiff Council, Pollution Control Division Permit Reference: EPR 152/1.1 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input Status: Permitted Positional Accuracy: Manually positioned to the address or location | A7NE (SW) | 647 | 4 | 321209 175862 |
| 24 | Local Authority Pollution Prevention and Controls Name: Castle Wire Location: PO Box 48, Castle Works, CARDIFF, South Glamorgan, CF10 1XQ Authority: Cardiff Council, Pollution Control Division Permit Reference: Epa90/19/2.2 Dated: 14th April 1993 Process Type: Local Authority Air Pollution Control Description: PG2/2 Hot dip galvanising processes Status: Authorisation revoked Positional Accuracy: Manually positioned to the address or location | A12SE (SW) | 678 | 4 | 320991 176057 |
| 25 | Local Authority Pollution Prevention and Controls Name: Diggers Vehicle Dismantlers Location: Unit 15 Tremorfa Industrial Estate, Tremorfa, CARDIFF, Mid Glamorgan, CF2 2SD Authority: Cardiff Council, Pollution Control Division Permit Reference: Epa90/116/2.2 Dated: 21st September 2001 Process Type: Local Authority Air Pollution Control Description: PG2/1Furnaces for the extraction of non-ferrous metal from scrap Status: Authorised Positional Accuracy: Manually positioned to the address or location | A7NE (SW) | 721 | 4 | 321162 175805 |
| 26 | Local Authority Pollution Prevention and Controls Name: Hope Ready Mixed Concrete Location: Cardiff Wharf, Roath Dock Road, Cardiff, CF10 4ED Authority: Cardiff Council, Pollution Control Division Permit Reference: Ppc/15/3.1 Dated: 18th November 1992 Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement Status: Permitted Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 736 | 4 | 321052 175879 |
| 27 | Local Authority Pollution Prevention and Controls Name: Tilcon Ltd Location: Rover Way, The Docks, CARDIFF, South Glamorgan, CF24 2RX Authority: Cardiff Council, Pollution Control Division Permit Reference: epa90/12/3.1 Dated: 28th August 1992 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement Status: Authorisation has varied Positional Accuracy: Manually positioned to the road within the address or location | A7NE (SW) | 797 | 4 | 320990 175857 |
| 28 | Local Authority Pollution Prevention and Controls Name: Tesco Petrol Filling Station Location: Eastern Bay Road, Pengam Green, CARDIFF, CF24 2HN Authority: Cardiff Council, Pollution Control Division Permit Reference: PPC/114/1.2 Dated: 12th February 2001 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Permitted Positional Accuracy: Manually positioned to the address or location | A18NE (N) | 849 | 4 | 321623 177239 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 29 | Local Authority Pollution Prevention and Controls Name: Action Environmental Location: Unit 5 Martin Road, Tremorfa Industrial Estate, Cardiff, Cf24 5sd Authority: Cardiff Council, Pollution Control Division Permit Reference: PPC/121/3.5 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG3/16 Mobile screening and crushing processes Status: Permitted Positional Accuracy: Manually positioned to the address or location | A7NE (SW) | 877 | 4 | 320979 175753 |
| | Nearest Surface Water Feature | A13NE (NE) | 275 | - | 321762 176597 |
| 30 | Pollution Incidents to Controlled Waters Property Type: Not Given Location: Rover Way Foreshore Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Severn Est; Effluent Quality Incident Date: 4th August 1997 Incident Reference: 33549 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Weather Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m | A13SE (SE) | 351 | 3 | 321900 176250 |
| 31 | Pollution Incidents to Controlled Waters Property Type: Not Given Location: Seawall Road, TREMORFA Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 23rd April 1996 Incident Reference: 28126 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m | A13NW (NW) | 417 | 3 | 321300 176700 |
| 32 | Pollution Incidents to Controlled Waters Property Type: Not Given Location: A Plant Units, 4 5 And 6, Eastmoors Road Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Not Supplied Incident Date: 6th September 1995 Incident Reference: 25773 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m | A18SW (NW) | 495 | 3 | 321300 176800 |
| | River Quality Name: Not Supplied GQA Grade: Unclassified Tidal River Reach: Not Supplied Estimated Distance (km): Not Supplied Flow Rate: Not Supplied Flow Type: Not Supplied Year: 1995 | A13SW (W) | 194 | 3 | 321400 176320 |
| 33 | Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 13th April 2003 Incident Reference: 150733 Water Impact: Category 3 - Minor Incident Air Impact: Category 2 - Significant Incident Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants And Effects: Smoke | A13NE (NE) | 386 | 2 | 321825 176689 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 34 | Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 29th September 2005 Incident Reference: 349879 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Asbestos Waste | A8NW (SW) | 657 | 2 | 321284 175806 |
| 35 | Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 18th July 2001 Incident Reference: 17309 Water Impact: Category 3 - Minor Incident Air Impact: Category 2 - Significant Incident Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants And Effects: Other Atmospheric Pollutant Or Effect | A7SE (SW) | 959 | 2 | 321089 175568 |
| 36 | Water Abstractions Operator: Celsa Manufacturing (Uk) Ltd Licence Number: 21/57/25/0078 Permit Version: 2 Location: Underground Strata At Mineral Site Rover Way Authority: Natural Resources Wales Abstraction: Mineral Products: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 04 January Authorised End: 03 July Permit Start Date: 3rd October 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m | A13SW (SW) | 359 | 2 | 321323 176141 |
| 36 | Water Abstractions Operator: Celsa Manufacturing (Uk) Ltd Licence Number: 21/57/25/0078 Permit Version: 2 Location: Underground Strata At Mineral Site Rover Way Authority: Natural Resources Wales Abstraction: Mineral Products: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 3rd October 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m | A13SW (SW) | 359 | 2 | 321323 176141 |
| 36 | Water Abstractions Operator: Celsa Manufacturing (Uk) Ltd Licence Number: 21/57/25/0078 Permit Version: 2 Location: Underground Strata At Mineral Site Rover Way Authority: Natural Resources Wales Abstraction: Mineral Products: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 3rd October 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m | A13SW (SW) | 359 | 2 | 321323 176141 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 37 | Water Abstractions Operator: Celsa Manufacturing (Uk) Ltd Licence Number: 21/57/25/0078 Permit Version: 1 Location: Underground Strata, Marine Alluvium And E A F Slag Authority: Natural Resources Wales Abstraction: Mineral Products: Dust Suppression Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 2nd March 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 656 | 2 | 321040 176020 |
| 37 | Water Abstractions Operator: Celsa Manufacturing (Uk) Ltd Licence Number: 21/57/25/0078 Permit Version: 1 Location: Underground Strata, Marine Alluvium And E A F Slag Authority: Natural Resources Wales Abstraction: Mineral Products: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 2nd March 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 656 | 2 | 321040 176020 |
| | Water Abstractions Operator: Cardiff City Council Licence Number: 21/57/12/0039 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 0 Yearly Rate (m3): 35 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m | A16SW (W) | 1775 | 3 | 319920 177020 |
| | Water Abstractions Operator: Freeline Electro Plating Ltd Licence Number: 21/57/12/0074 Permit Version: 100 Location: Borehole At Freeline Electro Plating Ltd. Authority: Environment Agency, Welsh Region Abstraction: Other Industrial/Commercial/Public Services: General Washing/Process Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th July 1981 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m | A22NW (NW) | 1788 | 3 | 320800 178000 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 38 | Water Industry Act Referrals Name: Dwr Cymru Cyfyngedig Location: Cardiff Wwtw, Tide Field Road, TREMORFA, Cardiff, CF24 5SD Authority: Natural Resources Wales Permit Reference: AN0303701 Dated: 26th June 2009 Process Type: Permissions or amendments to discharge under the Water Industry Act 1991 Description: Processes which result in the discharge of Special Category effluents under The Trade Effluents (Prescribed Processes and Substances) Regulations Status: Application has been authorised and any conditions apply to the operator Positional Accuracy: Manually positioned within the geographical locality | A8NW (S) | 508 | 2 | 321422 175910 |
| | Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 36 Mid Glamorgan Scale: 1:100,000 | A13NE (NE) | 0 | 3 | 321580 176392 |
| | Drift Deposits None | | | | |
| | Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B | A13NE (NE) | 0 | 2 | 321580 176392 |
| | Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated | A13NE (NE) | 0 | 2 | 321580 176392 |
| | Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied | A13NE (NE) | 0 | 2 | 321580 176392 |
| | Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied | A13NE (N) | 46 | 2 | 321595 176435 |
| | Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied | A13NE (N) | 46 | 2 | 321595 176435 |
| | Areas Benefiting from Flood Defences None | | | | |
| | Flood Water Storage Areas None | | | | |
| | Flood Defences None | | | | |
| 39 | OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 82.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rhymney Primacy: 2 | A13NE (NE) | 275 | 5 | 321763 176597 |
| 40 | OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 79.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rhymney Primacy: 2 | A13NE (NE) | 303 | 5 | 321699 176670 |
| 41 | OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 31.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rhymney Primacy: 2 | A13NE (NE) | 381 | 5 | 321758 176728 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 42 | OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 160.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rhymney Primacy: 2 | A18SE (NE) | 433 | 5 | 321793 176768 |
| 43 | OS Water Network Lines Watercourse Form: Tidal river Watercourse Length: 2550.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Rhymni Catchment Name: Rhymney Primacy: 1 | A14NW (E) | 485 | 5 | 322063 176422 |
| 44 | OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 372.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rhymney Primacy: 2 | A18SE (NE) | 589 | 5 | 321904 176883 |
| 45 | OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 95.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Rhymney Primacy: 1 | A19NW (NE) | 916 | 5 | 322014 177198 |
| 46 | OS Water Network Lines Watercourse Form: Tidal river Watercourse Length: 618.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Rhymni Catchment Name: Rhymney Primacy: 1 | A19NW (N) | 969 | 5 | 321935 177293 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 47 | BGS Recorded Landfill Sites Site Name: British Steel Corp Location: Rover Way, Cardiff East Moors, CARDIFF, South Glamorgan Authority: British Geological Survey, National Geoscience Information Service Ground Water: Information not available Surface Water: Information not available Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate | A13NE (NE) | 0 | - | 321580 176392 |
| 48 | Historical Landfill Sites Licence Holder: Not Supplied Location: Rover Way, Cardiff East Moors, Cardiff, South Glamorgan Name: British Steel Corporation Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD31199 First Input Date: 31st December 1940 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert and Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 2044 Other Ref: Not Supplied | A13NE (NE) | 0 | 2 | 321580 176392 |
| 49 | Historical Landfill Sites Licence Holder: GKN South Wales Limited Location: Cardiff, South Glamorganshire Name: GKN Fragmentiser Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15211 First Input Date: 31st December 1977 Last Input Date: 31st December 1981 Specified Waste: Deposited Waste included Industrial and Household Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0037 BGS Ref: Not Supplied Other Ref: 3/77 | A13SE (E) | 60 | 2 | 321637 176379 |
| 50 | Historical Landfill Sites Licence Holder: Birds Shredded Produce Location: Rover Way, Cardiff, South Glamorganshire Name: Birds Fragmentiser Waste Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15267 First Input Date: 31st December 1981 Last Input Date: 31st December 1991 Specified Waste: Deposited Waste included Industrial, Household and Special Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0007 BGS Ref: Not Supplied Other Ref: 4/81 | A13SE (SE) | 75 | 2 | 321624 176331 |
| 51 | Historical Landfill Sites Licence Holder: Slag Reduction Cardiff Location: Cardiff Name: Slag Reduction Limited Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15269 First Input Date: 31st December 1977 Last Input Date: 31st December 1990 Specified Waste: Deposited Waste included Inert and Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0095 BGS Ref: Not Supplied Other Ref: 4/77 | A13SW (SW) | 224 | 2 | 321469 176197 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 52 | Historical Landfill Sites Licence Holder: Allied Steel and Wire Location: Flue Dust Pit, Cardiff Name: ASW North Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15241 First Input Date: 31st December 1991 Last Input Date: 31st December 1994 Specified Waste: Deposited Waste included Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0002 BGS Ref: Not Supplied Other Ref: Not Supplied | A13SW (S) | 326 | 2 | 321455 176091 |
| 53 | Historical Landfill Sites Licence Holder: Allied Steel and Wire Location: Flue Dust Pit, Rover Way, Cardiff Name: ASW South Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15270 First Input Date: 31st December 1988 Last Input Date: 31st December 1991 Specified Waste: Deposited Waste included Industrial and Special Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0003 BGS Ref: Not Supplied Other Ref: 88/09 | A8NW (S) | 398 | 2 | 321464 176011 |
| 54 | Historical Landfill Sites Licence Holder: Not Supplied Location: Cardiff, South Glamorganshire Name: Pengram Moors Landfill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15217 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert, Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0079 BGS Ref: Not Supplied Other Ref: Not Supplied | A13NE (NE) | 444 | 2 | 321891 176708 |
| 55 | Historical Landfill Sites Licence Holder: Crunchgrip Limited Location: Cardiff Name: Dragon Coal and Ovoids Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15172 First Input Date: 31st December 1986 Last Input Date: 31st December 1990 Specified Waste: Deposited Waste included Inert and Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0024 BGS Ref: Not Supplied Other Ref: 3/86 | A7NE (SW) | 632 | 2 | 321203 175885 |
| 56 | Historical Landfill Sites Licence Holder: Cardiff Bay Development Corporation Location: Cardiff Name: Flue Dust Enclosure Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15263 First Input Date: 31st December 1989 Last Input Date: 31st December 1991 Specified Waste: Deposited Waste included Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0031 BGS Ref: Not Supplied Other Ref: Not Supplied | A8NW (SW) | 638 | 2 | 321267 175836 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 57 | Historical Landfill Sites Licence Holder: Allied Steel and Wire Location: Foreshore, Rovers Way, Cardiff Name: Flue and Dust Disposal Site Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15173 First Input Date: 31st December 1981 Last Input Date: 31st December 1988 Specified Waste: Deposited Waste included Inert and Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0030 BGS Ref: Not Supplied Other Ref: 1/80, 3/81 | A8NW (S) | 675 | 2 | 321358 175755 |
| 58 | Historical Landfill Sites Licence Holder: British Steel Corporation Location: Cardiff Name: BSC Flue Dust Pit Extension Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15271 First Input Date: 31st December 1961 Last Input Date: 31st December 1981 Specified Waste: Deposited Waste included Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0013 BGS Ref: Not Supplied Other Ref: 2/77 | A8SW (S) | 735 | 2 | 321310 175709 |
| 59 | Historical Landfill Sites Licence Holder: British Steel Location: Cardiff Name: BCS-GKN Flue Dust Pit Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15216 First Input Date: 31st December 1974 Last Input Date: 31st December 1976 Specified Waste: Deposited Waste included Industrial and Special Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0014 BGS Ref: Not Supplied Other Ref: Not Supplied | A8SW (S) | 744 | 2 | 321324 175694 |
| 60 | Historical Landfill Sites Licence Holder: W T Davies Transport Limited Location: Cardiff, South Glamorganshire Name: Land rear of Tarmac Topmix Site Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14135 First Input Date: 31st December 1984 Last Input Date: 31st December 1985 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6815/0057 BGS Ref: Not Supplied Other Ref: 1/84 | A7SE (SW) | 957 | 2 | 321015 175620 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 61 | Licensed Waste Management Facilities (Locations) Licence Number: DP3699FM Location: Celsa Manufacturing UK Ltd, Celsa Manufacturing UK Ltd, Rover Way, Cardiff, Glamorgan, Cardiff, CF24 2RX Operator Name: Celsa Manufacturing (UK) Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Effective Issued: 6th February 2018 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A13NE (E) | 38 | 2 | 321617 176392 |
| 62 | Licensed Waste Management Facilities (Locations) Licence Number: 30093 Location: Cardiff Millscale Services, Rover Way, Cardiff Foreshore, Cardiff, CF1 5UX Operator Name: Simsmetal U K Ltd Operator Location: Long Marston, Stratford Upon Avon, Warwickshire, CU37 8AQ Authority: Environment Agency Wales, South East Area Site Category: Metal Recycling Sites (Mixed) Licence Status: Modified Issued: 7th May 1993 Last Modified: 28th August 2002 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A13NW (W) | 122 | 3 | 321458 176392 |
| 63 | Licensed Waste Management Facilities (Locations) Licence Number: 30093 Location: Tremorfa Melt Shop, Seawall Road, Cardiff, CF24 2TH Operator Name: Celsa Manufacturing U K Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Physical Treatment Facilities Licence Status: Modified Issued: 7th May 1993 Last Modified: 24th April 2012 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 516 | 2 | 321194 176050 |
| 64 | Licensed Waste Management Facilities (Locations) Licence Number: XP3495FC Location: Bill Way & Co Ltd, Tremorfa Industrial Estate, Rover Way, Cardiff, Cardiff, CF24 5SD Operator Name: Bill Way & Co Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Effective Issued: 17th January 2001 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 641 | 2 | 321181 175890 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 65 | Licensed Waste Management Facilities (Locations) Licence Number: XB3293HS Location: National Engine Centre, Martin Rd, Tremorfa Ind Est, Cardiff, Cardiff, CF24 5SD Operator Name: Robert Lory Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Effective Issued: 26th February 2018 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 664 | 2 | 321238 175823 |
| 65 | Licensed Waste Management Facilities (Locations) Licence Number: 900084 Location: Unit 16a, Martin Rd, Tremorfa Ind Est, Cardiff, CF24 5SD Operator Name: Lory Robert Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Vehicle depollution facility Licence Status: Issued Issued: 18th June 2014 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 664 | 2 | 321238 175823 |
| 65 | Licensed Waste Management Facilities (Locations) Licence Number: UP3295FU Location: Unit 17, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, Cardiff, Cardiff, CF24 5SD Operator Name: Project Black Recycling Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Effective Issued: 17th October 2016 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A8NW (SW) | 668 | 2 | 321266 175803 |
| 65 | Licensed Waste Management Facilities (Locations) Licence Number: 30224 Location: Unit 17, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Operator Name: R G F Haulage Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations Licence Status: Modified Issued: 20th December 2000 Last Modified: 22nd December 2007 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A8NW (SW) | 693 | 2 | 321252 175782 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 66 | Licensed Waste Management Facilities (Locations) Licence Number: ZP3295FH Location: Diggers Dismantlers, Tremorfa Ind Estate, Cardiff, Glamorgan, Cardiff, CF24 5SD Operator Name: William David Roberts Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Effective Issued: 20th May 2004 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 701 | 2 | 321190 175810 |
| 66 | Licensed Waste Management Facilities (Locations) Licence Number: 30319 Location: E L V Facility, 15 Martin Road , Tremorfa Ind Estate, Cardiff, CF24 5SD Operator Name: Roberts William David Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: End of Life Vehicles Licence Status: Issued Issued: 20th May 2004 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 701 | 2 | 321190 175810 |
| 67 | Licensed Waste Management Facilities (Locations) Licence Number: GP3095FF Location: 1st Choice Vehicle Dismantlers, Units 12/13, Tremorfa Ind Estate, Cardiff, Glamorgan, Cardiff, CF24 5SD Operator Name: Malcolm David Harrison Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Effective Issued: 28th September 2001 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 754 | 2 | 321127 175789 |
| 67 | Licensed Waste Management Facilities (Locations) Licence Number: 30244 Location: Units 12/13, Martin Road, Tremorfa Ind Estate, Cardiff, CF24 5SD Operator Name: Harrison Malcolm David Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Vehicle Dismantlers) Licence Status: Modified Issued: 28th September 2001 Last Modified: 14th May 2010 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 754 | 2 | 321127 175789 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 67 | Licensed Waste Management Facilities (Locations) Licence Number: YP3399FR Location: City Special Waste Ltd, Tremorfa Ind Est, Cardiff, Glamorgan, Cardiff, CF24 5SD Operator Name: City Special Waste Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Expired Issued: 18th May 1994 Last Modified: Not Supplied Expires: 28th September 2006 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 779 | 2 | 321115 175767 |
| 68 | Licensed Waste Management Facilities (Locations) Licence Number: WB3893HZ Location: Bayliss Metals, Tremorfa, Cardiff, Cardiff, CF24 5SD Operator Name: Bayliss Recovery Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Effective Issued: 11th May 2018 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7NE (SW) | 840 | 2 | 321044 175745 |
| 69 | Licensed Waste Management Facilities (Locations) Licence Number: 30303 Location: Unit 6, Martin Road, Tremorfa, Cardiff Operator Name: Action Environmental Waste Management Ltd Operator Location: Unit 6, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Authority: Environment Agency Wales, South East Area Site Category: Household, Commercial And Industrial Transfer Stations Licence Status: Issued Issued: 24th February 2004 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m | A7SE (SW) | 842 | 3 | 321100 175700 |
| 70 | Licensed Waste Management Facilities (Locations) Licence Number: CP3095FG Location: Action Environmental Waste Management Ltd (administration), Tremorfa, Cardiff, Glamorgan, Cardiff, CF24 5SD Operator Name: Action Environmental Waste Management Ltd (administration) Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Expired Issued: 24th February 2004 Last Modified: Not Supplied Expires: 21st October 2007 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7SE (SW) | 953 | 2 | 321025 175617 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 70 | Licensed Waste Management Facilities (Locations) Licence Number: 30303 Location: Unit 6, Martin Road, Tremorfa, Cardiff, Glamorgan, CF24 5SD Operator Name: Action Environmental Waste Management Ltd (administration) Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations Licence Status: Expired Issued: 24th February 2004 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m | A7SE (SW) | 953 | 2 | 321025 175617 |
| | Local Authority Landfill Coverage Name: Cardiff Council - Has no landfill data to supply | | 0 | 6 | 321580 176392 |
| 71 | Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989 | A13NE (NE) | 419 | - | 321904 176656 |
| 72 | Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989 | A12SE (W) | 431 | - | 321150 176365 |
| 73 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A13SW (SW) | 17 | - | 321573 176377 |
| 74 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A13NW (W) | 20 | - | 321562 176399 |
| 75 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A13NW (NW) | 173 | - | 321486 176537 |
| 76 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A13NW (N) | 285 | - | 321520 176670 |
| 77 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A13NW (N) | 292 | - | 321484 176668 |
| 78 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A13NW (N) | 329 | - | 321566 176721 |
| 79 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A12NE (W) | 353 | - | 321232 176450 |
| 80 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A13SW (W) | 362 | - | 321243 176260 |
| 81 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18SW (N) | 411 | - | 321527 176799 |
| 82 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A12NE (W) | 426 | - | 321171 176510 |
| 83 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A18SW (NW) | 433 | - | 321412 176790 |
| 84 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18SW (N) | 437 | - | 321422 176799 |
| 85 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A12NE (W) | 443 | - | 321155 176518 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 86 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A12NE (NW) | 472 | - | 321178 176638 |
| 87 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A12NE (NW) | 474 | - | 321178 176643 |
| 88 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A12NE (NW) | 478 | - | 321215 176699 |
| 89 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A17SE (NW) | 523 | - | 321207 176758 |
| 90 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A17SE (NW) | 541 | - | 321222 176797 |
| 91 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A12SE (W) | 542 | - | 321041 176340 |
| 92 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18SW (N) | 544 | - | 321485 176927 |
| 93 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18SW (NW) | 547 | - | 321368 176896 |
| 94 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A18SW (N) | 550 | - | 321448 176925 |
| 95 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A12NE (W) | 561 | - | 321043 176553 |
| 96 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A17SE (NW) | 581 | - | 321230 176855 |
| 97 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A12SE (W) | 605 | - | 320982 176296 |
| 98 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18SW (N) | 616 | - | 321358 176966 |
| 99 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A12NE (NW) | 625 | - | 321006 176638 |
| 100 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18SW (NW) | 655 | - | 321256 176961 |
| 101 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901 | A17SE (NW) | 657 | - | 321064 176797 |
| 102 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A17SE (NW) | 670 | - | 321047 176797 |
| 103 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A17SE (NW) | 694 | - | 321105 176897 |
| 104 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18NW (N) | 709 | - | 321524 177098 |
| 105 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18SE (NE) | 726 | - | 321858 177062 |
| 106 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A18NW (N) | 730 | - | 321361 177088 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 107 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A17SE (NW) | 732 | - | 321052 176898 |
| 108 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A12NW (W) | 766 | - | 320841 176592 |
| 109 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A17SE (NW) | 784 | - | 321081 176996 |
| 110 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A19SW (NE) | 794 | - | 322007 177061 |
| 111 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A17SE (NW) | 800 | - | 321051 176991 |
| 112 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A17NE (NW) | 809 | - | 321181 177095 |
| 113 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A12SW (W) | 814 | - | 320796 176173 |
| 114 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901 | A12NW (W) | 826 | - | 320776 176577 |
| 115 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A17SW (NW) | 827 | - | 320863 176803 |
| 116 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A18NW (N) | 834 | - | 321412 177209 |
| 117 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901 | A12NW (W) | 835 | - | 320765 176575 |
| 118 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A19NW (NE) | 837 | - | 322049 177085 |
| 119 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A17SE (NW) | 843 | - | 321055 177051 |
| 120 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A18NE (N) | 845 | - | 321610 177236 |
| 121 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A17SW (NW) | 852 | - | 320863 176852 |
| 122 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965 | A19NW (NE) | 853 | - | 322001 177133 |
| 123 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1951 | A19NW (NE) | 867 | - | 322076 177102 |
| 124 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A18NE (N) | 895 | - | 321688 177280 |
| 125 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901 | A17SW (NW) | 899 | - | 320761 176763 |
| 126 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901 | A12NW (W) | 942 | - | 320638 176395 |
| 127 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1886 | A17SW (NW) | 947 | - | 320728 176804 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 128 | Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1922 | A7NW (SW) | 988 | - | 320774 175821 |
| 129 | Registered Landfill Sites Licence Holder: Birds Shredded Products Licence Reference: 4/81 Site Location: East Foreshore, Rover Way, Cardiff, South Glamorgan Licence Easting: 321560 Licence Northing: 176300 Operator Location: Rover Way, Tremorfa, CARDIFF, South Glamorgan, CF1 5UX Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: Waste produced/controlled by licence holder Restrictions: Status: Record supersededSuperseded Dated: Not Supplied Preceded By: Not Given Licence: Superseded By: P 3 (94/04) Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Iron/Steel Manufacturing Wastes Slag, Boiler/Flue Cleanings | A13SW (S) | 94 | 3 | 321560 176300 |
| 129 | Registered Landfill Sites Licence Holder: G.J.N. S Wales Ltd Licence Reference: 3/77 Site Location: Cardiff Foreshore Adj.Rover Way, Cardiff, South Glamorgan Licence Easting: 321600 Licence Northing: 176300 Operator Location: Castle Works, Cardiff, South Glamorgan Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st August 1977 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Iron/Steel Manufacturing Wastes Slag, Boiler/Flue Cleanings | A13SE (S) | 95 | 3 | 321600 176300 |
| 130 | Registered Landfill Sites Licence Holder: Crunchgrip Ltd T/A Roadstone Prod'S Licence Reference: 3/86 Site Location: Adj.Rover Way, Rear Of (Tarmac Topmix), Cardiff, South Glamorgan Licence Easting: 321900 Licence Northing: 176700 Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st September 1986 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Hardcore Inert Demol. & Building Waste Soil,Subsoil Prohibited Waste: Liquid Wastes Special Wastes | A13NE (NE) | 345 | 3 | 321828 176631 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 131 | Registered Landfill Sites Licence Holder: Slag Reduction Company (Cardiff) Ltd Licence Reference: 4/77 Site Location: Cardiff Foreshore., Rover Way, Cardiff, South Glamorgan Licence Easting: 321300 Licence Northing: 176100 Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Record supersededSuperseded Dated: 1st August 1977 Preceded By: Not Given Licence: Superseded By: 93/2 Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Iron/Steel Manufacturing Wastes Slag, Boiler/Flue Cleanings | A13SW (SW) | 405 | 3 | 321300 176100 |
| 132 | Registered Landfill Sites Licence Holder: Allied Steel & Wire Ltd Licence Reference: 88/09 Site Location: Behind Slag Reduction, Rover Way, Cardiff, South Glamorgan Licence Easting: 321470 Licence Northing: 175950 Operator Location: Po Box 83, Castle Works, Cardiff, South Glamorgan Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: Waste produced/controlled by licence holder Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st June 1988 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Flue Dust From Arrestment Apparatus Non-Tox.Inert Solids From Demolition Residue Ex Recov'Y Of Steel From Slag Slag & Scale Ex Iron/Steel Manuf. Prohibited Waste: Waste N.O.S. | A8NW (S) | 456 | 3 | 321470 175950 |
| 133 | Registered Landfill Sites Licence Holder: B.S.C. Welsh Div. Licence Reference: 2/77 Site Location: Cardiff Foreshore At.Rover Way, Cardiff, South Glamorgan Licence Easting: 321200 Licence Northing: 175600 Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st August 1977 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Iron/Steel Manufacturing Wastes Slag, Boiler/Flue Cleanings | A8SW (SW) | 779 | 3 | 321244 175690 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 134 | Registered Landfill Sites Licence Holder: R Bailey Plant (Bedwas) Ltd Licence Reference: 89/01 Site Location: Rear Of Tarmac Topmix Site, Rover Way, Cardiff, South Glamorgan Licence Easting: 321000 Licence Northing: 175600 Operator Location: Bedwas House, Newport, Gwent Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: Not Supplied Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Brok.Concrete/Bricks/Hardcore/Rubble Nat.Occ. Soils/Clays/Gravels/Rocks Prohibited Waste: Liquid Wastes Special Wastes | A7SE (SW) | 882 | 3 | 321059 175681 |
| 135 | Registered Landfill Sites Licence Holder: Allied Steel And Wire Licence Reference: 3/81 Site Location: Cardiff Foreshore, Rover Way, Cardiff, South Glamorgan Licence Easting: 321100 Licence Northing: 175600 Operator Location: Po Box 83, Castle Works, Cardiff, South Glamorgan Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: Waste produced/controlled by licence holder Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st October 1981 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Constr'N/Demol. Inert/Non-Haz/Non-Tox Iron/Steel Manufacturing Wastes Slag, Boiler/Flue Cleanings | A7SE (SW) | 926 | 3 | 321100 175600 |
| 136 | Registered Landfill Sites Licence Holder: W T Davies (Transport) Ltd Licence Reference: 1/84 Site Location: Rover Way, (Adj. Tarmac Topmix), Tremorfa, Cardiff, South Glamorgan Licence Easting: 321000 Licence Northing: 175600 Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: Not Supplied Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Constr'N/Demol. Inert/Non-Haz/Non-Tox | A7SE (SW) | 982 | 3 | 321000 175600 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 137 | Registered Waste Transfer Sites Licence Holder: Slag Reduction Company (Cardiff) Ltd Licence Reference: T 9 (93/2) Site Location: Foreshore Site Rover Way, Tremorfa, Cardiff, South Glamorgan Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Transfer Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 7th May 1993 Preceded By: 93/2 Licence: Superseded By: T 9 (93/2) Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Cardboard Construction And Demolition Wastes Ferrous Swarf (Millscale) Foundry Sand Furnace Bricks Oil Other Ferrous Metal Other Non-Ferrous Metal Paper Plastic Slags Tyres Wood Prohibited Waste: Any Substances In Eec Dir. 80/68 Pumpable Sludges (< 20% Dry Solids) Special Wastes Waste In Sealed Drums Waste N.O.S. | A13SW (W) | 137 | 3 | 321450 176350 |
| 137 | Registered Waste Transfer Sites Licence Holder: Slag Reduction Company (Cardiff) Ltd Licence Reference: 93/2 Site Location: Foreshore Site Rover Way, Tremorfa, Cardiff, South Glamorgan Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Transfer Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 1st May 1993 Preceded By: 4/77 Licence: Superseded By: T 9 (93/2) Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Brick Demolition Wastes Ferrous Metal Scrap Max.Storage In Licence Non-Ferrous Metal Scrap Plastic, Wood Slag Swarf Prohibited Waste: Pumpable Sludge Wastes Sealed Drums Special Wastes | A13SW (W) | 137 | 3 | 321450 176350 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 138 | Registered Waste Transfer Sites Licence Holder: Marlee Metals & Skip Hire Ltd Licence Reference: EAWML30224 Site Location: Unit 17 Tremorfa Industrial Estate, off Martin Road, CARDIFF, South Glamorgan, CF2 2SD Operator Location: 8 Gilbert Place, Mynachdy, CARDIFF, South Glamorgan, CF4 3HF Authority: Environment Agency Wales, South East Area Site Category: Transfer Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 19th December 2000 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Positioned by the supplier Boundary Quality: Good Authorised Waste: Degradable Household/Commercial/Industrial Waste (As In Post'98 E.A.Lics And Equivalent To 22.09.00) Maximum Waste Permitted By Licence Ukw 21.00.00 Inert Materials Ukw 22.00.00 General & Biodegradable Waste - Including Ukw 23.00.00 Metals & Discarded/Scrap Composite Equipment Ukw 24.00.00 Contaminated General Waste Prohibited Waste: Other Waste / Waste Not Otherwise Specified Special Waste (As In Epa 1990:S62 Of 1996 Regs) Ukw 25.00.00 Healthcare Risk Waste Ukw 26.00.00 Asbestos Waste Ukw 27.00.00 Mineral Wastes/Residues From Thermal Processes Not Listed Elsewhere Ukw 28.00.00 Inorganic Chemical Wastes Ukw 29.00.00 Organic Chemical Wastes Ukw 30.00.00 Mixed Chemical Smalls Ukw 31.00.00 Radioactive Waste Ukw 32.00.00 Explosive Waste Waste Solely/Mainly Finely Divided Metals Or Dusts/Powders/Loose Fibres | A8NW (SW) | 644 | 3 | 321292 175816 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 139 | Registered Waste Transfer Sites Licence Holder: City Special Waste Ltd Licence Reference: 94/07 Site Location: 11 Martin Road, Tremorfa Industrial Estate, Rover Way, CARDIFF, South Glamorgan, CF2 Operator Location: 11 Martin Road, Tremorfa Industrial Estate, Rover Way, CARDIFF, South Glamorgan, CF2 Authority: Environment Agency Wales, South East Area Site Category: Transfer Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 21st June 2000 Preceded By: 94/06 Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Animal Carcasses Asbestos (Bonded & Fibrous) Building & Demolition Wastes Car & Commercial Tyres Clinical Waste Grps B, D Domestic & Commercial Waste Drummed Special Waste (As In Epa 1990:S62 Of 1996 Regs) Fluorescent Tubes Gas Cylinders Industrial Waste Laboratory Smalls Lead/Acid Batteries Maximum Storage In Licence Maximum Waste Permitted By Licence Soil Contam. With Oil(Max 10%)/Asbestos/Heavy Metals/Chemicals - Incl> Special Waste Special Waste (As In Epa 1990:S62 Of 1996 Regs) - Comprising Prohibited Waste: Material With Haz.Code H 1 - Explosive Material With Haz.Code H 3a - Highly Flammable Material With Haz.Code H 3b - Flammable Material With Haz.Code H 7 - Carcinogenic Material With Haz.Code H10 - Teratogenic Material With Haz.Code H11 - Mutagenic Material With Haz.Code H12 - Can Release Toxic Gases Odorous Wastes (Unless In Sealed Containers) Other Waste/Waste Not Otherwise Specified Waste Liable To Attract Scavengers Wastes Likely To Create Litter (Unless In Sealed Containers) | A7NE (SW) | 790 | 3 | 321120 175750 |
| 139 | Registered Waste Transfer Sites Licence Holder: N Young t/a City Special Waste Licence Reference: T18 (94/07) Site Location: 11 Martin Road, Tremorfa Industrial Estate, Tremofa, CARDIFF, South Glamorgan, CF2 2SD Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 18th May 1994 Preceded By: Not Given Licence: Superseded By: 94/07 Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Asbestos Asbestos Cement Products Max.Storage Capacity In Licence Prohibited Waste: Any Waste Other Than Above | A7NE (SW) | 790 | 3 | 321120 175750 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 139 | Registered Waste Transfer Sites Licence Holder: N Young t/a City Salvage Ltd Licence Reference: 94/06 Site Location: 11 Martin Road, Tremorfa Industrial Estate, Rover Way, CARDIFF, South Glamorgan, CF2 Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Transfer Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 1st May 1994 Preceded By: Not Given Licence: Superseded By: 94/07 Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Building And Demolition Wastes Electrical Waste Machinery Max.Storage Capacity In Licence Plastics Scrap Metals Prohibited Waste: Batteries Free Flammable Solvents Liquid Wastes Pcb'S Special Wastes Tyres | A7NE (SW) | 790 | 3 | 321120 175750 |
| 140 | Registered Waste Treatment or Disposal Sites Licence Holder: Allied Metals Ltd Licence Reference: P 3 (94/04) Site Location: Rover Way, Tremorfa, CARDIFF, South Glamorgan, CF1 5UX Operator Location: Atlantech House, Beaufort Square, CHEPSTOW, Gwent, NP6 5EP Authority: Environment Agency Wales, South East Area Site Category: Scrapyard Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 12th April 1994 Preceded By: 4/81 Licence: Superseded By: Not Given Licence: Positional Accuracy: Positioned by the supplier Boundary Quality: Good Authorised Waste: Max.Storage In Licence Max.Waste Permitted By Licence Other Scrap Products Scrap Railway Wagons Scrap Vehicle Shells Trans/Capac (<0.5kg) Attached To Equip Prohibited Waste: Any Metal In Fine Powder Form Elemental Mercury Elemental Sodium/Potassium Liquid Wastes Percussive/Explosive/Similar Waste Sludge Wastes Special Wastes Sub'S Control. Radioactive Subs Act'60 Trans/Cpac'S(>0.5kg) Likely Cont.Pcbs Undrained Vehicles Waste N.O.S. | A13NE (NE) | 0 | 3 | 321580 176392 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 141 | Registered Waste Treatment or Disposal Sites Licence Holder: Phillip Metals (Europe) Ltd Licence Reference: T 9 (93/2) Site Location: Cardiff Foreshore, Rover Way, Tremorfa, CARDIFF, South Glamorgan, CF1 5UX Operator Location: Allied House, Beaufort Square, CHEPSTOW, Gwent, NP6 5EP Authority: Environment Agency Wales, South East Area Site Category: Transfer - with treatment Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 13th March 1998 Preceded By: T 9 (93/2) Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Com. & Ind. Waste Max.Stor Com/Ind.Waste For Auth.Proc. Max.Stor Ferrous Metals Max.Stor Foundry Sand For Auth.Proc. Max.Stor Max.Waste Permitted By Licence Millscale Max.Stor Non-Ferrous Metals Max.Stor Refractory Brick For Auth.Pr' Max.Stor Unprocessed Slags Max.Stor Prohibited Waste: Healthcare/Clinical Wastes Liquid/Sludge Wastes Lpg Cylinders Putrescible Waste Other Than Wood/Paper/Cardboard Spec.Waste (Epa'90:S62/1996 Regs) Spec.Waste (Epa'90:S62/1996 Regs)N.O.S Waste N.O.S. | A13SW (W) | 137 | 3 | 321450 176350 |
| 142 | Registered Waste Treatment or Disposal Sites Licence Holder: Bill Way % Co Ltd Licence Reference: EAWML30238 Site Location: Unit 16 Tremorfa Industrial Estate, Rover Way, CARDIFF, South Glamorgan, CF2 2SD Operator Location: Unit 16 Tremorfa Industrial Estate, Rover Way, CARDIFF, South Glamorgan, CF2 2SD Authority: Environment Agency Wales, South East Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 17th January 2001 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Positioned by the supplier Boundary Quality: Good Authorised Waste: Maximum Waste Permitted By Licence Vehicles (Incl. Special Waste Which Is Normal / Necessary Part Of Vehicle) Degradable Household/Commercial/Industrial Waste (As In Post'98 E.A.Lics And Equivalent To 22.09.00) Inert Materials (As In Post'98 E.A.Lics And Equivalent To 21.00.00) Other Waste / Waste Not Otherwise Specified Special Waste (As In Epa 1990:S62 Of 1996 Regs) Not Otherwise Specified | A8NW (SW) | 611 | 3 | 321307 175846 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 143 | Registered Waste Treatment or Disposal Sites Licence Holder: M Harrison T/A 1st Choice Vehicle Dismant Licence Reference: Eawml30244 Site Location: 1st Choice Vehicle Dismantlers, Units 12/13 Martins Road, Rover Way, Cardiff, South Glamorgan, Cf2 2sd Operator Location: 1st Choice Vehicle Dismantlers, Units 12/13 Martins Road, Rover Way, Cardiff, South Glamorgan, Cf2 2sd Authority: Environment Agency Wales, South East Area Site Category: Scrapyard Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 28th September 2001 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Metal Waste/Scrap Metal (Inferred From Regis Listing) New Licence, Wastes Not To Hand | A7NE (SW) | 704 | 3 | 321200 175800 |
| 144 | Registered Waste Treatment or Disposal Sites Licence Holder: H J Lane t/a Tremorfa Autosalgave Licence Reference: S12 (94/02) Site Location: Unit 5 Martin Road, Tremorfa Industrial Estate, CARDIFF, South Glamorgan, CF2 2RX Operator Location: As Site Address Authority: Environment Agency Wales, South East Area Site Category: Scrapyard Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 6th January 1994 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Max.Waste Permitted By Licence Oil/Water Mixtures Scrap Engines Scrap Tyres Scrap Vehicles Incl. Undrained Car Batteries Any Metal In Fine Powder Form Asbestos Epoxy Resins (Not Finished Prod'S) Insulated Cable Liquid Waste N.O.S. Sodium/Potassium Special Wastes Trans/Capc(>0.5kg) Cont.Pcbs/Analoges Waste N.O.S. Waste With Free Flam.Solvents | A7SE (SW) | 945 | 3 | 320970 175670 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 145 | Control of Major Accident Hazards Sites (COMAH) Name: Allied Steel and Wire Ltd Location: Tremorfa Steel Works, PO Box 37, Seawall Road, CARDIFF, South Glamorgan, CF24 5TH Reference: Not Supplied Type: Lower Tier Status: Record Ceased To Be Supplied Under COMAH Regulations Positional Accuracy: Automatically positioned to the address | A12SW (W) | 890 | 7 | 320695 176297 |
| 146 | Notification of Installations Handling Hazardous Substances (NIHHS) Name: Tremorfa Steelworks (Asw Plc) Location: P O Box 37, Tremorfa Works, CARDIFF, South Glamorgan, CF24 5YX Status: Not Active Positional Accuracy: Manually positioned within the geographical locality | A12NE (W) | 359 | 7 | 321236 176492 |
| 147 | Planning Hazardous Substance Consents Name: Allied Steel & Wire Ltd Location: Tremorfa Steelworks, Rover Way, Cardiff, South Glamorgan, Cf1 5ux Authority: Cardiff Council, Regulatory Services Application Ref: H/92/00001/R Hazardous Substance: Unknown at time of report Maximum Quantity: 30 Application date: 19th October 1992 Decision: Deemed Consent GrantedGranted Positional Accuracy: Manually positioned to the road within the address or location | A7NE (SW) | 716 | 8 | 321030 175934 |
| 148 | Planning Hazardous Substance Consents Name: Total Butler Location: Seawall Road, Tremorfa, Cardiff, CF24 5TH Authority: Cardiff Council, Regulatory Services Application Ref: 08/00534/E Hazardous Substance: Part C, Flammable Substance (Not in Parts A&B), Liquefied gas or gases, flammable in air with a boiling point of <0C, where amount held >= 50tonnes Maximum Quantity: 0 Application date: 29th February 2008 Decision: Deemed Consent GrantedGranted Positional Accuracy: Manually positioned to the road within the address or location | A12SW (W) | 757 | 8 | 320824 176353 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| | BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated) | A13NE (NE) | 0 | 1 | 321580 176392 |
| | BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg | A13NE (NE) | 0 | 1 | 321580 176392 |
| | BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: no data Chromium Concentration: 60 - 90 mg/kg Lead Concentration: no data Nickel Concentration: 15 - 30 mg/kg | A9NW (SE) | 575 | 1 | 322000 176000 |
| 149 | BGS Recorded Mineral Sites Site Name: Rover Way Location: Cardiff, Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 505 Type: Tip Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Not Available Geology: Blast Furnace Slag Commodity: Slag (Including Basic Oxygen Slag and Electric Arc Furnace Slags) Positional Accuracy: Located by supplier to within 10m | A7SE (SW) | 808 | 1 | 321138 175716 |
| | BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 321750, 176250 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured Concentration: 70.70 mg/kg Cadmium Measured Concentration: 48.60 mg/kg Chromium Measured Concentration: 864.70 mg/kg Lead Measured Concentration: 4959.30 mg/kg Nickel Measured Concentration: 482.10 mg/kg | A13SE (SE) | 222 | 1 | 321750 176250 |
| | BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 321220, 176210 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured Concentration: 11.60 mg/kg Cadmium Measured Concentration: 1.70 mg/kg Chromium Measured Concentration: 157.90 mg/kg Lead Measured Concentration: 89.70 mg/kg Nickel Measured Concentration: 29.30 mg/kg | A12SE (SW) | 404 | 1 | 321220 176210 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| | BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 321770, 176760 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 10.90 mg/kg Concentration: Cadmium Measured 2.50 mg/kg Concentration: Chromium Measured 544.30 mg/kg Concentration: Lead Measured 668.00 mg/kg Concentration: Nickel Measured 191.40 mg/kg Concentration: | A18SE (NE) | 415 | 1 | 321770 176760 |
| | BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 321220, 176720 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 30.10 mg/kg Concentration: Cadmium Measured 1.80 mg/kg Concentration: Chromium Measured 154.30 mg/kg Concentration: Lead Measured 665.00 mg/kg Concentration: Nickel Measured 50.20 mg/kg Concentration: | A12NE (NW) | 487 | 1 | 321220 176720 |
| | BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 321220, 175770 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 149.00 mg/kg Concentration: Cadmium Measured 100.60 mg/kg Concentration: Chromium Measured 2932.80 mg/kg Concentration: Lead Measured 8158.30 mg/kg Concentration: Nickel Measured 384.10 mg/kg Concentration: | A7NE (SW) | 719 | 1 | 321220 175770 |
| | BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 321810, 177310 Soil Sample Type: Topsoil Sample Area: Cardiff Arsenic Measured 18.60 mg/kg Concentration: Cadmium Measured 0.30 mg/kg Concentration: Chromium Measured 95.60 mg/kg Concentration: Lead Measured 80.30 mg/kg Concentration: Nickel Measured 36.60 mg/kg Concentration: | A18NE (N) | 947 | 1 | 321810 177310 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| | BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Cardiff Count Id: 506 Arsenic Minimum: 6.00 mg/kg Concentration: Arsenic Average: 18.00 mg/kg Concentration: Arsenic Maximum: 149.00 mg/kg Concentration: Cadmium Minimum: 0.10 mg/kg Concentration: Cadmium Average: 0.90 mg/kg Concentration: Cadmium Maximum: 100.60 mg/kg Concentration: Chromium Minimum: 28.00 mg/kg Concentration: Chromium Average: 86.00 mg/kg Concentration: Chromium Maximum: 2933.00 mg/kg Concentration: Lead Minimum: 20.00 mg/kg Concentration: Lead Average: 190.00 mg/kg Concentration: Lead Maximum: 8158.00 mg/kg Concentration: Nickel Minimum: 8.00 mg/kg Concentration: Nickel Average: 35.00 mg/kg Concentration: Nickel Maximum: 482.00 mg/kg Concentration: | A13NE (NE) | 0 | 1 | 321580 176392 |
| | Coal Mining Affected Areas In an area that might not be affected by coal mining | | | | |
| | Non Coal Mining Areas of Great Britain No Hazard | | | | |
| | Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service | A13NE (NE) | 0 | 1 | 321580 176392 |
| | Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service | A13NE (NE) | 0 | 1 | 321580 176392 |
| | Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service | A13SE (SE) | 181 | 1 | 321682 176243 |
| | Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service | A13NE (NE) | 0 | 1 | 321580 176392 |
| | Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service | A13NE (NE) | 0 | 1 | 321580 176392 |
| | Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service | A13SE (SE) | 227 | 1 | 321776 176280 |
| | Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service | A13SE (SE) | 247 | 1 | 321785 176255 |
| | Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service | A13NE (NE) | 0 | 1 | 321580 176392 |
| | Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service | A13SE (SE) | 181 | 1 | 321682 176243 |
| | Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service | A13NE (NE) | 0 | 1 | 321580 176392 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| | Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service | A13NE (NE) | 0 | 1 | 321580 176392 |
| | Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service | A13NE (NE) | 0 | 1 | 321580 176392 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 150 | Contemporary Trade Directory Entries Name: Sims Metal Management Location: Rover Way, Cardiff, CF24 2RX Classification: Scrap Metal Merchants Status: Active Positional Accuracy: Automatically positioned to the address | A13SE (S) | 73 | - | 321601 176323 |
| 150 | Contemporary Trade Directory Entries Name: Sims Metal Management Location: Rover Way, Cardiff, CF24 2RX Classification: Scrap Metal Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address | A13SE (S) | 73 | - | 321601 176323 |
| 151 | Contemporary Trade Directory Entries Name: Baldwins Industrial Services Plc Location: Crane House, Rover Way, Cardiff, South Glamorgan, CF24 2RX Classification: Crane Hire, Sales & Service Status: Inactive Positional Accuracy: Manually positioned to the address or location | A18SE (NE) | 474 | - | 321859 176774 |
| 151 | Contemporary Trade Directory Entries Name: Auto Salvage Location: Rover Way, Cardiff, South Glamorgan, CF24 2RX Classification: Salvage Dealers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A18SE (NE) | 482 | - | 321850 176790 |
| 152 | Contemporary Trade Directory Entries Name: Classic Restoration Location: 100, Willows Avenue, Cardiff, CF24 2SU Classification: Furniture - Repairing & Restoring Status: Inactive Positional Accuracy: Automatically positioned to the address | A12NE (W) | 548 | - | 321059 176561 |
| 152 | Contemporary Trade Directory Entries Name: 1st Choice Location: 100, Willows Avenue, Cardiff, CF24 2SU Classification: Door Manufacturers - Industrial Status: Inactive Positional Accuracy: Automatically positioned to the address | A12NE (W) | 548 | - | 321059 176561 |
| 153 | Contemporary Trade Directory Entries Name: A Plus L Location: Unit 5 Hunters Industrial Estate, Cardiff, South Glamorgan, CF24 5TH Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address | A12NE (W) | 576 | - | 321009 176464 |
| 153 | Contemporary Trade Directory Entries Name: J J Motors Cardiff Location: Unit 3, Seawall Road, Cardiff, CF24 5TH Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address | A12NE (W) | 586 | - | 321000 176477 |
| 153 | Contemporary Trade Directory Entries Name: Sealmasters Location: Unit 2, Seawall Road, Cardiff, CF24 5TH Classification: Seal & Joint Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address | A12NE (W) | 617 | - | 320966 176452 |
| 153 | Contemporary Trade Directory Entries Name: B S P Pneumatic Centre Location: 5, Seawall Road, Cardiff, South Glamorgan, CF24 5TH Classification: Hydraulic Equipment & Accessories - Sales & Service Status: Inactive Positional Accuracy: Manually positioned to the address or location | A12NE (W) | 617 | - | 320966 176452 |
| 153 | Contemporary Trade Directory Entries Name: Parfitt Tyres Ltd Location: 5, Seawall Road, CARDIFF, CF24 5TH Classification: Tyre Dealers Status: Active Positional Accuracy: Automatically positioned to the address | A12NE (W) | 617 | - | 320966 176452 |
| 153 | Contemporary Trade Directory Entries Name: Seawall M O T Ltd Location: Unit 2, Seawall Road, Cardiff, CF24 5TH Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address | A12NE (W) | 617 | - | 320966 176452 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 153 | Contemporary Trade Directory Entries Name: Garwill Engineering Ltd Location: Unit 5, Seawall Road, Cardiff, South Glamorgan, CF24 5TH Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address | A12NE (W) | 617 | - | 320966 176452 |
| 154 | Contemporary Trade Directory Entries Name: R H I Refractories Site Services Ltd Location: Cardiff, CF24 5TH Classification: Refractory Materials & Supplies Status: Active Positional Accuracy: Automatically positioned to the address | A12SE (W) | 628 | - | 320954 176343 |
| 154 | Contemporary Trade Directory Entries Name: Cardiff Wire Erosion & Engineering Location: 94, Seawall Road, Cardiff, CF24 5XB Classification: Precision Engineers Status: Active Positional Accuracy: Automatically positioned to the address | A12SE (W) | 651 | - | 320933 176323 |
| 154 | Contemporary Trade Directory Entries Name: Harsco Metals Location: Seawall Road, Cardiff, CF24 5TH Classification: Steel Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address | A12SE (W) | 651 | - | 320933 176323 |
| 154 | Contemporary Trade Directory Entries Name: Mepco Mouldings Ltd Location: Mepco House, 85, Seawall Road, Cardiff, CF24 5TH Classification: Plastic Products - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address | A12SE (W) | 651 | - | 320933 176323 |
| 154 | Contemporary Trade Directory Entries Name: C & G Accident Repair Location: Mepco House, 85, Seawall Road, Cardiff, CF24 5TH Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address | A12SE (W) | 651 | - | 320933 176323 |
| 155 | Contemporary Trade Directory Entries Name: National Engine Centre Review Location: Unit 16, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Engine Rebuilding & Reconditioning Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 647 | - | 321209 175863 |
| 155 | Contemporary Trade Directory Entries Name: Parts (Uk) Location: Unit 16, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Scrap Yards Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 647 | - | 321209 175863 |
| 155 | Contemporary Trade Directory Entries Name: Diggers Location: Unit 15, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 681 | - | 321184 175839 |
| 155 | Contemporary Trade Directory Entries Name: The Engine Shop Location: 16 Martin Rd, Tremorfa Ind Est, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Engine Rebuilding & Reconditioning Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A7NE (SW) | 696 | - | 321148 175846 |
| 156 | Contemporary Trade Directory Entries Name: D D Windows Location: 24, Mercia Road, Cardiff, CF24 2TF Classification: PVC-U Products - Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address | A12NE (NW) | 650 | - | 320998 176681 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 157 | Contemporary Trade Directory Entries Name: J & H Supplies Location: unit 2b Seawall Rd, Cardiff, South Glamorgan, CF24 5TH Classification: Fireplaces & Mantelpieces Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A12NE (W) | 655 | - | 320928 176448 |
| 157 | Contemporary Trade Directory Entries Name: Knight Fire & Security Products Ltd Location: 84, Seawall Road, Cardiff, CF24 5TH Classification: Plastics - Injection Moulding Status: Inactive Positional Accuracy: Automatically positioned to the address | A12NE (W) | 657 | - | 320925 176444 |
| 157 | Contemporary Trade Directory Entries Name: King David Tyres Ltd Location: Seawall Rd, Cardiff, South Glamorgan, CF24 5TH Classification: Tyre Dealers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A12NE (W) | 668 | - | 320914 176438 |
| 157 | Contemporary Trade Directory Entries Name: Gremer Chemicals Uk Ltd Location: Seawall Road, Cardiff, CF24 5TH Classification: Cleaning Materials & Equipment Status: Active Positional Accuracy: Automatically positioned to the address | A12NE (W) | 669 | - | 320916 176469 |
| 158 | Contemporary Trade Directory Entries Name: Generation Hire & Sale Location: Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Scaffolding & Work Platforms Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 664 | - | 321140 175895 |
| 159 | Contemporary Trade Directory Entries Name: South Western Print Finishers Location: 16a, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Print Finishers Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 669 | - | 321241 175815 |
| 159 | Contemporary Trade Directory Entries Name: A A 1 Location: Unit 15, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 677 | - | 321205 175829 |
| 160 | Contemporary Trade Directory Entries Name: Cardiff Bay Auto Centre Ltd Location: Unit 5 Seawall Road, Cardiff, South Glamorgan, CF24 5TH Classification: Mot Testing Centres Status: Active Positional Accuracy: Manually positioned to the road within the address or location | A12NW (W) | 700 | - | 320880 176410 |
| 160 | Contemporary Trade Directory Entries Name: Total Butler Location: Seawall Road, Cardiff, CF24 5TH Classification: Oil Fuel Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address | A12SW (W) | 706 | - | 320874 176380 |
| 160 | Contemporary Trade Directory Entries Name: Certas Energy Location: Seawall Road, Cardiff, CF24 5TH Classification: Oil Fuel Distributors Status: Active Positional Accuracy: Automatically positioned to the address | A12SW (W) | 706 | - | 320874 176380 |
| 160 | Contemporary Trade Directory Entries Name: Metalskills Location: 85, Seawall Road, Cardiff, CF24 5TH Classification: Gate Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address | A12SW (W) | 714 | - | 320866 176368 |
| 160 | Contemporary Trade Directory Entries Name: C J'S Accident Repair Location: 85, Seawall Road, Cardiff, CF24 5TH Classification: Car Body Repairs Status: Active Positional Accuracy: Automatically positioned to the address | A12SW (W) | 714 | - | 320866 176368 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 160 | Contemporary Trade Directory Entries Name: Philip Huntley Location: Seawall Road, Cardiff, CF24 5TH Classification: Fire Escapes & Evacuation Equipment Status: Inactive Positional Accuracy: Automatically positioned to the address | A12SW (W) | 723 | - | 320859 176348 |
| 160 | Contemporary Trade Directory Entries Name: Cardiff Engineering Location: 83, Seawall Road, Cardiff, CF24 5TH Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address | A12SW (W) | 726 | - | 320857 176327 |
| 160 | Contemporary Trade Directory Entries Name: Cardiff Engineering Co Ltd Location: 83, Seawall Road, Cardiff, CF24 5TH Classification: Engineering Services Status: Inactive Positional Accuracy: Automatically positioned to the address | A12SW (W) | 726 | - | 320857 176327 |
| 160 | Contemporary Trade Directory Entries Name: Car Care Body Shop Location: 85A Seawall Rd, Cardiff, South Glamorgan, CF24 5TH Classification: Car Body Repairs Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A12SW (W) | 734 | - | 320846 176374 |
| 160 | Contemporary Trade Directory Entries Name: Miss Lulu Location: 82, Seawall Road, Cardiff, CF24 5TH Classification: Bags, Belts & Accessories - Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address | A12SW (W) | 751 | - | 320830 176351 |
| 160 | Contemporary Trade Directory Entries Name: Z C C Garage Location: Mepco House, 85, Seawall Road, Cardiff, CF24 5TH Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address | A12SW (W) | 757 | - | 320823 176368 |
| 161 | Contemporary Trade Directory Entries Name: D M D Mechanical Engineering Ltd Location: Darby Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SB Classification: Mechanical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 739 | - | 321095 175835 |
| 162 | Contemporary Trade Directory Entries Name: 1st Choice Vehicle Dismantlers Location: Unit 12-13, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Car Breakers & Dismantlers Status: Active Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 743 | - | 321149 175788 |
| 162 | Contemporary Trade Directory Entries Name: It Works Location: Martin Rd, Tremorfa Ind Est, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Computer Recycling & Disposal Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A7NE (SW) | 774 | - | 321110 175777 |
| 163 | Contemporary Trade Directory Entries Name: Tesco Filling Station Location: Eastern Bay Road, Cardiff, South Glamorgan, CF24 2HP Classification: Petrol Filling Stations Status: Active Positional Accuracy: Manually positioned within the geographical locality | A18NE (N) | 763 | - | 321845 177107 |
| 164 | Contemporary Trade Directory Entries Name: Body & Soul Autoworks Location: Unit 3, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 799 | - | 321101 175753 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 164 | Contemporary Trade Directory Entries Name: 1st Choice Vehicles Location: Unit 12-13 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Mot Testing Centres Status: Inactive Positional Accuracy: Manually positioned within the geographical locality | A7NE (SW) | 804 | - | 321118 175734 |
| 164 | Contemporary Trade Directory Entries Name: C & B Car Repairs Location: Unit 1d, Martin Rd, Tremorfa Ind Est, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A7NE (SW) | 830 | - | 321082 175728 |
| 164 | Contemporary Trade Directory Entries Name: Bill Way & Co Ltd Location: 16 Martin Rd, Tremorfa Ind Est, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A7NE (SW) | 836 | - | 321080 175722 |
| 164 | Contemporary Trade Directory Entries Name: Marlee Metals & Skip Hire Ltd Location: Unit 17, Off Martin Road, Cardiff, South Glamorgan, CF24 2SD Classification: Scrap Metal Merchants Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location | A7NE (SW) | 837 | - | 321080 175721 |
| 164 | Contemporary Trade Directory Entries Name: The Panel Shop Location: Martin Road, Tremorfa Industrial Estate, Tremorfa, CARDIFF, CF24 5SD Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Automatically positioned to the address | A7SE (SW) | 843 | - | 321095 175703 |
| 164 | Contemporary Trade Directory Entries Name: Commercial Motors Location: Martin Rd, Tremorfa Ind Est, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Commercial Vehicle Dealers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality | A7NE (SW) | 857 | - | 321034 175732 |
| 165 | Contemporary Trade Directory Entries Name: B S P Sales Centre Location: Unit 5, Seawall Court, Seawall Road, CARDIFF, CF24 5PQ Classification: Pneumatic Systems & Equipment Status: Active Positional Accuracy: Automatically positioned to the address | A12NW (W) | 803 | - | 320779 176442 |
| 165 | Contemporary Trade Directory Entries Name: Conway Tolhurst Ltd Location: Seawall Road, Cardiff, CF24 5XE Classification: Sheet Metal Work Status: Inactive Positional Accuracy: Automatically positioned to the address | A12NW (W) | 805 | - | 320777 176441 |
| 165 | Contemporary Trade Directory Entries Name: Torque Motors Ltd Location: Seawall Road, Cardiff, CF24 5TH Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address | A12NW (W) | 813 | - | 320767 176412 |
| 165 | Contemporary Trade Directory Entries Name: Carrington Wire Location: Seawall Road, Cardiff, CF24 5TH Classification: Wire Products - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address | A12NW (W) | 822 | - | 320759 176418 |
| 166 | Contemporary Trade Directory Entries Name: Ace Tyre Services Location: Martin Road, Tremorfa Industrial Estate, Tremorfa, CARDIFF, CF24 5SD Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address | A7SE (SW) | 808 | - | 321147 175710 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 166 | Contemporary Trade Directory Entries Name: Ace Tyre Services Location: Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address | A7SE (SW) | 808 | - | 321147 175710 |
| 167 | Contemporary Trade Directory Entries Name: Glamorgan White Lining Location: Seawall Road, Cardiff, CF24 5TH Classification: Road Marking & Surfacing Equipment & Material Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address | A12SW (W) | 823 | - | 320758 176356 |
| 168 | Contemporary Trade Directory Entries Name: Industrial Training Services Uk Ltd Location: Unit 7, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Fork Lift Trucks Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 847 | - | 320998 175776 |
| 168 | Contemporary Trade Directory Entries Name: Cardiff Reclamation Ltd Location: Unit 7, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Reclamation Centres Status: Active Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 847 | - | 320998 175776 |
| 168 | Contemporary Trade Directory Entries Name: Hayward James Motor Co Ltd Location: Unit 1c, Martin Rd, Tremorfa Ind Est, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Car Dealers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality | A7NE (SW) | 848 | - | 320998 175776 |
| 168 | Contemporary Trade Directory Entries Name: Action Recycling Ltd Location: Unit 6, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Reclaiming - Waste Products Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 866 | - | 320989 175760 |
| 168 | Contemporary Trade Directory Entries Name: Presco (Uk) Ltd Location: Unit 4, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Catering Equipment Status: Inactive Positional Accuracy: Automatically positioned to the address | A7NE (SW) | 890 | - | 320977 175738 |
| 169 | Contemporary Trade Directory Entries Name: Mot'S 4 U Location: Unit 1c, Martin Rd, Tremorfa Ind Est, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Mot Testing Centres Status: Inactive Positional Accuracy: Manually positioned within the geographical locality | A7SE (SW) | 909 | - | 320979 175710 |
| 169 | Contemporary Trade Directory Entries Name: E-Pro Automotive Ltd Location: Unit 1, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Engine Rebuilding & Reconditioning Status: Active Positional Accuracy: Automatically positioned to the address | A7SE (SW) | 920 | - | 320969 175704 |
| 169 | Contemporary Trade Directory Entries Name: Celtic Chem-Dry Location: Unit 1, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address | A7SE (SW) | 924 | - | 320960 175707 |
| 169 | Contemporary Trade Directory Entries Name: Cars Cardiff Location: Unit 1, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Automatically positioned to the address | A7SE (SW) | 924 | - | 320960 175707 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 169 | Contemporary Trade Directory Entries Name: Celtic Chem-Dry Location: Unit 1, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address | A7SE (SW) | 924 | - | 320960 175707 |
| 169 | Contemporary Trade Directory Entries Name: Cardiff Van Centre Location: Unit 1, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, South Glamorgan, CF24 5SD Classification: Commercial Vehicle Dealers Status: Inactive Positional Accuracy: Manually positioned to the address or location | A7SE (SW) | 924 | - | 320960 175707 |
| 170 | Fuel Station Entries Name: Tesco Cardiff Pengam Extra Location: Eastern Bay Road , Ffurdd Pengham , Cardiff, Cardiff, CF24 2HP Brand: Tesco Extra Premises Type: Hypermarket Status: Open Positional Accuracy: Manually positioned to the address or location | A18NE (N) | 849 | - | 321625 177239 |
| 171 | Points of Interest - Commercial Services Name: Sims Metal UK Ltd Location: Rover Way, Cardiff, CF24 2RX Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A13SE (S) | 73 | 9 | 321601 176323 |
| 171 | Points of Interest - Commercial Services Name: Sims Metal Management Cardiff Location: Rover Way, Cardiff, CF24 2RX Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A13SE (S) | 73 | 9 | 321601 176323 |
| 171 | Points of Interest - Commercial Services Name: Sims Metal Management Location: Rover Way, Cardiff, CF24 2RX Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A13SE (S) | 73 | 9 | 321600 176322 |
| 171 | Points of Interest - Commercial Services Name: Scrap Yard Location: CF24 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A13SW (S) | 75 | 9 | 321577 176317 |
| 172 | Points of Interest - Commercial Services Name: Scrap Yard Location: CF24 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A13SW (W) | 143 | 9 | 321444 176348 |
| 172 | Points of Interest - Commercial Services Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location | A13SW (W) | 148 | 9 | 321440 176345 |
| 172 | Points of Interest - Commercial Services Name: Scrap Yard Location: CF24 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A13SW (SW) | 191 | 9 | 321438 176264 |
| 173 | Points of Interest - Commercial Services Name: J J Motors Cardiff Location: Unit 3, Seawall Road, Cardiff, CF24 5TH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A12NE (W) | 594 | 9 | 320992 176475 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 173 | Points of Interest - Commercial Services Name: Seawall M O T Ltd Location: Unit 2, Seawall Road, Cardiff, CF24 5TH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A12NE (W) | 617 | 9 | 320966 176452 |
| 173 | Points of Interest - Commercial Services Name: Seawall MOT Location: Unit 5, Seawall Road, Cardiff, CF24 5TH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A12NE (W) | 617 | 9 | 320966 176452 |
| 173 | Points of Interest - Commercial Services Name: Cardiff Bay Auto Centre Ltd Location: Unit 5 Seawall Road, Cardiff, CF24 5TH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A12NE (W) | 618 | 9 | 320965 176452 |
| 174 | Points of Interest - Commercial Services Name: Bill Way & Co Location: Unit 16 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A7NE (SW) | 647 | 9 | 321209 175863 |
| 174 | Points of Interest - Commercial Services Name: E D S Location: Unit 11 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A8NW (SW) | 679 | 9 | 321250 175799 |
| 174 | Points of Interest - Commercial Services Name: Silverdell Ltd Location: Unit 11 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A8NW (SW) | 679 | 9 | 321250 175799 |
| 174 | Points of Interest - Commercial Services Name: Silverdell Asbestos Removal Plc Location: Unit 11 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A8NW (SW) | 679 | 9 | 321250 175799 |
| 174 | Points of Interest - Commercial Services Name: Silverdell Ltd Location: Unit 11 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A8NW (SW) | 680 | 9 | 321249 175798 |
| 174 | Points of Interest - Commercial Services Name: Diggers Vehicle Dismantlers Location: Unit 15 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A7NE (SW) | 682 | 9 | 321183 175838 |
| 175 | Points of Interest - Commercial Services Name: Z C C Garage Location: Mepco House 85, Seawall Road, Cardiff, CF24 5TH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A12SE (W) | 651 | 9 | 320933 176322 |
| 175 | Points of Interest - Commercial Services Name: Metal Skills Location: 85 Seawall Road, Cardiff, CF24 5TH Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location | A12SW (W) | 714 | 9 | 320866 176368 |
| 175 | Points of Interest - Commercial Services Name: Metalskills Wrought Ironwork Location: 85 Seawall Road, Cardiff, CF24 5TH Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location | A12SW (W) | 714 | 9 | 320866 176368 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 175 | Points of Interest - Commercial Services Name: Car Care Body Shop Location: 85 Seawall Road, Cardiff, CF24 5TH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A12SW (W) | 714 | 9 | 320866 176368 |
| 175 | Points of Interest - Commercial Services Name: C J's Accident Repair Location: 85 Seawall Road, Cardiff, CF24 5TH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A12SW (W) | 715 | 9 | 320866 176367 |
| 176 | Points of Interest - Commercial Services Name: E-pro Automotive Location: Unit 1 Darby Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A7NE (SW) | 739 | 9 | 321095 175835 |
| 176 | Points of Interest - Commercial Services Name: B & R Garages Location: Unit 1A Darby Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A7NE (SW) | 739 | 9 | 321095 175835 |
| 176 | Points of Interest - Commercial Services Name: 1st Choice Vehicles Location: Unit 12-13 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A7NE (SW) | 744 | 9 | 321148 175787 |
| 176 | Points of Interest - Commercial Services Name: 1st Choice Vehicle Dismantlers Location: Unit 12-13 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A7NE (SW) | 744 | 9 | 321148 175787 |
| 176 | Points of Interest - Commercial Services Name: National Engine Centre Ltd Location: Unit 1 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A7NE (SW) | 760 | 9 | 321089 175812 |
| 177 | Points of Interest - Commercial Services Name: Torque Motors Ltd Location: Seawall Road, Cardiff, CF24 5TH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A12NW (W) | 813 | 9 | 320767 176411 |
| 178 | Points of Interest - Commercial Services Name: Scrap Yard Location: CF24 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A7NE (SW) | 827 | 9 | 321102 175717 |
| 178 | Points of Interest - Commercial Services Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location | A7SE (SW) | 831 | 9 | 321101 175713 |
| 178 | Points of Interest - Commercial Services Name: Panel Shop Location: Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location | A7SE (SW) | 843 | 9 | 321095 175703 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 179 | Points of Interest - Commercial Services Name: Car Wash Location: Ffordd Pengam, Cardiff, CF24 2HP Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location | A18NE (N) | 849 | 9 | 321625 177239 |
| 179 | Points of Interest - Commercial Services Name: Tesco Cardiff Pengam Extra Location: Ffordd Pengam, Cardiff, CF24 2HP Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location | A18NE (N) | 858 | 9 | 321612 177249 |
| 180 | Points of Interest - Commercial Services Name: Action Recycling Ltd Location: Unit 6 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A7NE (SW) | 866 | 9 | 320989 175760 |
| 180 | Points of Interest - Commercial Services Name: Action Recycling Ltd Location: Unit 6 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A7NE (SW) | 866 | 9 | 320989 175760 |
| 180 | Points of Interest - Commercial Services Name: Body & Soul Autoworks Location: Unit 3 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A7NE (SW) | 902 | 9 | 320965 175733 |
| 180 | Points of Interest - Commercial Services Name: Itel Supplies Ltd Location: Unit 2 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A7SE (SW) | 914 | 9 | 320965 175715 |
| 180 | Points of Interest - Commercial Services Name: C & B Car Repair Location: Unit 1c Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A7SE (SW) | 924 | 9 | 320960 175707 |
| 180 | Points of Interest - Commercial Services Name: Cardiff MOT Centre Location: Unit 1c Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A7SE (SW) | 924 | 9 | 320960 175707 |
| 180 | Points of Interest - Commercial Services Name: E-pro Automotive Ltd Location: Unit 1 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location | A7SE (SW) | 925 | 9 | 320960 175706 |
| 181 | Points of Interest - Commercial Services Name: Shield Environmental Services Ltd Location: Unit 11 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location | A7SE (SW) | 899 | 9 | 321152 175602 |
| 182 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A13NW (NW) | 111 | 9 | 321518 176484 |
| 182 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A13NW (NW) | 114 | 9 | 321513 176484 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 183 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13NW (W) | 168 | 9 | 321423 176452 |
| 184 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A13NW (N) | 205 | 9 | 321511 176584 |
| 184 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location | A13NW (N) | 221 | 9 | 321496 176596 |
| 184 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13NW (NW) | 267 | 9 | 321453 176626 |
| 184 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13NW (NW) | 271 | 9 | 321458 176633 |
| 185 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13NW (W) | 220 | 9 | 321367 176445 |
| 185 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13NW (W) | 227 | 9 | 321357 176433 |
| 185 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13NW (W) | 244 | 9 | 321336 176393 |
| 185 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location | A13NW (NW) | 251 | 9 | 321348 176488 |
| 185 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A13NW (NW) | 253 | 9 | 321365 176525 |
| 185 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13SW (W) | 262 | 9 | 321319 176380 |
| 185 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A13NW (W) | 268 | 9 | 321323 176466 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 186 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13SW (W) | 244 | 9 | 321337 176373 |
| 186 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A13SW (W) | 267 | 9 | 321315 176362 |
| 187 | Points of Interest - Manufacturing and Production Name: Shaft Location: CF24 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location | A13NE (NE) | 321 | 9 | 321771 176649 |
| 188 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A12NE (W) | 376 | 9 | 321205 176411 |
| 189 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A13SW (SW) | 452 | 9 | 321260 176073 |
| 190 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (SW) | 502 | 9 | 321337 175953 |
| 190 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (SW) | 503 | 9 | 321376 175933 |
| 190 | Points of Interest - Manufacturing and Production Name: Tanks Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A8NW (SW) | 504 | 9 | 321370 175934 |
| 190 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (SW) | 568 | 9 | 321307 175894 |
| 190 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (SW) | 569 | 9 | 321347 175873 |
| 191 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SE (W) | 506 | 9 | 321086 176282 |
| 192 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (S) | 517 | 9 | 321454 175891 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 192 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (S) | 529 | 9 | 321493 175870 |
| 192 | Points of Interest - Manufacturing and Production Name: Tanks Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A8NW (S) | 580 | 9 | 321429 175832 |
| 192 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (S) | 581 | 9 | 321426 175832 |
| 192 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (S) | 592 | 9 | 321464 175812 |
| 192 | Points of Interest - Manufacturing and Production Name: Cardiff Waste Water Treatment - Sewage Sludge Digestion (DECC) Location: Tide Fields Road, Splott, Cardiff, CF24 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location | A8NW (S) | 599 | 9 | 321361 175835 |
| 192 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (S) | 642 | 9 | 321373 175785 |
| 192 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (S) | 655 | 9 | 321434 175754 |
| 193 | Points of Interest - Manufacturing and Production Name: Tanks Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A12SE (W) | 535 | 9 | 321045 176377 |
| 194 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SE (W) | 568 | 9 | 321012 176391 |
| 194 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SE (W) | 636 | 9 | 320947 176335 |
| 194 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SE (W) | 636 | 9 | 320947 176336 |
| 194 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A12NE (W) | 640 | 9 | 320940 176395 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 194 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A12SE (W) | 654 | 9 | 320926 176382 |
| 194 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A12SW (W) | 689 | 9 | 320891 176387 |
| 194 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A12SW (W) | 691 | 9 | 320889 176384 |
| 194 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A12SW (W) | 691 | 9 | 320889 176390 |
| 194 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A12SW (W) | 695 | 9 | 320885 176386 |
| 194 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 713 | 9 | 320868 176362 |
| 194 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 713 | 9 | 320868 176362 |
| 194 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A12SW (W) | 714 | 9 | 320874 176289 |
| 195 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SE (SW) | 606 | 9 | 321041 176115 |
| 195 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SE (SW) | 676 | 9 | 320969 176103 |
| 196 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NE (W) | 611 | 9 | 320972 176452 |
| 196 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NE (W) | 611 | 9 | 320972 176452 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 196 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NE (W) | 643 | 9 | 320938 176431 |
| 197 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A7NE (SW) | 650 | 9 | 321034 176040 |
| 197 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A7NE (SW) | 695 | 9 | 321025 175974 |
| 197 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A7NE (SW) | 700 | 9 | 321012 175984 |
| 198 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8NW (S) | 686 | 9 | 321353 175745 |
| 198 | Points of Interest - Manufacturing and Production Name: Tanks Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A8NW (S) | 695 | 9 | 321361 175733 |
| 198 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8SW (S) | 746 | 9 | 321325 175691 |
| 198 | Points of Interest - Manufacturing and Production Name: Tanks Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A8SW (S) | 756 | 9 | 321331 175678 |
| 198 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8SW (S) | 758 | 9 | 321380 175661 |
| 198 | Points of Interest - Manufacturing and Production Name: Shaft Location: CF24 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location | A8SW (SW) | 758 | 9 | 321263 175704 |
| 198 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8SW (S) | 788 | 9 | 321307 175653 |
| 198 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8SW (S) | 802 | 9 | 321364 175620 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 199 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A8SW (S) | 699 | 9 | 321413 175714 |
| 200 | Points of Interest - Manufacturing and Production Name: Tanks Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 704 | 9 | 320876 176389 |
| 200 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 723 | 9 | 320858 176432 |
| 200 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 723 | 9 | 320858 176432 |
| 200 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 755 | 9 | 320825 176383 |
| 200 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 755 | 9 | 320825 176383 |
| 200 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 757 | 9 | 320826 176452 |
| 200 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 757 | 9 | 320826 176453 |
| 201 | Points of Interest - Manufacturing and Production Name: Tanks Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 717 | 9 | 320871 176290 |
| 201 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location | A12SW (W) | 718 | 9 | 320870 176286 |
| 201 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 748 | 9 | 320835 176324 |
| 201 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 748 | 9 | 320835 176324 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 202 | Points of Interest - Manufacturing and Production Name: Ready-Mixed Concrete Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A7NE (SW) | 759 | 9 | 321047 175852 |
| 203 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location | A12NW (W) | 784 | 9 | 320796 176392 |
| 203 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 786 | 9 | 320794 176394 |
| 203 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 800 | 9 | 320781 176350 |
| 203 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 807 | 9 | 320775 176439 |
| 203 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 820 | 9 | 320761 176417 |
| 203 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 820 | 9 | 320761 176417 |
| 203 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12NW (W) | 845 | 9 | 320738 176458 |
| 203 | Points of Interest - Manufacturing and Production Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 855 | 9 | 320725 176387 |
| 203 | Points of Interest - Manufacturing and Production Name: Factory Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 855 | 9 | 320725 176387 |
| 204 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A7NE (SW) | 790 | 9 | 320923 175953 |
| 204 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A7NE (SW) | 790 | 9 | 320923 175954 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 204 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A7NE (SW) | 828 | 9 | 320927 175884 |
| 204 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A7NW (SW) | 847 | 9 | 320858 175949 |
| 205 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (SW) | 794 | 9 | 320848 176084 |
| 206 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 825 | 9 | 320756 176349 |
| 206 | Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 894 | 9 | 320691 176303 |
| 206 | Points of Interest - Manufacturing and Production Name: Works Location: CF24 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location | A12SW (W) | 900 | 9 | 320685 176302 |
| 207 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A7SE (SW) | 873 | 9 | 321159 175627 |
| 207 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A7SE (SW) | 880 | 9 | 321141 175630 |
| 207 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A7SE (SW) | 916 | 9 | 321120 175600 |
| 208 | Points of Interest - Manufacturing and Production Name: Tremorfa Industrial Estate Location: CF24 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location | A7NE (SW) | 889 | 9 | 320986 175731 |
| 209 | Points of Interest - Manufacturing and Production Name: Tank Location: CF24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location | A7NW (SW) | 922 | 9 | 320890 175781 |
| 210 | Points of Interest - Public Infrastructure Name: Cleanaway Ltd Location: Rover Way, Cardiff, CF24 5UX Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location | A13NW (W) | 121 | 9 | 321459 176392 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 211 | Points of Interest - Public Infrastructure Name: Slag Heap Location: CF24 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location | A13SW (SW) | 308 | 9 | 321372 176165 |
| 212 | Points of Interest - Public Infrastructure Name: Outfall Location: CF24 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location | A14NW (NE) | 400 | 9 | 321946 176552 |
| 213 | Points of Interest - Public Infrastructure Name: Cleanaway Ltd Location: Rover Way, Cardiff, CF24 2RX Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location | A12SE (SW) | 497 | 9 | 321165 176118 |
| 214 | Points of Interest - Public Infrastructure Name: Tesco Cardiff Pengam Extra Location: Ffordd Pengam, Cardiff, CF24 2HP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location | A18NE (N) | 849 | 9 | 321625 177239 |
| 215 | Points of Interest - Public Infrastructure Name: Action Recycling Ltd Location: Unit 6 Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff, CF24 5SD Category: Infrastructure and Facilities Class Code: Recycling Centres Positional Accuracy: Positioned to address or location | A7NE (SW) | 866 | 9 | 320989 175760 |
| 216 | Points of Interest - Recreational and Environmental Name: Splott Park Location: South Park Road, Cardiff, South Glamorgan, CF24 2LU Category: Recreational Class Code: Municipal Parks And Gardens Positional Accuracy: Positioned to address or location | A17SW (NW) | 977 | 9 | 320681 176773 |

| Map ID | Details | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 217 | Ramsar Sites Name: Severn Estuary (Wales) Multiple Areas: Y Total Area (m2): 68891898.01 Source: Natural Resources Wales Reference: UK11081 Designation Date: 13th July 1995 | A13NE (E) | 301 | 2 | 321865 176486 |
| 218 | Sites of Special Scientific Interest Name: Severn Estuary Multiple Areas: Y Total Area (m2): 68537733.72 Source: Natural Resources Wales Reference: 46133wgx Designation Details: Biological Designation Date: 1st January 1976 Date Type: Notified | A13NE (E) | 301 | 2 | 321865 176486 |
| 219 | Special Areas of Conservation Name: Severn Estuary (Wales) Multiple Areas: N Total Area (m2): 267698780.64 Source: Natural Resources Wales Reference: UK0013030 Status: Designated | A13NE (E) | 301 | 2 | 321865 176486 |
| 220 | Special Protection Areas Name: Severn Estuary (Wales) Multiple Areas: Y Total Area (m2): 68891897.65 Source: Natural Resources Wales Reference: UK9015022 Designation Date: 13th July 1995 | A13NE (E) | 301 | 2 | 321865 176486 |

| Agency & Hydrological | Version | Update Cycle |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------------------|
| Contaminated Land Register Entries and Notices Vale Of Glamorgan County Borough Council - Environmental Health Department Newport City Council - Public Protection and Environmental Services Cardiff Council - Pollution Control Division | April 2014 January 2015 October 2017 | Annual Rolling Update Annual Rolling Update Annual Rolling Update |
| Discharge Consents Environment Agency - Welsh Region Natural Resources Wales | August 2014 October 2018 | Quarterly Quarterly |
| Enforcement and Prohibition Notices Environment Agency - Welsh Region | March 2013 | Annual Rolling Update |
| Integrated Pollution Controls Environment Agency - Welsh Region | October 2008 | Variable |
| Integrated Pollution Prevention And Control Environment Agency - Welsh Region Natural Resources Wales | October 2018 October 2018 | Quarterly Quarterly |
| Local Authority Integrated Pollution Prevention And Control Newport City Council - Public Protection and Environmental Services Vale Of Glamorgan County Borough Council - Environmental Health Department Cardiff Council - Pollution Control Division | June 2014 June 2014 March 2016 | Variable Variable Variable |
| Local Authority Pollution Prevention and Controls Newport City Council - Public Protection and Environmental Services Vale Of Glamorgan County Borough Council - Environmental Health Department Cardiff Council - Pollution Control Division | June 2014 June 2014 March 2016 | Annual Rolling Update Annual Rolling Update Annual Rolling Update |
| Local Authority Pollution Prevention and Control Enforcements Newport City Council - Public Protection and Environmental Services Vale Of Glamorgan County Borough Council - Environmental Health Department Cardiff Council - Pollution Control Division | June 2014 June 2014 March 2016 | Variable Variable Variable |
| Nearest Surface Water Feature Ordnance Survey | September 2017 | |
| Pollution Incidents to Controlled Waters Environment Agency - Welsh Region | December 1998 | Not Applicable |
| Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region Natural Resources Wales | March 2013 March 2013 | Annual Rolling Update Annual Rolling Update |
| Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region Natural Resources Wales | March 2013 March 2013 | Annual Rolling Update Annual Rolling Update |
| Registered Radioactive Substances Natural Resources Wales Environment Agency - Welsh Region | January 2015 January 2015 | Annually |
| River Quality Environment Agency - Head Office | November 2001 | Not Applicable |
| Substantiated Pollution Incident Register Environment Agency Wales - South East Area Natural Resources Wales | October 2018 October 2018 | Quarterly Quarterly |
| Water Abstractions Environment Agency - Welsh Region Natural Resources Wales | October 2018 October 2018 | Quarterly Quarterly |
| Water Industry Act Referrals Environment Agency - Welsh Region Natural Resources Wales | October 2017 October 2018 | Quarterly Quarterly |
| Groundwater Vulnerability Environment Agency - Head Office | April 2015 | Not Applicable |

| Agency & Hydrological | Version | Update Cycle |
|-----------------------------------------------------------------------------------------------------------------------|---------------|-----------------------|
| Drift Deposits Environment Agency - Head Office | January 1999 | Not Applicable |
| Bedrock Aquifer Designations Natural Resources Wales | January 2018 | Annually |
| Superficial Aquifer Designations Natural Resources Wales | January 2018 | Annually |
| Source Protection Zones Natural Resources Wales | November 2016 | Annual Rolling Update |
| Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales | February 2018 | Quarterly |
| Flooding from Rivers or Sea without Defences Natural Resources Wales | February 2018 | Quarterly |
| Areas Benefiting from Flood Defences Natural Resources Wales | February 2018 | Quarterly |
| Flood Water Storage Areas Natural Resources Wales | February 2018 | Quarterly |
| Flood Defences Natural Resources Wales | November 2018 | Quarterly |
| OS Water Network Lines Ordnance Survey | October 2018 | Quarterly |
| Surface Water 1 in 30 year Flood Extent Natural Resources Wales | October 2013 | Annually |
| Surface Water 1 in 100 year Flood Extent Natural Resources Wales | October 2013 | Annually |
| Surface Water 1 in 1000 year Flood Extent Natural Resources Wales | October 2013 | Annually |
| Surface Water Suitability Natural Resources Wales | October 2013 | Annually |
| BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service | May 2013 | Annually |

| Waste | Version | Update Cycle |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------|
| BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service | June 1996 | Not Applicable |
| Historical Landfill Sites Natural Resources Wales | July 2017 | Quarterly |
| Integrated Pollution Control Registered Waste Sites Environment Agency - Welsh Region | October 2008 | Not Applicable |
| Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency Wales - South East Area Natural Resources Wales | July 2018 July 2018 | Quarterly Quarterly |
| Licensed Waste Management Facilities (Locations) Environment Agency Wales - South East Area Natural Resources Wales | October 2018 October 2018 | Quarterly Quarterly |
| Local Authority Landfill Coverage Cardiff Council Newport City Council Vale Of Glamorgan County Borough Council | May 2000 May 2000 May 2000 | Not Applicable Not Applicable Not Applicable |
| Local Authority Recorded Landfill Sites Cardiff Council Newport City Council Vale Of Glamorgan County Borough Council | May 2000 May 2000 May 2000 | Not Applicable Not Applicable Not Applicable |
| Potentially Infilled Land (Non-Water) Landmark Information Group Limited | December 1999 | Not Applicable |
| Potentially Infilled Land (Water) Landmark Information Group Limited | December 1999 | Not Applicable |
| Registered Landfill Sites Environment Agency Wales - South East Area | March 2003 | Not Applicable |
| Registered Waste Transfer Sites Environment Agency Wales - South East Area | March 2003 | Not Applicable |
| Registered Waste Treatment or Disposal Sites Environment Agency Wales - South East Area | March 2003 | Not Applicable |
| Hazardous Substances | Version | Update Cycle |
| Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive | April 2018 | Bi-Annually |
| Explosive Sites Health and Safety Executive | March 2017 | Variable |
| Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive | November 2000 | Not Applicable |
| Planning Hazardous Substance Enforcements Vale Of Glamorgan County Borough Council - Planning Department Cardiff Council - Regulatory Services Newport City Council - Planning Department | January 2016 October 2015 October 2015 | Variable Variable Variable |
| Planning Hazardous Substance Consents Vale Of Glamorgan County Borough Council - Planning Department Cardiff Council - Regulatory Services Newport City Council - Planning Department | January 2016 October 2015 October 2015 | Variable Variable Variable |

| Geological | Version | Update Cycle |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------|
| BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service | January 2009 | Not Applicable |
| BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service | October 2015 | Annually |
| BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service | November 2018 | Bi-Annually |
| BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service | October 2015 | Annually |
| BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service | October 2015 | Annually |
| CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) | August 2011 | Not Applicable |
| Coal Mining Affected Areas The Coal Authority - Property Searches | March 2014 | Annual Rolling Update |
| Mining Instability Ove Arup & Partners | October 2000 | Not Applicable |
| Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service | May 2015 | Not Applicable |
| Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service | June 2015 | Annually |
| Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service | June 2015 | Annually |
| Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service | June 2015 | Annually |
| Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service | June 2015 | Annually |
| Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service | June 2015 | Annually |
| Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service | June 2015 | Annually |
| Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service | July 2011 | Annually |
| Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service | July 2011 | Annually |

| Industrial Land Use | Version | Update Cycle |
|----------------------------------------------------------------------|----------------|--------------|
| Contemporary Trade Directory Entries Thomson Directories | November 2018 | Quarterly |
| Fuel Station Entries Experian Catalist | November 2018 | Quarterly |
| Gas Pipelines National Grid | July 2014 | |
| Points of Interest - Commercial Services PointX | September 2018 | Quarterly |
| Points of Interest - Education and Health PointX | September 2018 | Quarterly |
| Points of Interest - Manufacturing and Production PointX | September 2018 | Quarterly |
| Points of Interest - Public Infrastructure PointX | September 2018 | Quarterly |
| Points of Interest - Recreational and Environmental PointX | September 2018 | Quarterly |
| Underground Electrical Cables National Grid | December 2015 | |

| Sensitive Land Use | Version | Update Cycle |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|
| Ancient Woodland Natural Resources Wales | August 2018 | Bi-Annually |
| Areas of Adopted Green Belt Cardiff Council Newport City Council | August 2018 August 2018 | As notified As notified |
| Areas of Unadopted Green Belt Cardiff Council Newport City Council | August 2018 August 2018 | As notified As notified |
| Areas of Outstanding Natural Beauty Natural Resources Wales | August 2018 | Bi-Annually |
| Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside) | January 2017 | |
| Forest Parks Forestry Commission | April 1997 | Not Applicable |
| Local Nature Reserves Cardiff Council Newport City Council Vale Of Glamorgan County Borough Council | August 2018 August 2018 August 2018 | Bi-Annually Bi-Annually Bi-Annually |
| Marine Nature Reserves Natural Resources Wales | August 2018 | Bi-Annually |
| National Nature Reserves Natural Resources Wales | August 2018 | Bi-Annually |
| National Parks Natural Resources Wales | August 2018 | Annually |
| Nitrate Vulnerable Zones Natural Resources Wales The National Assembly for Wales - GI Services (Department of Planning & Countryside) | July 2017 October 2005 | Bi-Annually |
| Ramsar Sites Natural Resources Wales | February 2018 | Bi-Annually |
| Sites of Special Scientific Interest Natural Resources Wales | February 2018 | Bi-Annually |
| Special Areas of Conservation Natural Resources Wales | August 2018 | Bi-Annually |
| Special Protection Areas Natural Resources Wales | August 2018 | Bi-Annually |

A selection of organisations who provide data within this report

| Data Supplier | Data Supplier Logo |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ordnance Survey |  |
| Environment Agency |  |
| Scottish Environment Protection Agency |  |
| The Coal Authority |  |
| British Geological Survey |  British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL |
| Centre for Ecology and Hydrology |  Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL |
| Natural Resources Wales |  |
| Scottish Natural Heritage |  |
| Natural England |  |
| Public Health England |  |
| Ove Arup |  |
| Peter Brett Associates |  |

| Contact | Name and Address | Contact Details |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1 | British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG | Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk |
| 2 | Natural Resources Wales Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP | Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk |
| 3 | Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY | Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk |
| 4 | Cardiff Council - Pollution Control Division Regulatory Services, City Hall, Cardiff, Mid Glamorgan, CF10 3ND | Telephone: 029 20872000 Fax: 01222 873212 Website: www.cardiff.gov.uk |
| 5 | Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS | Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk |
| 6 | Cardiff Council County Hall, Atlantic Wharf, Cardiff, Mid Glamorgan, CF1 5UW | Telephone: 029 2087 2000 Fax: 029 2087 3212 Website: www.cardiff.gov.uk |
| 7 | Health and Safety Executive 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS | Website: www.hse.gov.uk |
| 8 | Cardiff Council - Regulatory Services Room 158, City Hall, Cardiff, Mid Glamorgan, CF10 3ND | Telephone: 029 20872429 Fax: 029 2087 2597 Website: www.cardiff.gov.uk |
| 9 | PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY | Website: www.pointx.co.uk |
| - | Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ | Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org |
| - | Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD | Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk |

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

ANNEX A
Envirocheck Report

Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



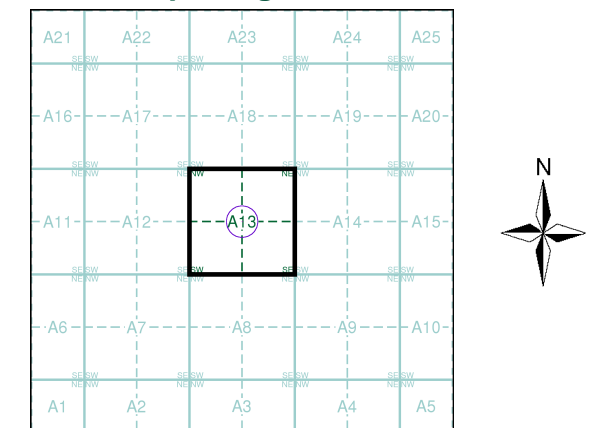
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

| Mapping Type | Scale | Date | Pg |
|------------------------------------------|---------|-------------|----|
| Glamorganshire | 1:2,500 | 1880 | 2 |
| Glamorganshire | 1:2,500 | 1901 | 3 |
| Glamorganshire | 1:2,500 | 1919 | 4 |
| Glamorganshire | 1:2,500 | 1942 | 5 |
| Ordnance Survey Plan | 1:2,500 | 1957 | 6 |
| Ordnance Survey Plan | 1:1,250 | 1957 | 7 |
| Ordnance Survey Plan | 1:1,250 | 1966 - 1969 | 8 |
| Ordnance Survey Plan | 1:2,500 | 1970 | 9 |
| Supply of Unpublished Survey Information | 1:1,250 | 1973 | 10 |
| Additional SIMs | 1:1,250 | 1977 - 1988 | 11 |
| Additional SIMs | 1:1,250 | 1987 - 1988 | 12 |
| Large-Scale National Grid Data | 1:1,250 | 1992 | 13 |
| Large-Scale National Grid Data | 1:1,250 | 1993 - 1995 | 14 |
| Large-Scale National Grid Data | 1:1,250 | 1994 | 15 |
| Historical Aerial Photography | 1:2,500 | 2009 | 16 |

Historical Map - Segment A13



Order Details

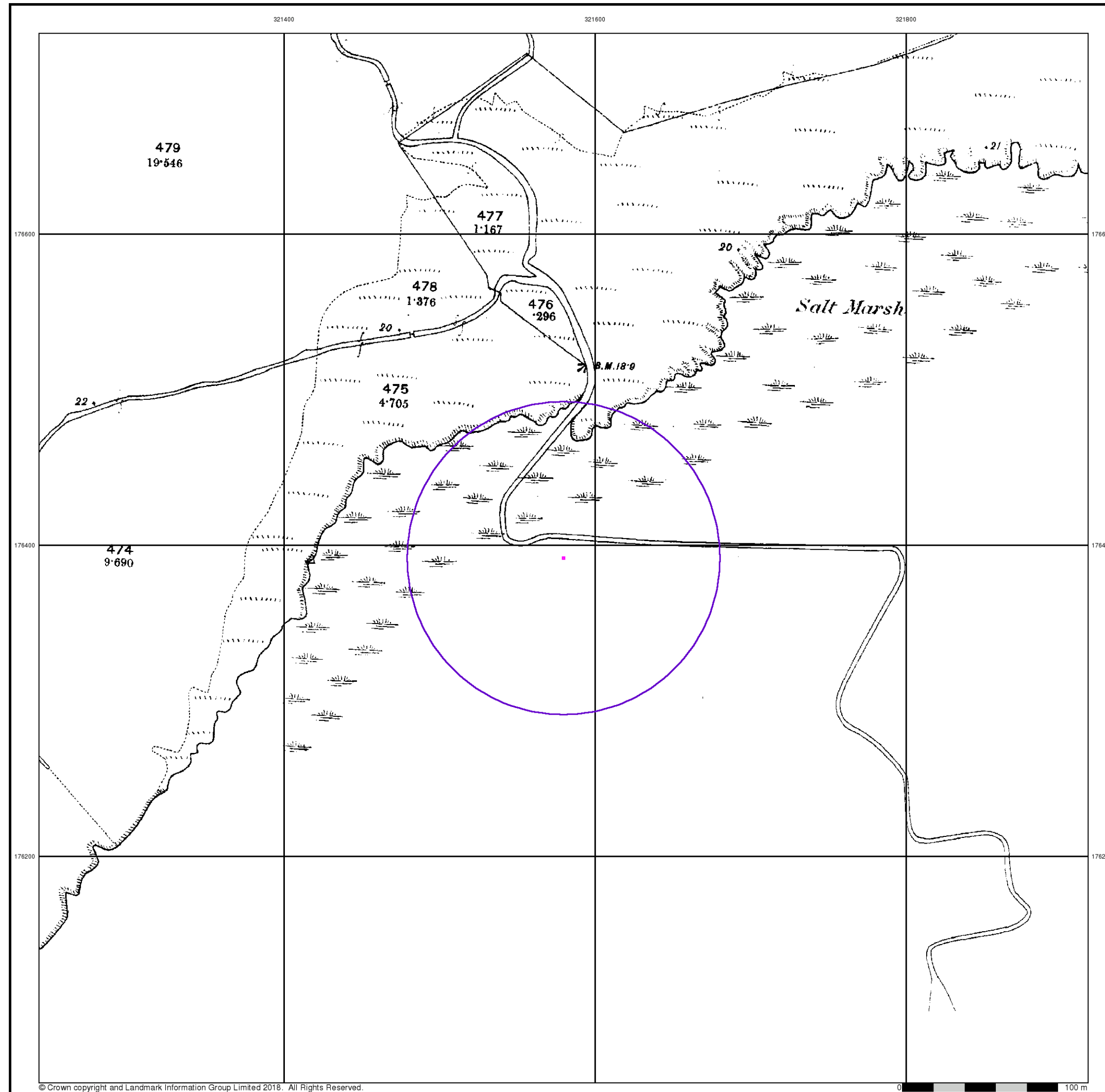
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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



© Crown copyright and Landmark Information Group Limited 2018. All Rights Reserved.



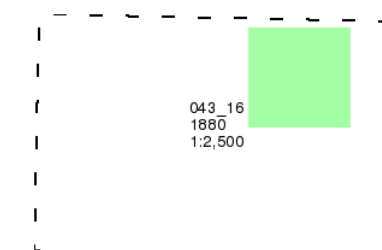
Glamorganshire

Published 1880

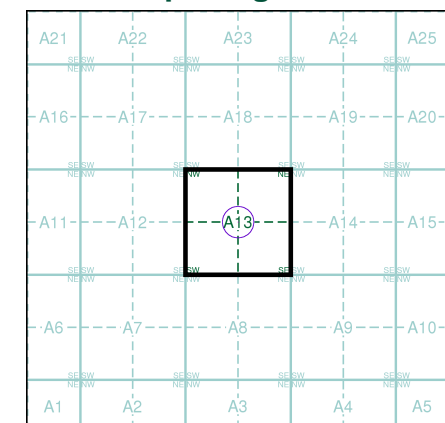
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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



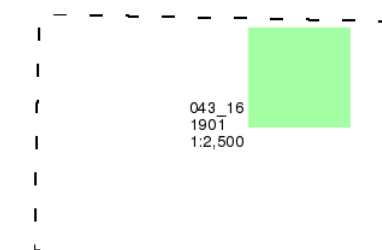
Glamorganshire

Published 1901

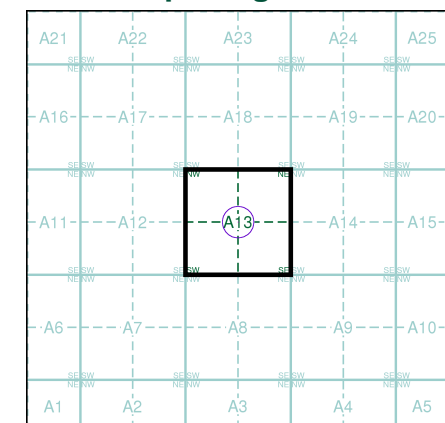
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

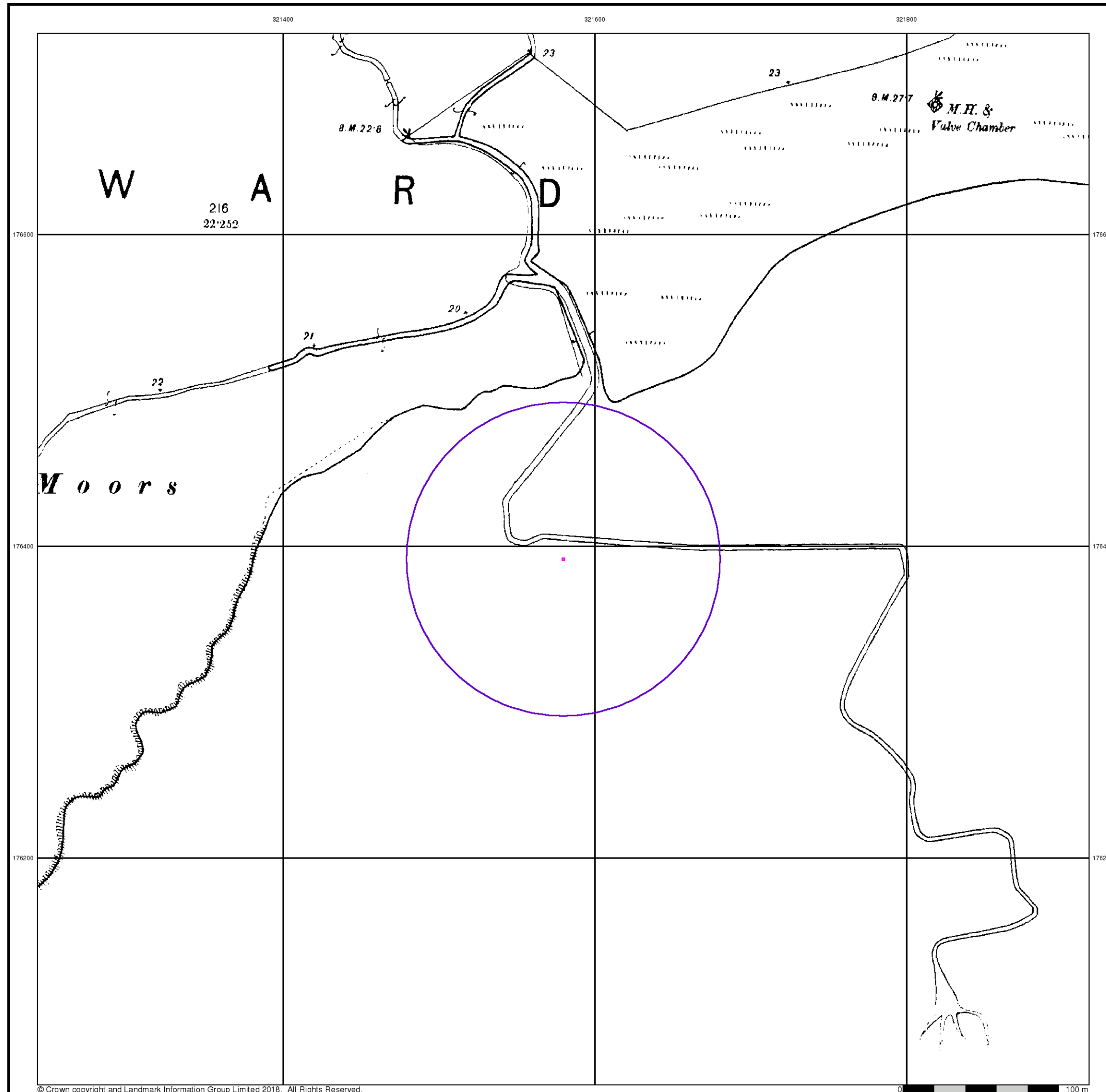
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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





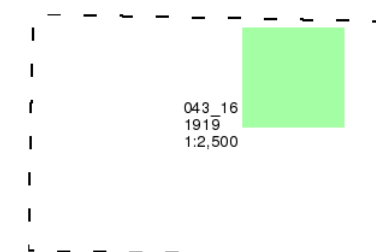
Glamorganshire

Published 1919

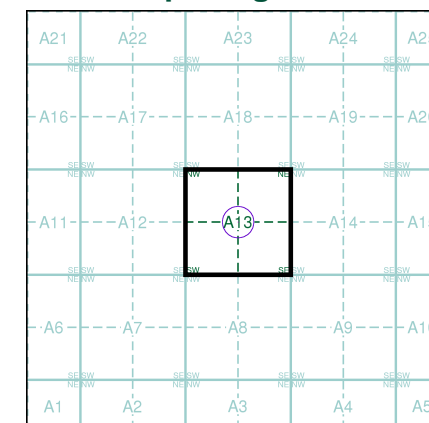
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

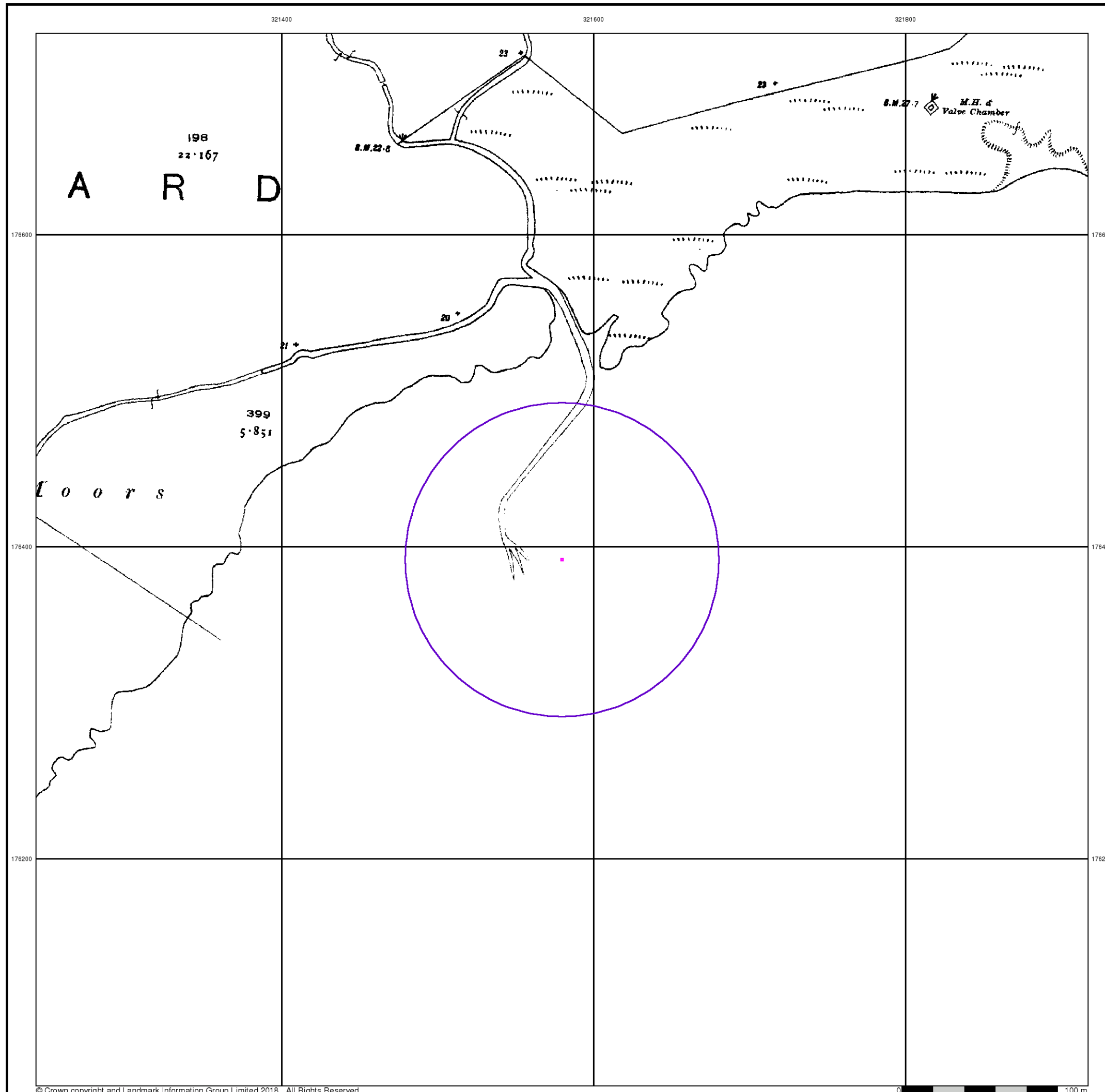
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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





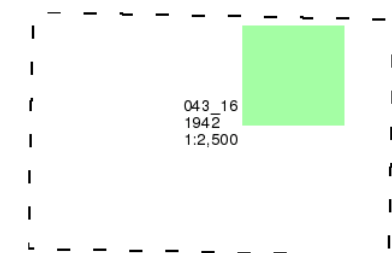
Glamorganshire

Published 1942

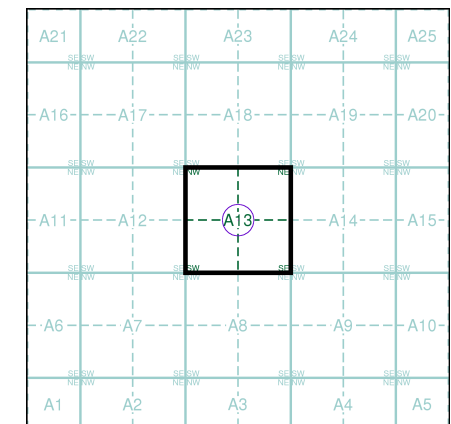
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

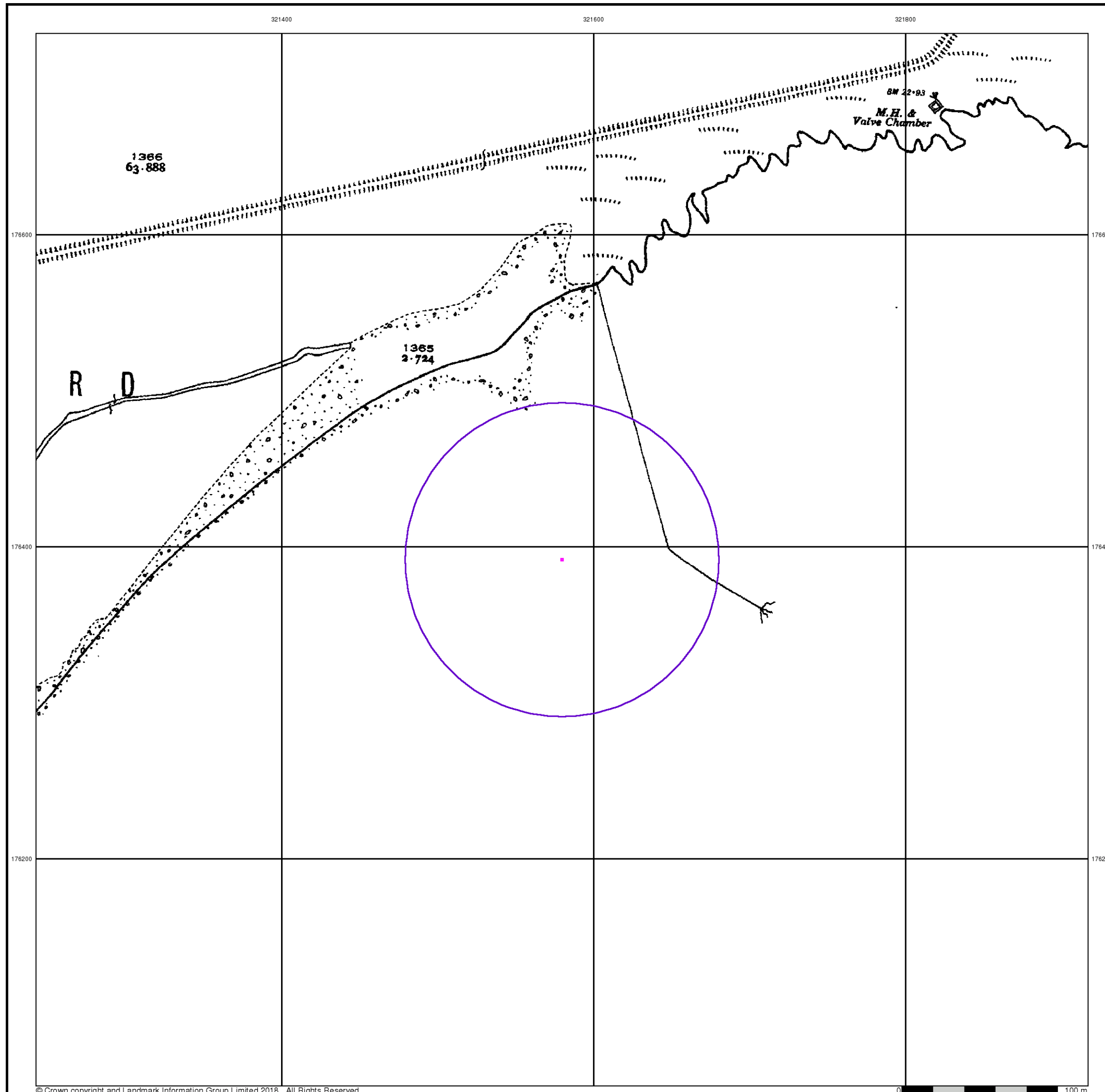
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

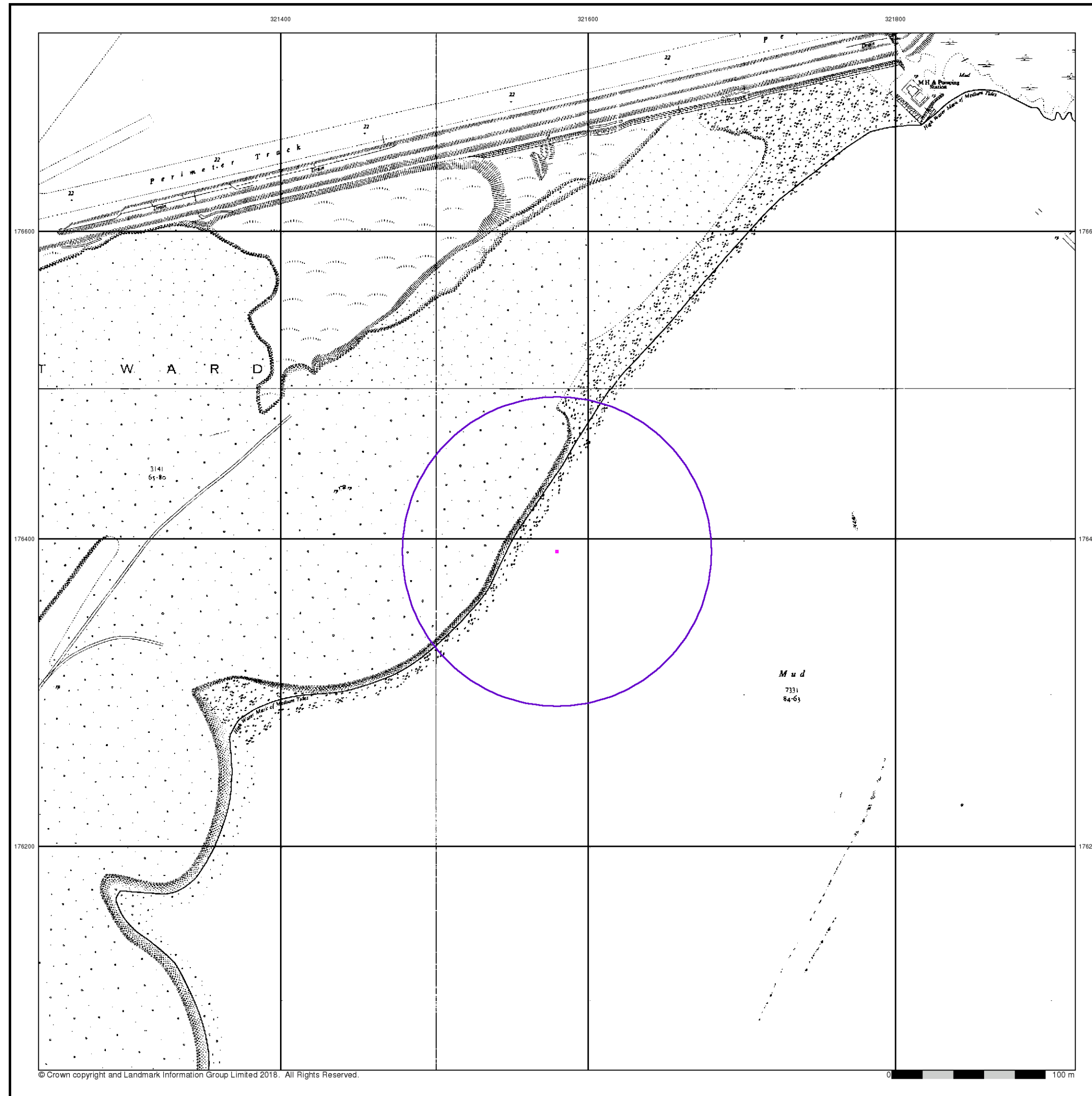
Site Details

Site at 321570, 176410



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





© Crown copyright and Landmark Information Group Limited 2018. All Rights Reserved.

0 100 m



terrafirma

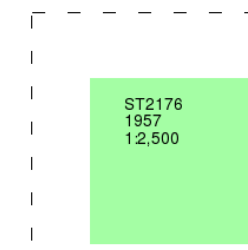
Ordnance Survey Plan

Published 1957

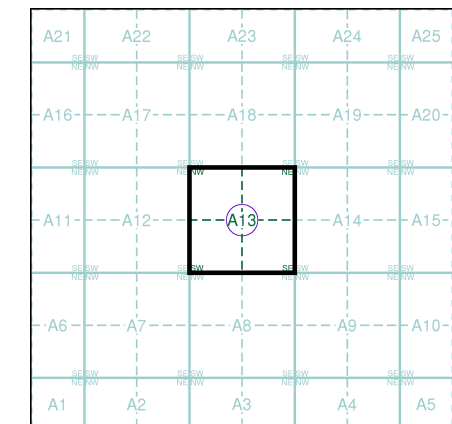
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410

Landmark
INFORMATION GROUP

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



Ordnance Survey Plan

Published 1957

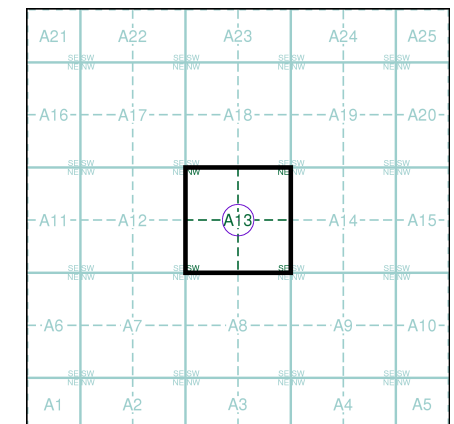
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

| | |
|-----------------------------|-----------------------------|
| ST2176NW 1957 1:1,250 | ST2176NE 1957 1:1,250 |
| ST2176SW 1957 1:1,250 | ST2176SE 1957 1:1,250 |

Historical Map - Segment A13



Order Details

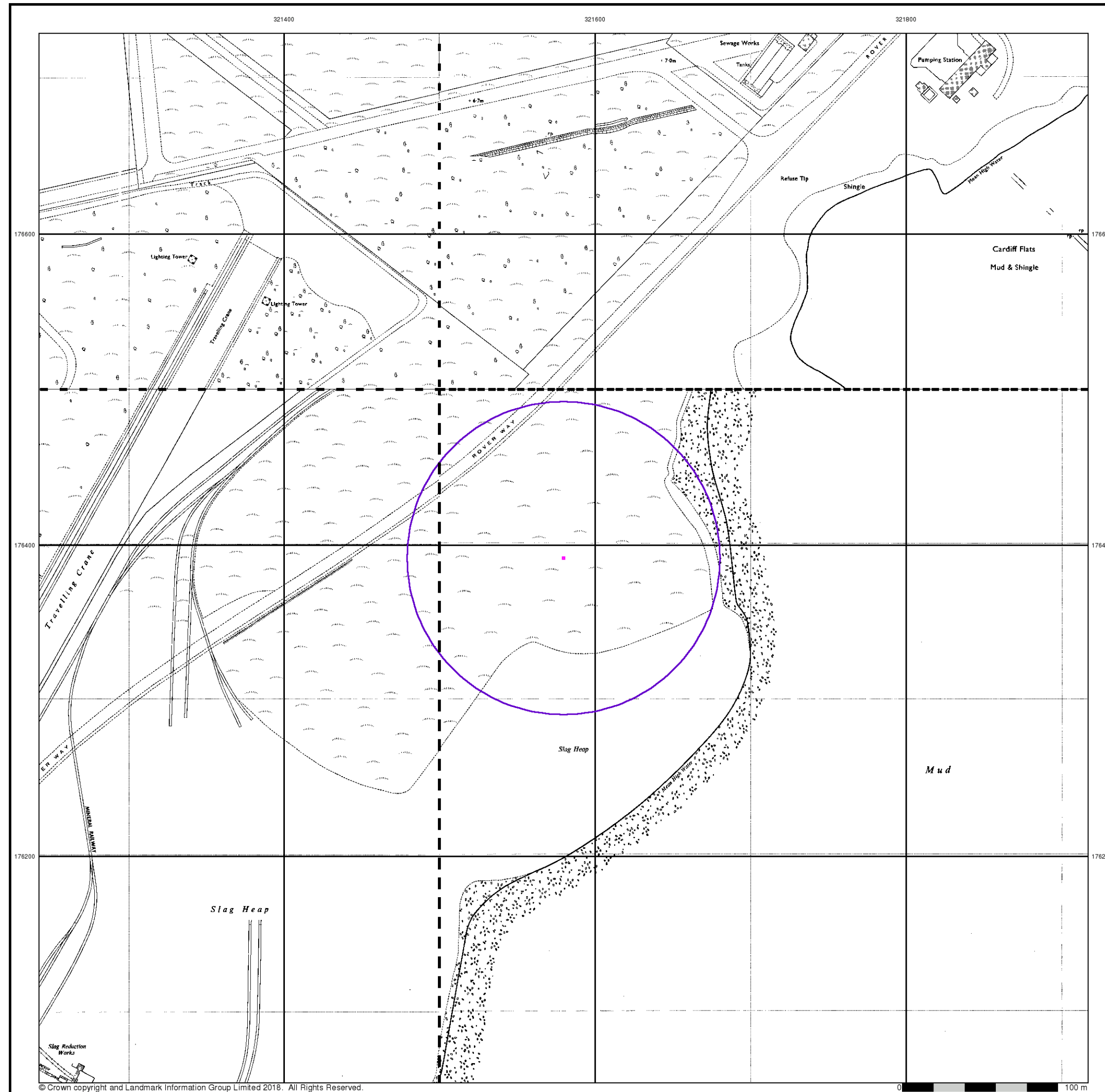
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410

Landmark
INFORMATION GROUP

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



Ordnance Survey Plan

Published 1966 - 1969

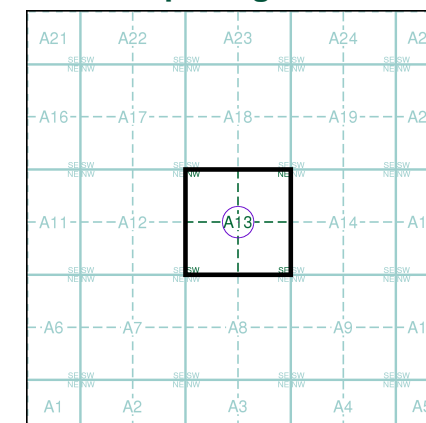
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

| | |
|-----------------------------|-----------------------------|
| ST2176NW 1969 1:1,250 | ST2176NE 1969 1:1,250 |
| ST2176SW 1966 1:1,250 | ST2176SE 1966 1:1,250 |

Historical Map - Segment A13



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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



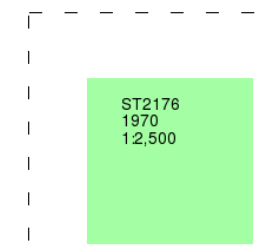
Ordnance Survey Plan

Published 1970

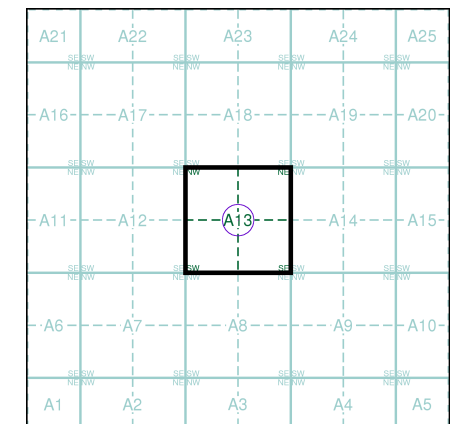
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

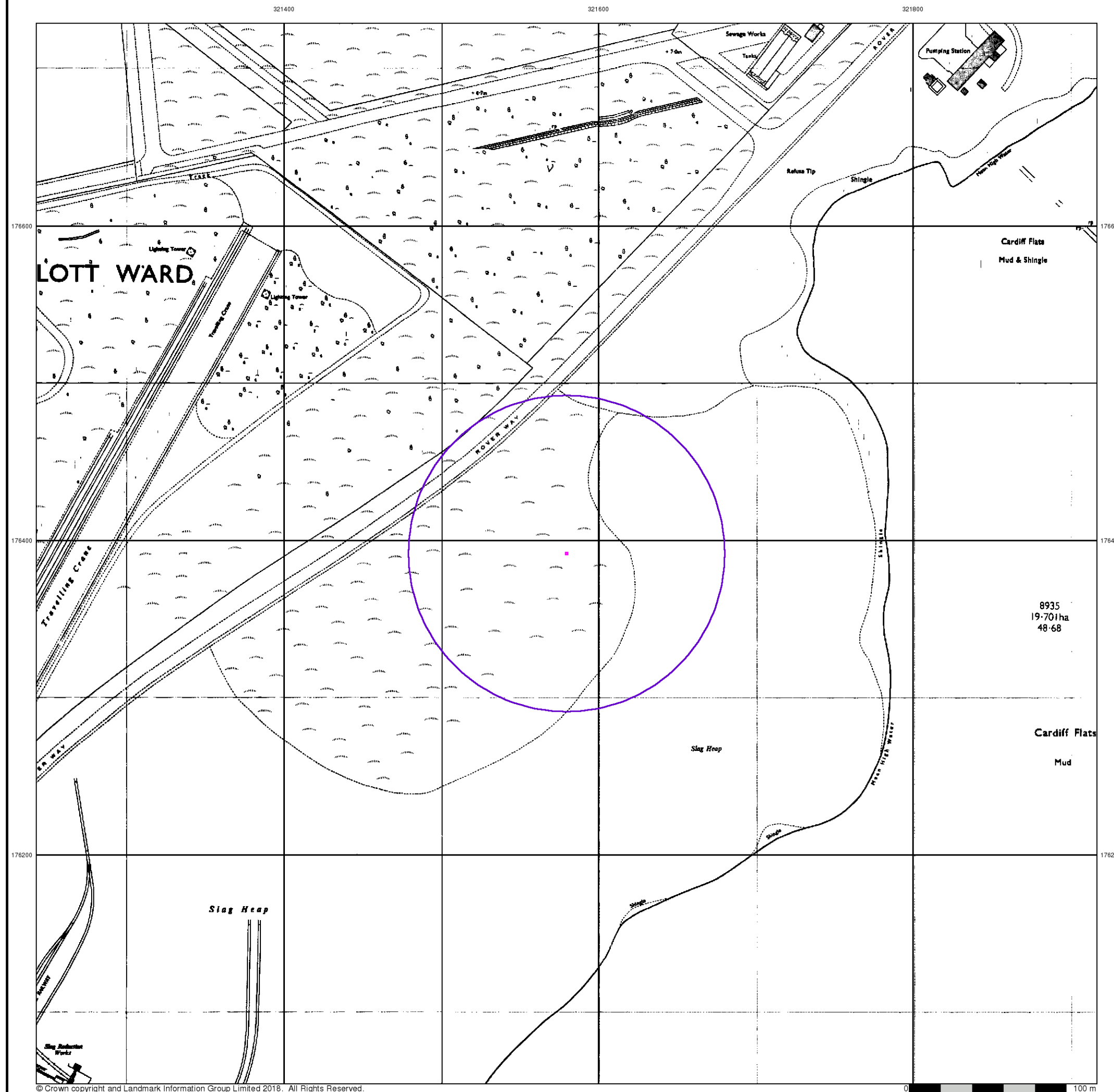
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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





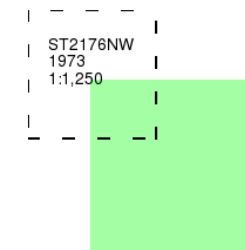
Supply of Unpublished Survey Information

Published 1973

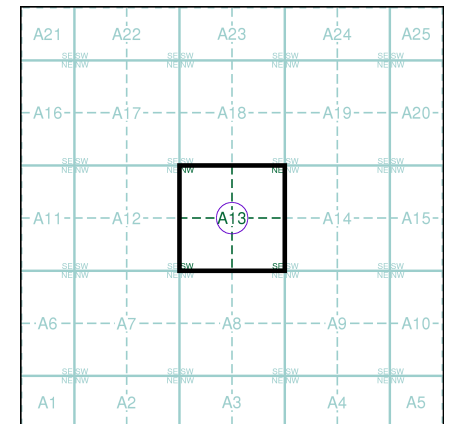
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a 'work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

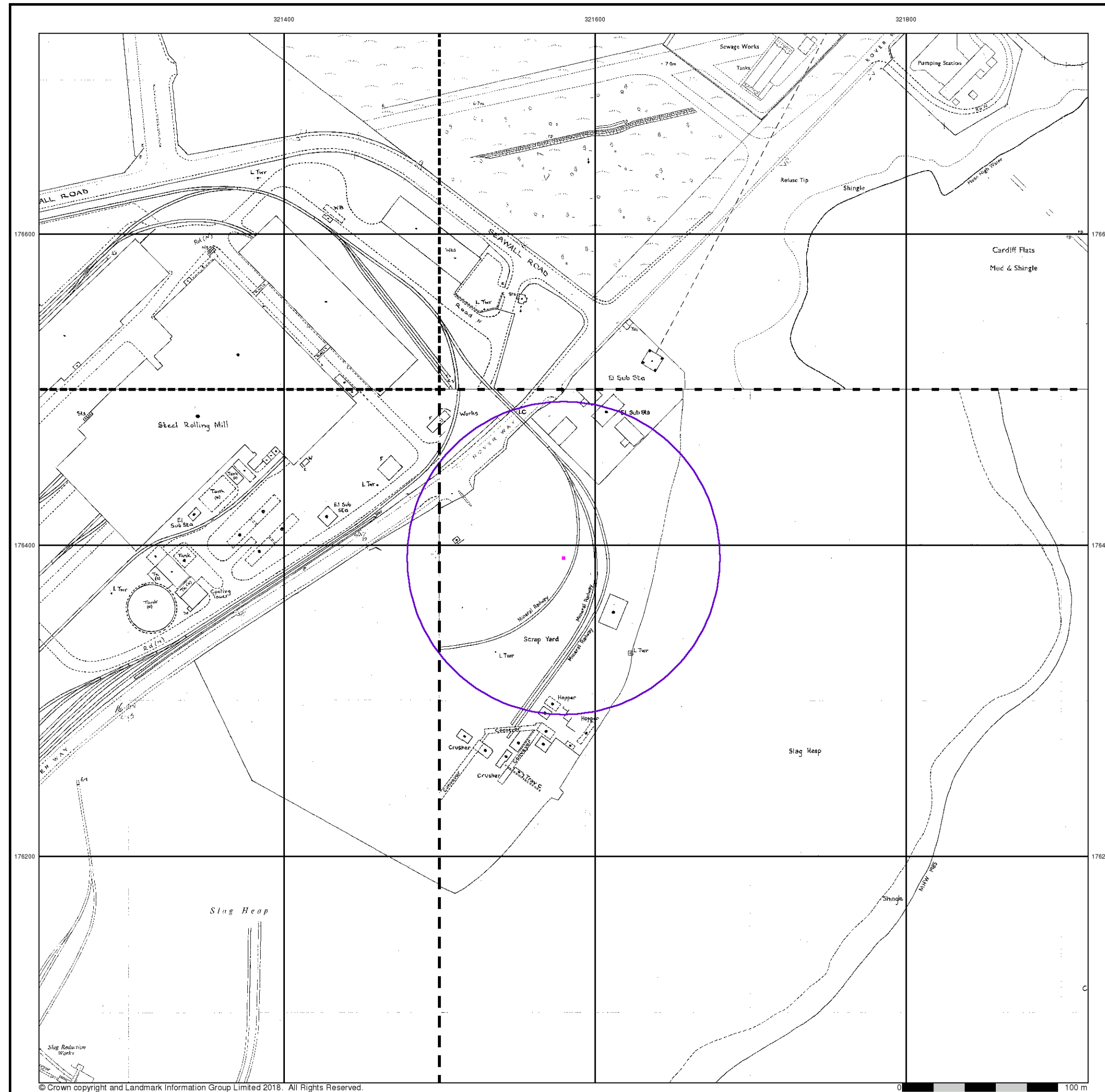
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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



© Crown copyright and Landmark Information Group Limited 2018. All Rights Reserved.



Additional SIMs

Published 1977 - 1988

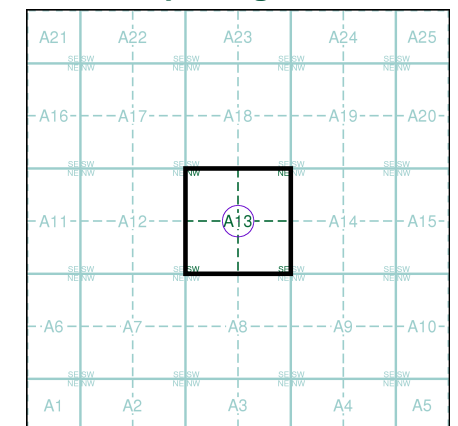
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

| | |
|-----------------------------|-----------------------------|
| ST2176NW 1977 1:1,250 | ST2176NE 1977 1:1,250 |
| ST2176SW 1977 1:1,250 | ST2176SE 1988 1:1,250 |

Historical Map - Segment A13



Order Details

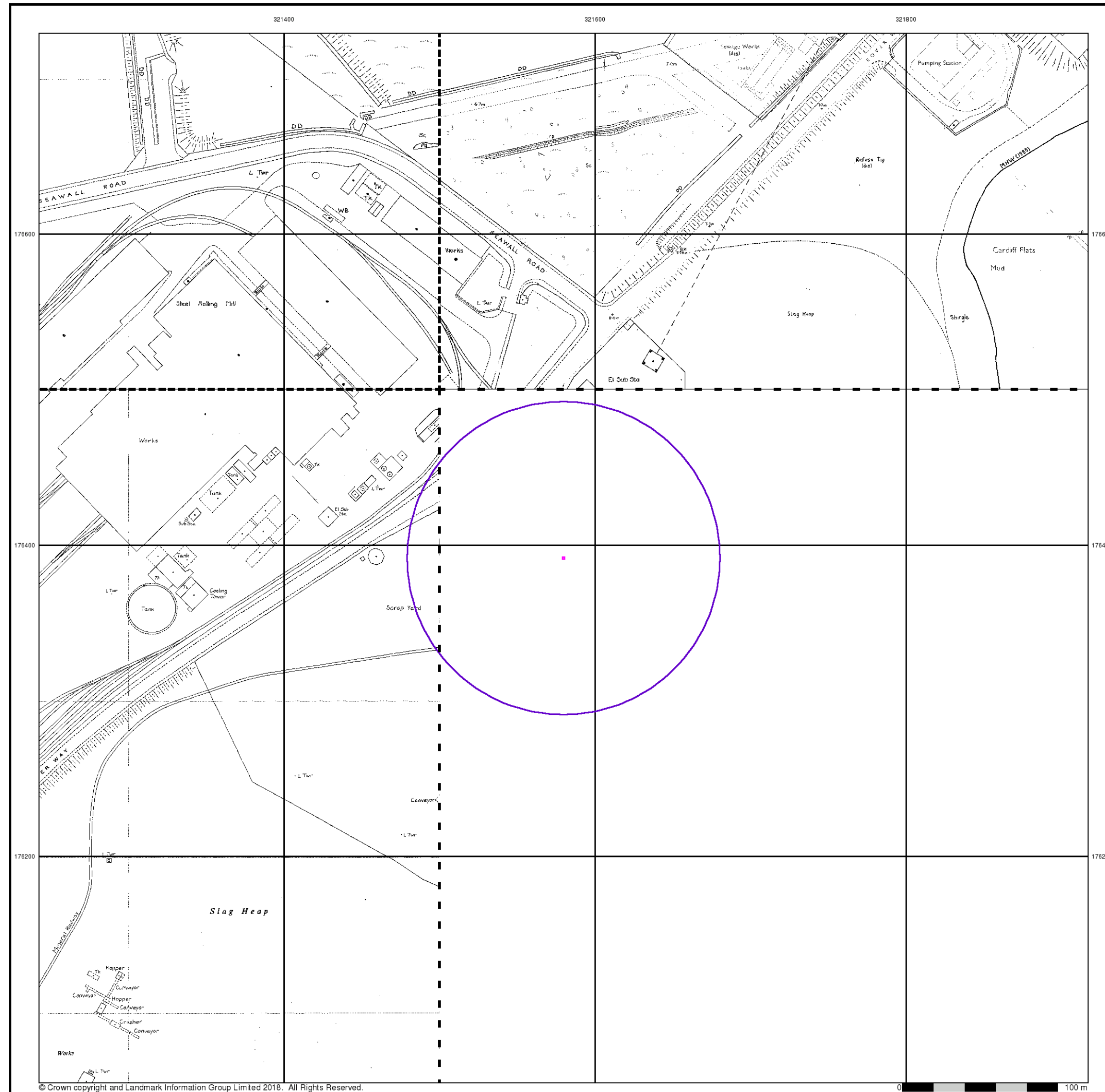
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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



© Crown copyright and Landmark Information Group Limited 2018. All Rights Reserved.



Additional SIMs

Published 1987 - 1988

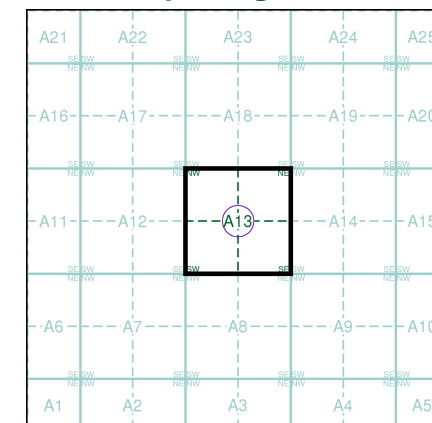
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

| | |
|-----------------------------|-----------------------------|
| ST2176NW 1987 1:1,250 | ST2176NE 1988 1:1,250 |
| ST2176SW 1988 1:1,250 | |

Historical Map - Segment A13



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410



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



Large-Scale National Grid Data

Published 1993 - 1995

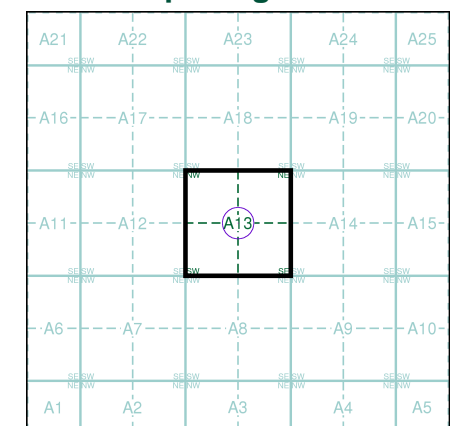
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

| | |
|-----------------------------|-----------------------------|
| ST2176NW 1993 1:1,250 | |
| ST2176SW 1995 1:1,250 | ST2176SE 1995 1:1,250 |

Historical Map - Segment A13



Order Details

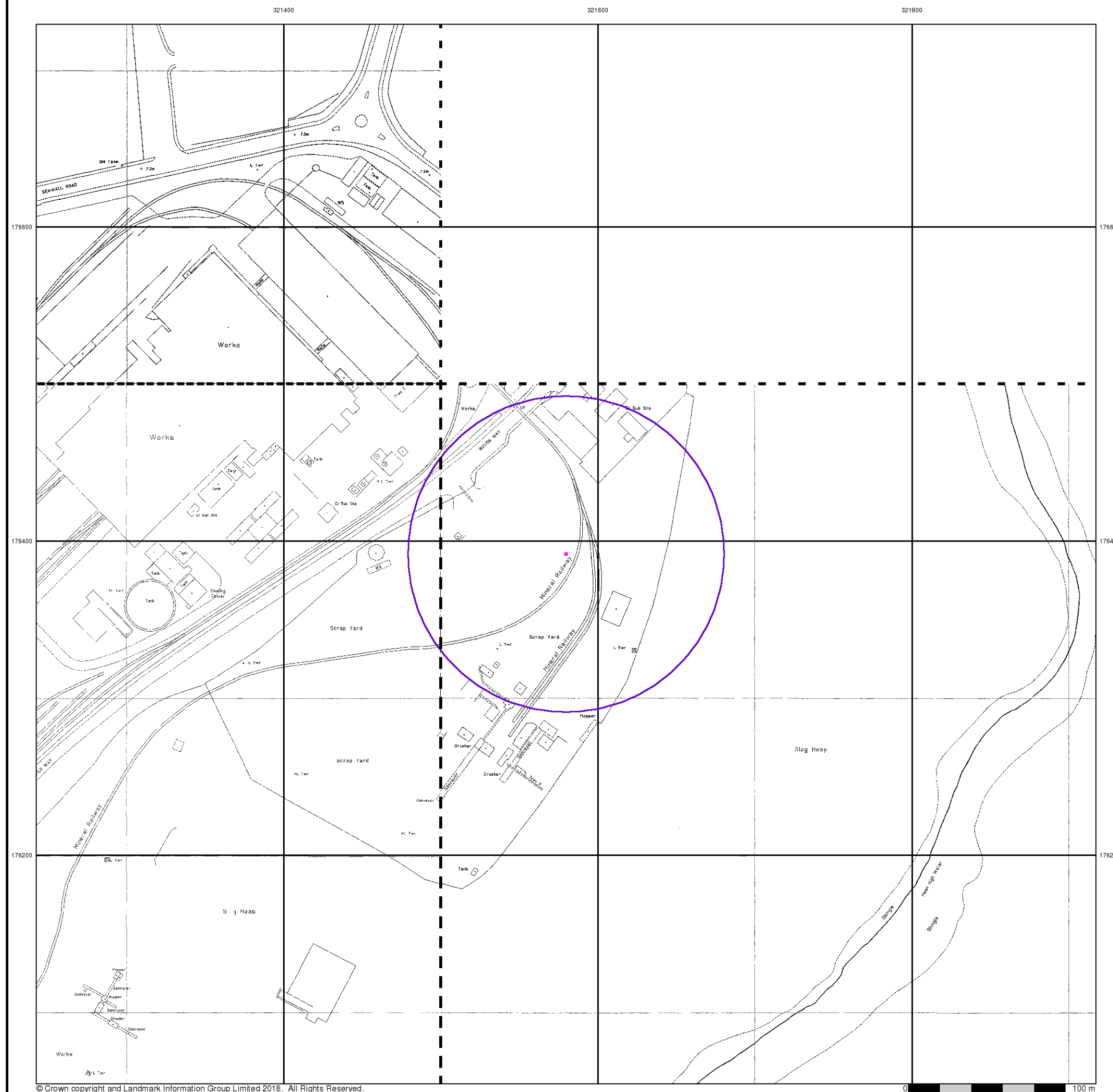
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

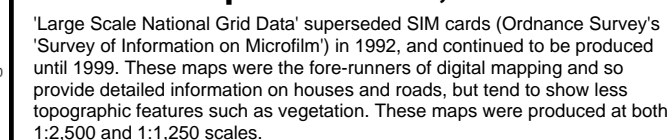
Site Details

Site at 321570, 176410

Landmark
INFORMATION GROUP

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





ST2176NW
1994
1:1.250

A 5x5 grid of points labeled A1 through A25. The points are arranged in a regular grid pattern. A 3x3 square is highlighted with a thick black border, centered on point A13. The points are arranged in a regular grid pattern with dashed lines connecting them.



Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site at 321570, 176410

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

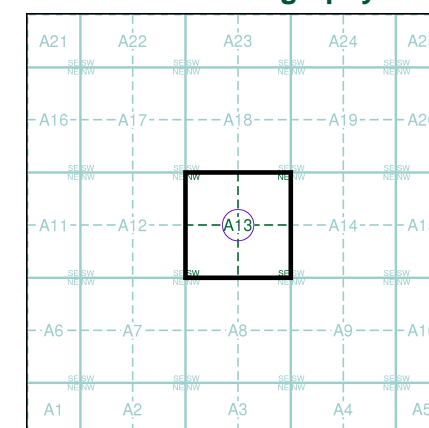


Historical Aerial Photography

Published 2009

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

Historical Aerial Photography - Segment A13



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 100

Site Details

Site at 321570, 176410

Landmark
INFORMATION GROUP

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

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

| | | | | | |
|--|-----------------------------------------------|--|-----------------------------|--|---------------|
| | Gravel Pit | | Sand Pit | | Other Pits |
| | Quarry | | Shingle | | Orchard |
| | Osiers | | Reeds | | Marsh |
| | Mixed Wood | | Deciduous | | Brushwood |
| | Fir | | Furze | | Rough Pasture |
| | Arrow denotes flow of water | | Trigonometrical Station | | |
| | Site of Antiquities | | Bench Mark | | |
| | Pump, Guide Post, Signal Post | | Well, Spring, Boundary Post | | |
| | •285 Surface Level | | | | |
| | Sketched Contour | | Instrumental Contour | | |
| | Main Roads | | Minor Roads | | |
| | Sunken Road | | Raised Road | | |
| | Road over Railway | | Railway over River | | |
| | Railway over Road | | Level Crossing | | |
| | Road over River or Canal | | Road over Stream | | |
| | Road over Stream | | | | |
| | County Boundary (Geographical) | | | | |
| | County & Civil Parish Boundary | | | | |
| | Administrative County & Civil Parish Boundary | | | | |
| | County Borough Boundary (England) | | | | |
| | County Burgh Boundary (Scotland) | | | | |
| | Rural District Boundary | | | | |
| | Civil Parish Boundary | | | | |

Ordnance Survey Plan 1:10,000

| | | | |
|--|-----------------------------------------------------------------------|--|---------------------------------------------------------|
| | Chalk Pit, Clay Pit or Quarry | | Gravel Pit |
| | Sand Pit | | Disused Pit or Quarry |
| | Refuse or Slag Heap | | Lake, Loch or Pond |
| | Dunes | | Boulders |
| | Coniferous Trees | | Non-Coniferous Trees |
| | Orchard | | Scrub |
| | Bracken | | Heath |
| | Marsh | | Reeds |
| | Building | | Glasshouse |
| | Sloping Masonry | | Pylon |
| | Cutting | | Embankment |
| | Road Under | | Road Over |
| | Level Crossing | | Foot Bridge |
| | Standard Gauge Multiple Track | | Standard Gauge Single Track |
| | Siding, Tramway or Mineral Line | | Narrow Gauge |
| | Geographical County | | Administrative County, County Borough or County of City |
| | Municipal Borough, Urban or Rural District, Burgh or District Council | | Borough, Burgh or County Constituency |
| | Civil Parish | | |
| | BP, BS Boundary Post or Stone | | Police Station |
| | Church | | Post Office |
| | Club House | | Public Convenience |
| | Fire Engine Station | | Public House |
| | Foot Bridge | | Signal Box |
| | Fountain | | Spring |
| | Guide Post | | Telephone Call Box |
| | Mile Post | | Telephone Call Post |
| | Mile Stone | | Well |

1:10,000 Raster Mapping

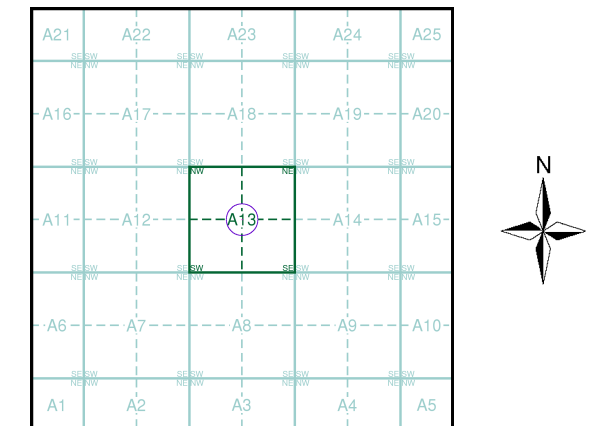
| | | | |
|--|----------------------------------------------------------|--|--------------------------------------------|
| | Gravel Pit | | Refuse tip or slag heap |
| | Rock | | Rock (scattered) |
| | Boulders | | Boulders (scattered) |
| | Shingle | | Mud |
| | Sand | | Sand Pit |
| | Slopes | | Top of cliff |
| | General detail | | Underground detail |
| | Overhead detail | | Narrow gauge railway |
| | Multi-track railway | | Single track railway |
| | County boundary (England only) | | Civil, parish or community boundary |
| | District, Unitary, Metropolitan, London Borough boundary | | Constituency boundary |
| | Area of wooded vegetation | | Non-coniferous trees |
| | Non-coniferous trees (scattered) | | Coniferous trees |
| | Coniferous trees (scattered) | | Positioned tree |
| | Orchard | | Coppice or Osiers |
| | Rough Grassland | | Heath |
| | Scrub | | Marsh, Salt Marsh or Reeds |
| | Water feature | | Flow arrows |
| | Mean high water (springs) | | Mean low water (springs) |
| | Telephone line (where shown) | | Electricity transmission line (with poles) |
| | Bench mark (where shown) | | Triangulation station |
| | Point feature (e.g. Guide Post or Mile Stone) | | Pylon, flare stack or lighting tower |
| | Site of (antiquity) | | Glasshouse |
| | General Building | | Important Building |



Historical Mapping & Photography included:

| Mapping Type | Scale | Date | Pg |
|-------------------------------|----------|-------------|----|
| Glamorganshire | 1:10,560 | 1885 - 1886 | 3 |
| Monmouthshire | 1:10,560 | 1886 - 1887 | 4 |
| Monmouthshire | 1:10,560 | 1887 | 5 |
| Glamorganshire | 1:10,560 | 1901 | 6 |
| Glamorganshire | 1:10,560 | 1922 | 7 |
| Glamorganshire | 1:10,560 | 1938 - 1947 | 8 |
| Glamorganshire | 1:10,560 | 1947 - 1954 | 9 |
| Historical Aerial Photography | 1:10,560 | 1947 | 10 |
| Historical Aerial Photography | 1:10,560 | 1947 | 11 |
| Ordnance Survey Plan | 1:10,000 | 1965 | 12 |
| Ordnance Survey Plan | 1:10,000 | 1975 | 13 |
| Cardiff | 1:10,000 | 1982 | 14 |
| Ordnance Survey Plan | 1:10,000 | 1989 | 15 |
| 10K Raster Mapping | 1:10,000 | 1999 | 16 |
| 10K Raster Mapping | 1:10,000 | 2006 | 17 |
| VectorMap Local | 1:10,000 | 2018 | 18 |

Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings

Military and Industrial Buildings

Military and Communication Areas

Subway Entrance

Fireproof Building

Prominent Fireproof Building

Non-fireproof Building

Non-fireproof Building (non-dwelling)

Factory, mill, and flour mill, with chimneys

Factory, mill, and flour mill, without chimneys

Power Station, drawn to scale

Hydroelectric Power Station

Radio Station, drawn to scale

Telephone Station, drawn to scale

Abandoned Open-pit Mine or Quarry

Open-pit Salt Mine

Pit

Oil Deposit or Well

Oil Seepage

Tailings Pile

Fuel Storage Tanks

Natural Gas Tank

Bench Mark

Drill Hole

Burial Mound

Triangulation Point on Burial Mound

Single-track Railroad

Double-track Railroad

Railroad and Station Building

Coniferous Forest

Deciduous Forest

Mixed Forest

Lawns

Citrus Orchard

Wet Ground

Scattered Vegetation

243.8 Values for prominent elevations
186.0 Numbers for spot elevations, depth soundings, contour lines, etc.
0.2 Velocity of the current, width of river bed, depth of river
180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

| | | | |
|-----------------|----------------|-----------------|-----------------------|
| А а (A) | З з (Z) | П п (P) | Ч ч (CH) |
| Б б (B) | И и (I) | Р р (R) | Ш ш (SH) |
| В в (V) | Й й (Y) | С с (S) | Щ щ (SHCH) |
| Г г (G) | К к (K) | Т т (T) | Ъ (-) |
| Д д (D) | Л л (L) | У у (U) | Ы (Y) |
| Е е (E) | М м (M) | Ф ф (F) | Ь (') |
| Ё ё (YO) | Н н (N) | Х х (KH) | Э э (E) |
| Ж ж (ZH) | О о (O) | Ц ц (TS) | Ю ю (YU or IU) |
| | | | Я я (YA or IA) |

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings

Military and Industrial Buildings

Military and Communication Areas

Subway Entrance

Partly Demolished Buildings

Demolished Buildings

Built-Up Area with Fireproof Buildings Predominant

Built-Up Area with Non-Fireproof Buildings Predominant

Individual Fireproof Building

Prominent Industrial Building

Individual Dwelling, Fireproof

Ruins of an Individual Dwelling

Factory or Mill Chimney

Factory or Mill with Chimney

Factory or Mill without Chimney

Mine or Open Pit Mine

Operating Shaft or Mine

Non-Operating Shaft or Mine

Salt Mine

Tailings Pile

Pit

Stone Quarry

Gas Pump or Service Station

Fuel Storage or Natural Gas Tank

Oil or Natural Gas Derrick

Small Hydroelectric Power Station

Power Station

Transformer Station

Cemetery

Burial Mound (height in metres)

Triangulation Point on Burial Mound

Triangulation Point

Bench Mark

Bench Mark (monumented)

Telegraph Office

Telephone Station

Radio Station

Radio Tower

Airfield or Seaplane Base

Landing Strip

Cut, Fill, Km Post, Plantings

Telegraph/Telephone Lines

Main Highway

Highway under Construction

Improved Dirt Road (former truck road)

Small Bridge, Pipe (Culvert), Tunnel

Double-track Railroad with First Class Station

Dismantled Railroad

Railroad Under Construction

Shore Embankment

River or Ditch with Embankment

Water Gauge

Water Level Mark

Well

Water Reservoir or Rain Water Pit

Spring

Isobath with value

Heavy (Index) Contour Line

Contour Line and Value

Half Contour Line

Spot Elevation Value

Coniferous

Deciduous

Mixed

Scrub

Key to Numbers on Mapping

ST27NW_Cardiff

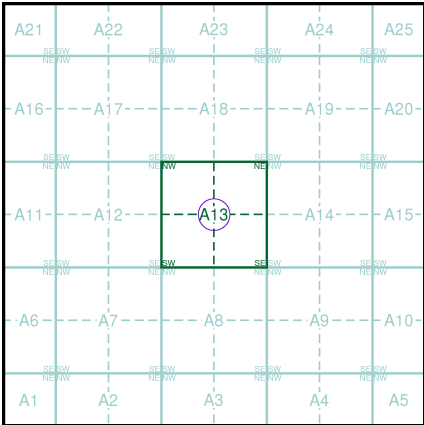
| No. | Description |
|-----|-------------------------|
| 14 | Factory (Cars) |
| 45 | Factories (Metal Works) |
| 103 | Depot (Railway) |



Historical Mapping & Photography included:

| Mapping Type | Scale | Date | Pg |
|-------------------------------|----------|-------------|----|
| Glamorganshire | 1:10,560 | 1885 - 1886 | 3 |
| Monmouthshire | 1:10,560 | 1886 - 1887 | 4 |
| Monmouthshire | 1:10,560 | 1887 | 5 |
| Glamorganshire | 1:10,560 | 1901 | 6 |
| Glamorganshire | 1:10,560 | 1922 | 7 |
| Glamorganshire | 1:10,560 | 1938 - 1947 | 8 |
| Glamorganshire | 1:10,560 | 1947 - 1954 | 9 |
| Historical Aerial Photography | 1:10,560 | 1947 | 10 |
| Historical Aerial Photography | 1:10,560 | 1947 | 11 |
| Ordnance Survey Plan | 1:10,000 | 1965 | 12 |
| Ordnance Survey Plan | 1:10,000 | 1975 | 13 |
| Cardiff | 1:10,000 | 1982 | 14 |
| Ordnance Survey Plan | 1:10,000 | 1989 | 15 |
| 10K Raster Mapping | 1:10,000 | 1999 | 16 |
| 10K Raster Mapping | 1:10,000 | 2006 | 17 |
| VectorMap Local | 1:10,000 | 2018 | 18 |

Russian Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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



Glamorganshire

Published 1885 - 1886

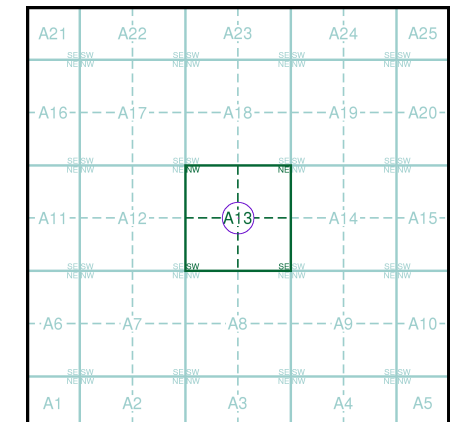
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

| | | |
|-------|------|----------|
| 04300 | 1886 | 1:10,560 |
| 04700 | 1885 | 1:10,560 |

Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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



Monmouthshire

Published 1886 - 1887

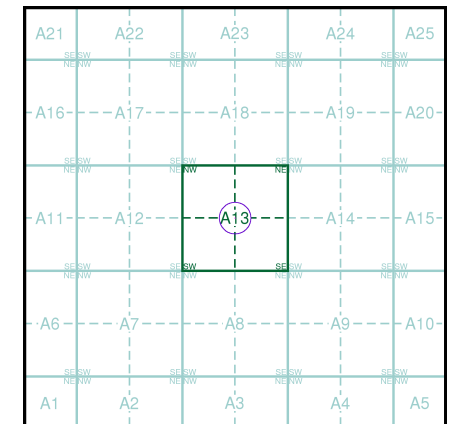
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

| |
|----------------------------|
| 03800 1886 1:10,560 |
| 038A00 1887 1:10,560 |

Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410

Landmark
INFORMATION GROUP

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



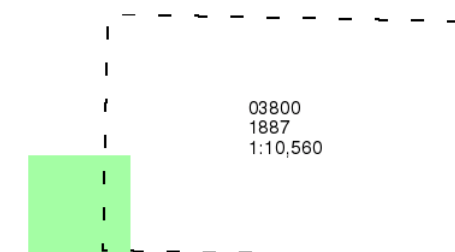
Monmouthshire

Published 1887

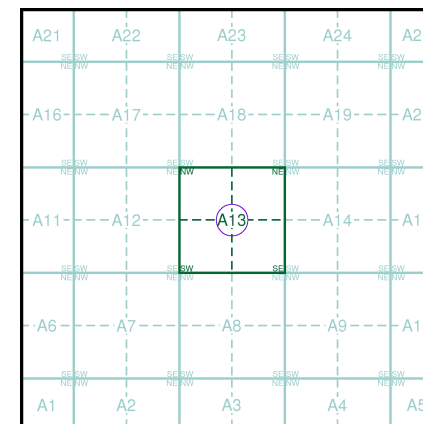
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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



The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

043SE
1901
1:10,560

043ASW
1901
1:10,560

047NE
1901
1:10,560

047SW
1901
1:10,560

A 5x5 grid of cells labeled A1 to A25. The grid is composed of solid black lines. The cells are labeled as follows:

- Row 1: A1, A2, A3, A4, A5
- Row 2: A6, A7, A8, A9, A10
- Row 3: A11, A12, A13, A14, A15
- Row 4: A16, A17, A18, A19, A20
- Row 5: A21, A22, A23, A24, A25

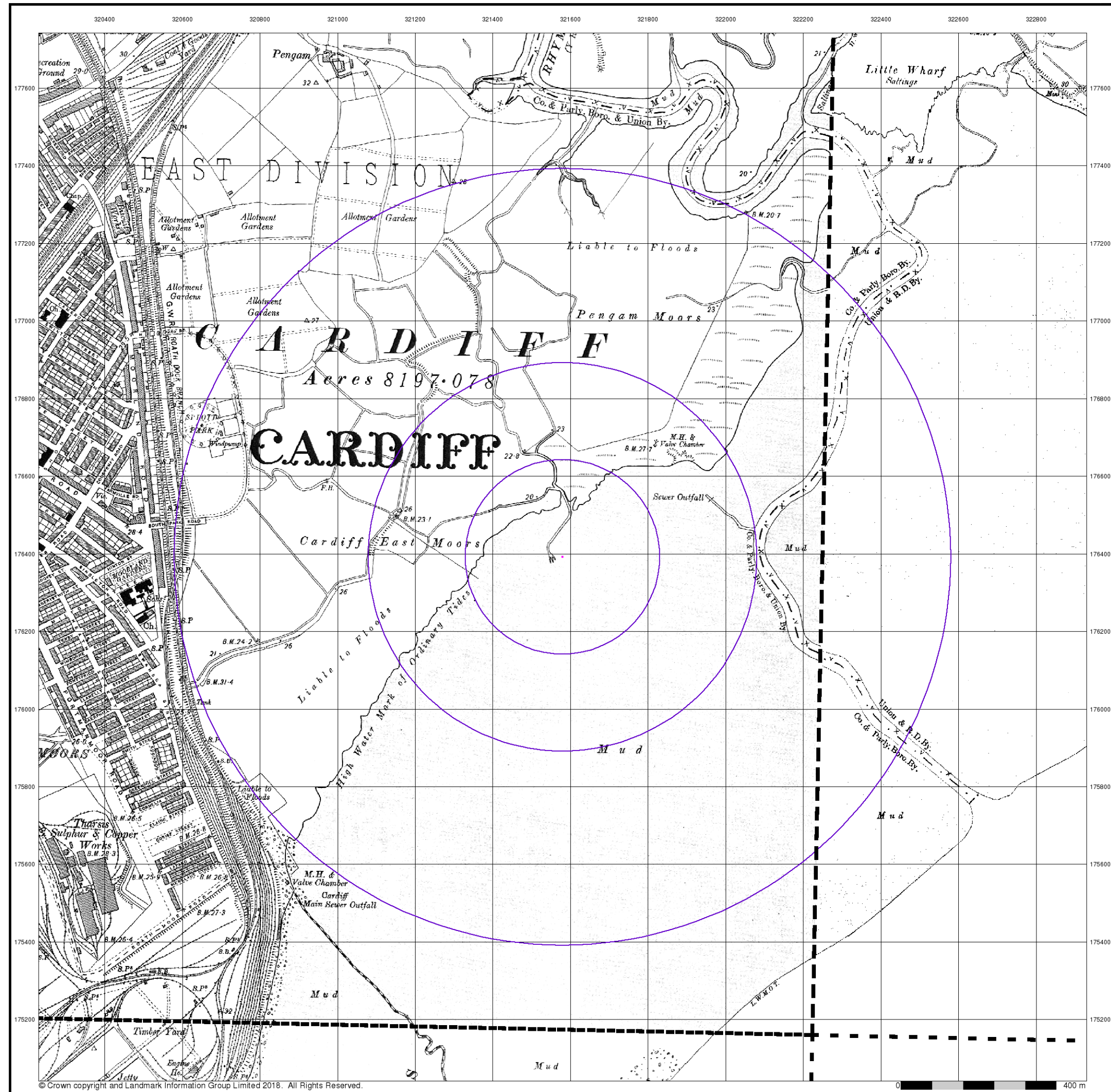
Cell A13 is highlighted with a green border and a purple circle.



| | |
|--------------------------|----------------|
| Order Number: | 188504369_1_1 |
| Customer Ref: | 14958-DE |
| National Grid Reference: | 321580, 176390 |
| Slice: | A |
| Site Area (Ha): | 0.01 |
| Search Buffer (m): | 1000 |

Site at 321570, 176410

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



© Crown copyright and Landmark Information Group Limited 2018. All Rights Reserved.

0 400 m



Glamorganshire
Published 1922

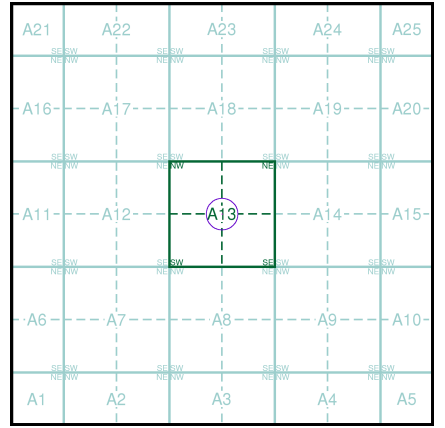
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

| | | | | | |
|-------|------|----------|--------|------|----------|
| 043SE | 1922 | 1:10,560 | 043A00 | 1922 | 1:10,560 |
|-------|------|----------|--------|------|----------|

Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



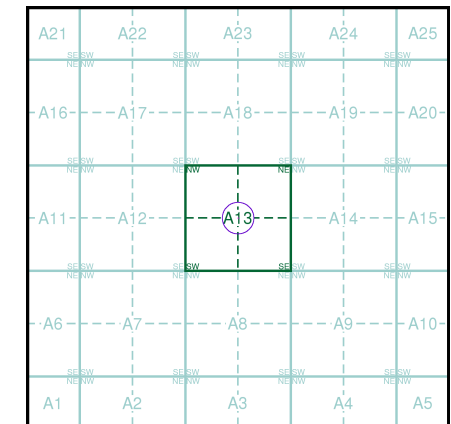
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

| | | | | | |
|-------|------|----------|--------|------|----------|
| 043SE | 1938 | 1:10,560 | 043A00 | 1947 | 1:10,560 |
|-------|------|----------|--------|------|----------|

Historical Map - Slice A

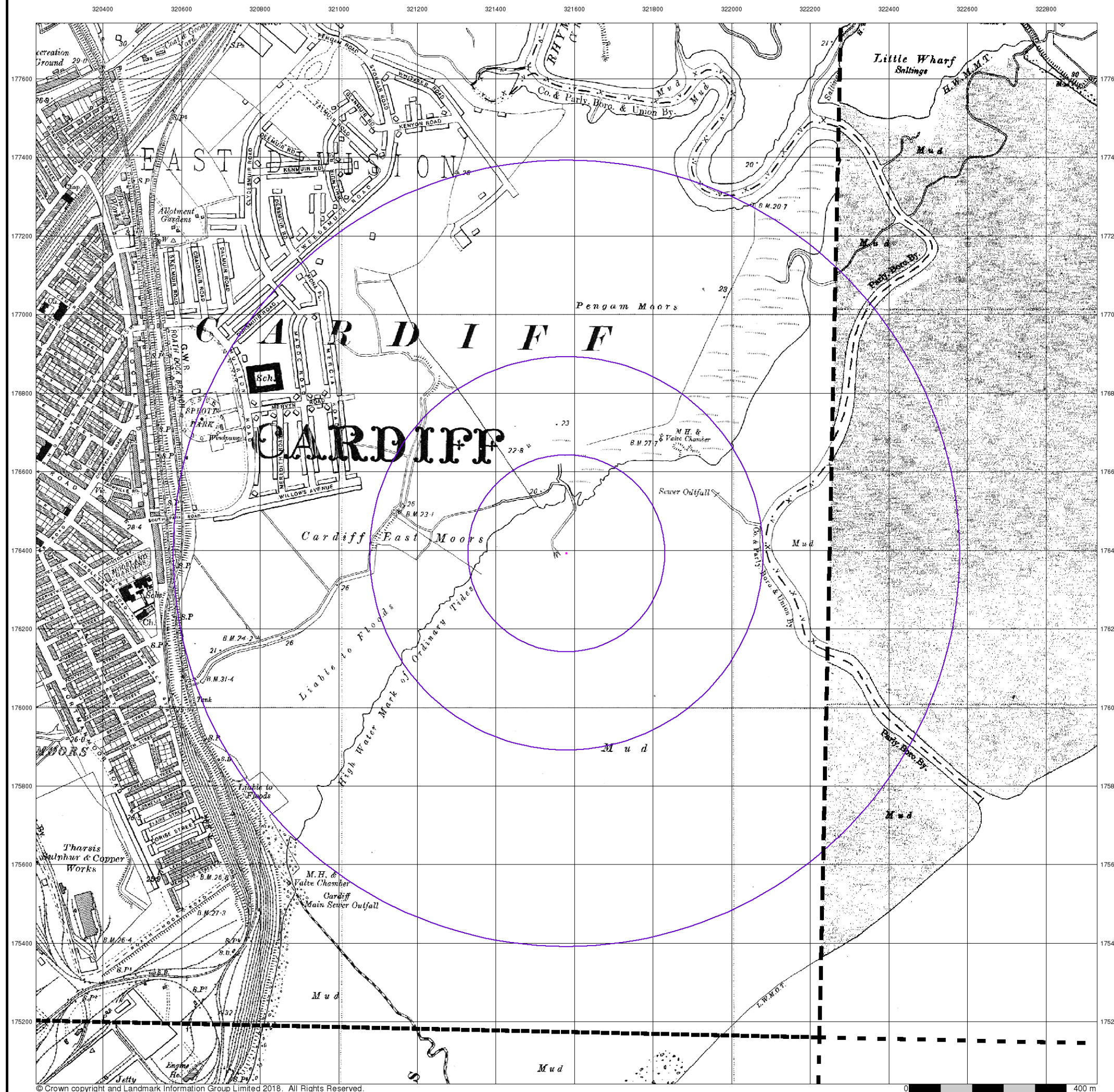


Order Details

Order Number: 188504369_1_1
 Customer Ref: 14958-DE
 National Grid Reference: 321580, 176390
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 321570, 176410





Historical Aerial Photography

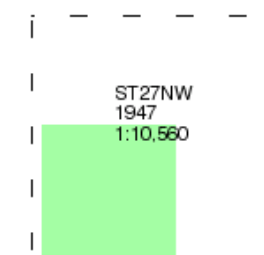
Published 1947

Source map scale - 1:10,560

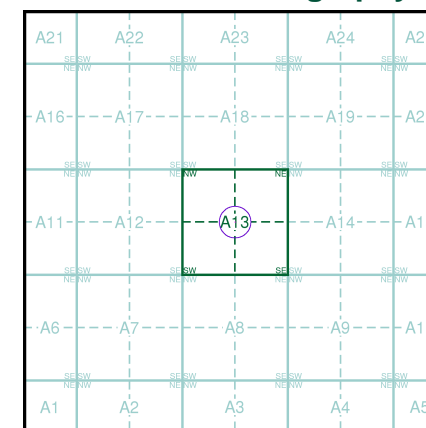
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

© Landmark Information Group and/or Data Suppliers 2010.

Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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



Historical Aerial Photography

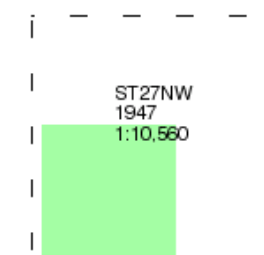
Published 1947

Source map scale - 1:10,560

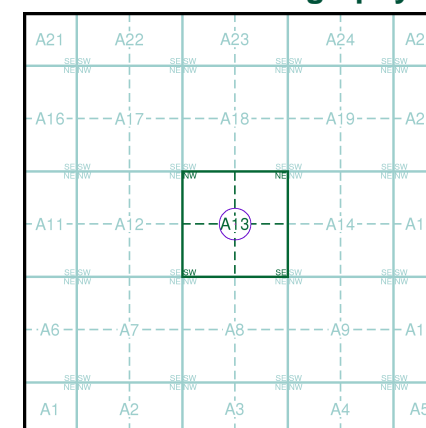
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

© Landmark Information Group and/or Data Suppliers 2010.

Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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



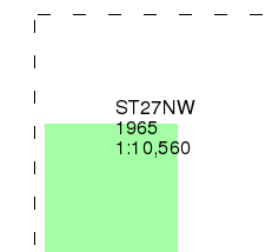
Ordnance Survey Plan

Published 1965

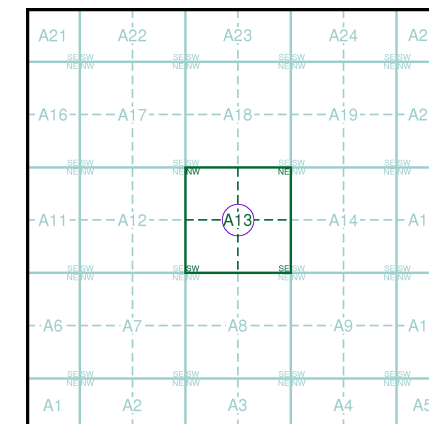
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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





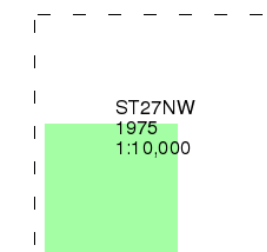
Ordnance Survey Plan

Published 1975

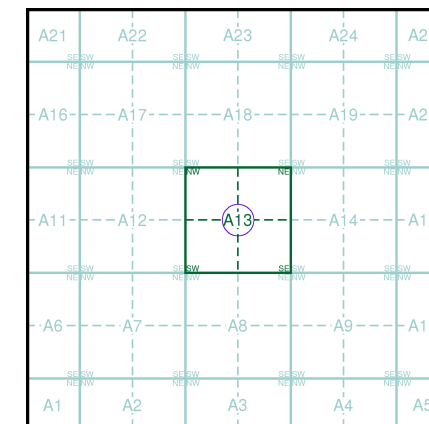
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.



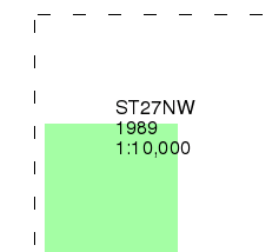
Ordnance Survey Plan

Published 1989

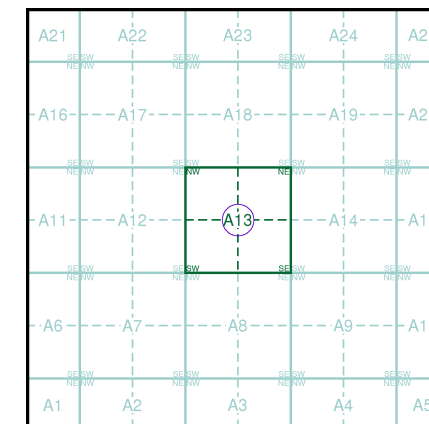
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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



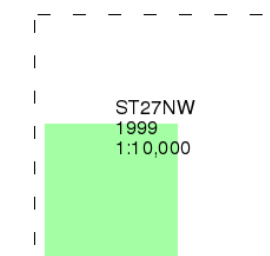
10k Raster Mapping

Published 1999

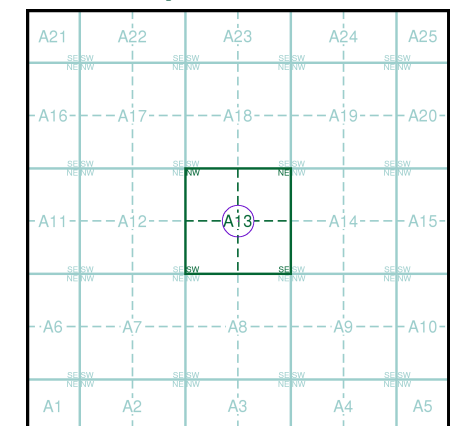
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

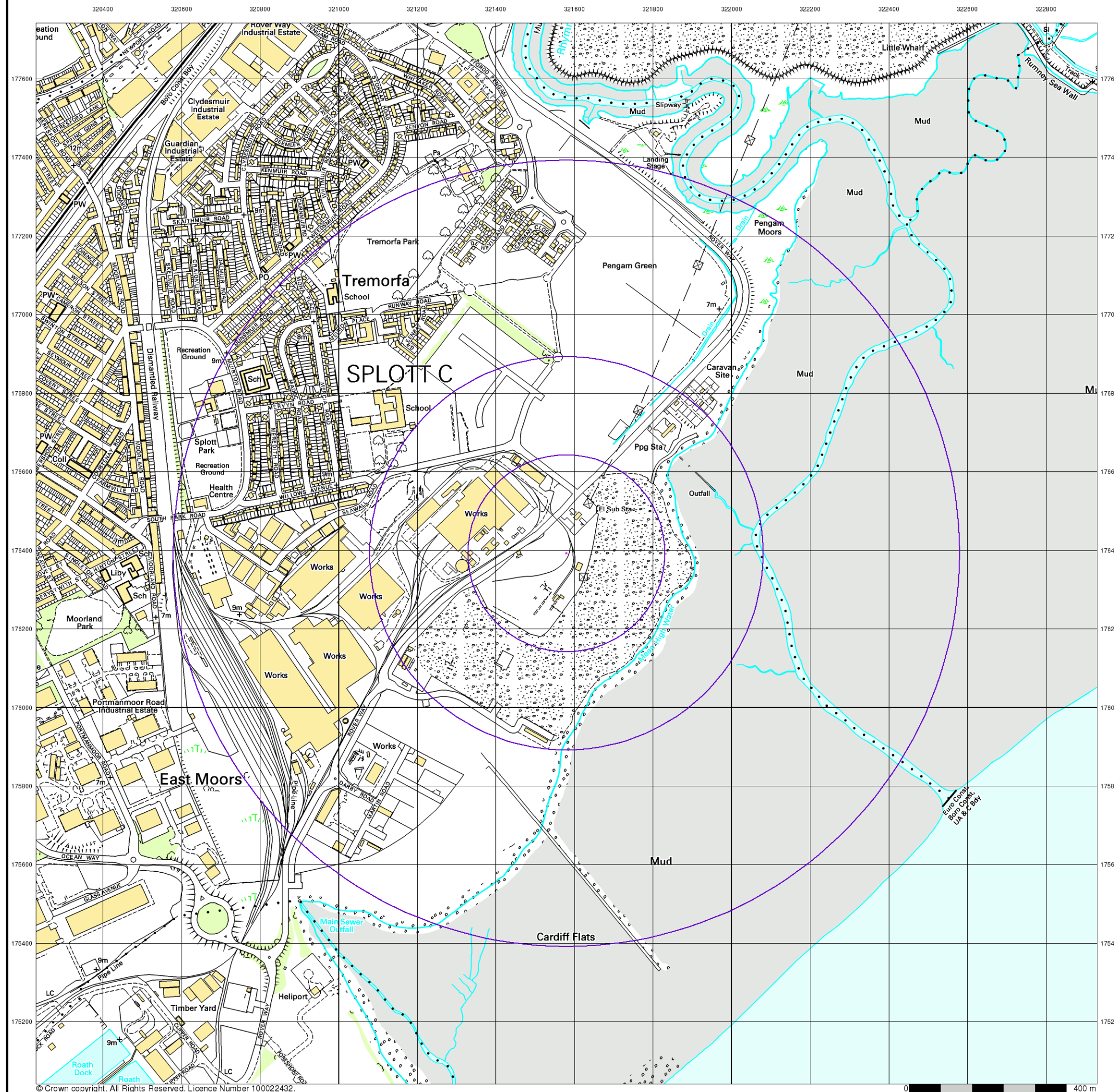
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410

Landmark
INFORMATION GROUP

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





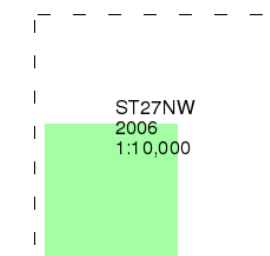
10k Raster Mapping

Published 2006

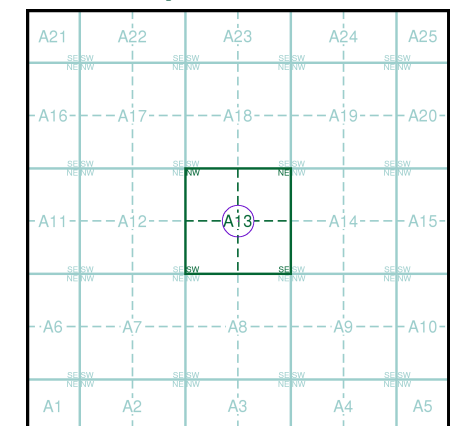
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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



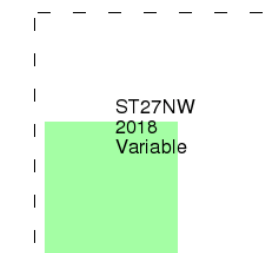
VectorMap Local

Published 2018

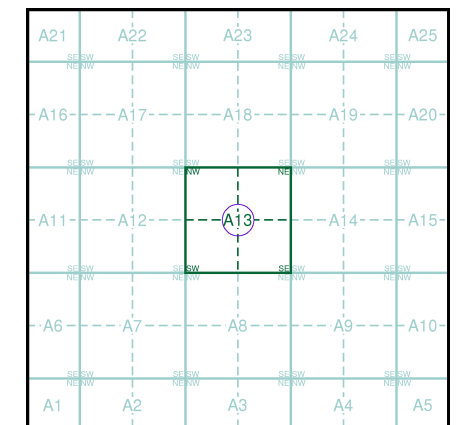
Source map scale - 1:10,000

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

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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





General

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

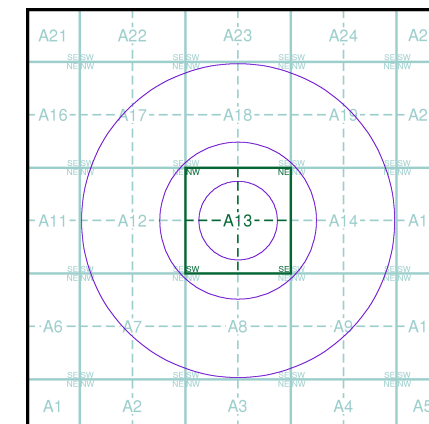
Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral
- Hazardous Substances
 - COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



Order Details

Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410

Landmark
INFORMATION GROUP

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



Industrial Land Use Map

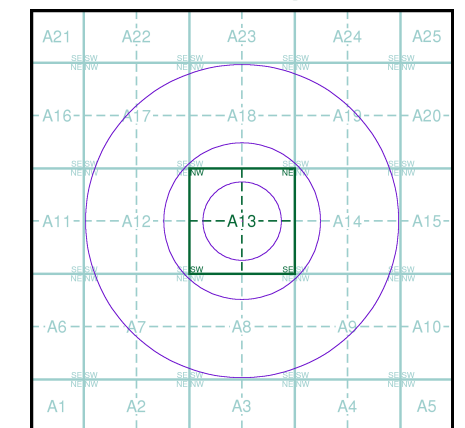
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

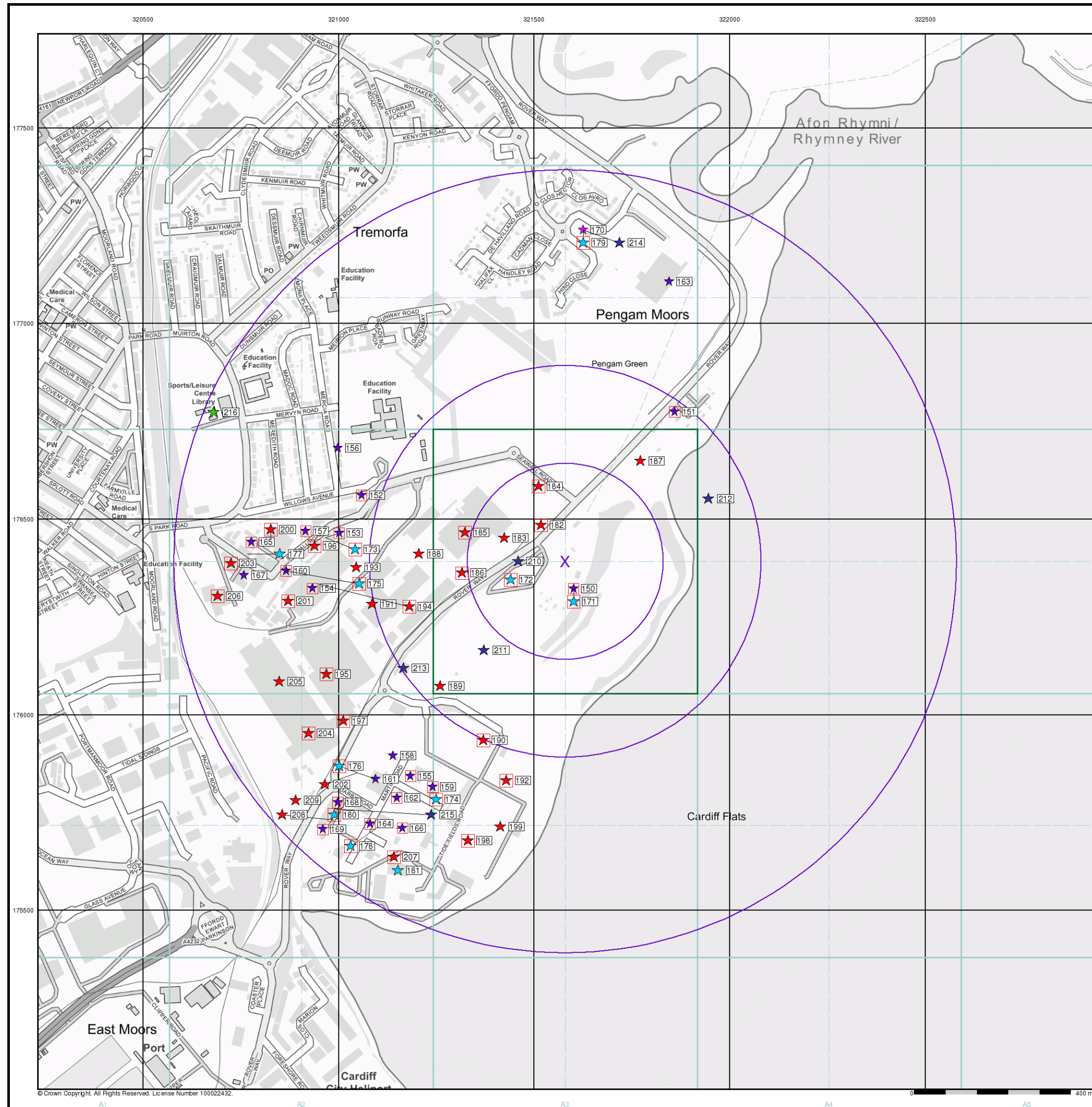
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410

Landmark
INFORMATION GROUP






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



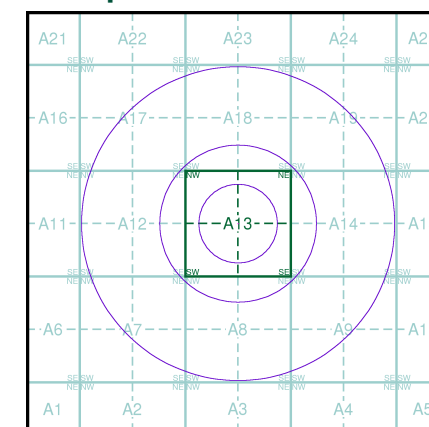
General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

Agency and Hydrological (Flood)

-  Extreme Flooding from Rivers or Sea without Defences (Zone 2)
-  Flooding from Rivers or Sea without Defences (Zone 3)
-  Area Benefiting from Flood Defence
-  Flood Water Storage Areas
-  Flood Defence

Flood Map - Slice A

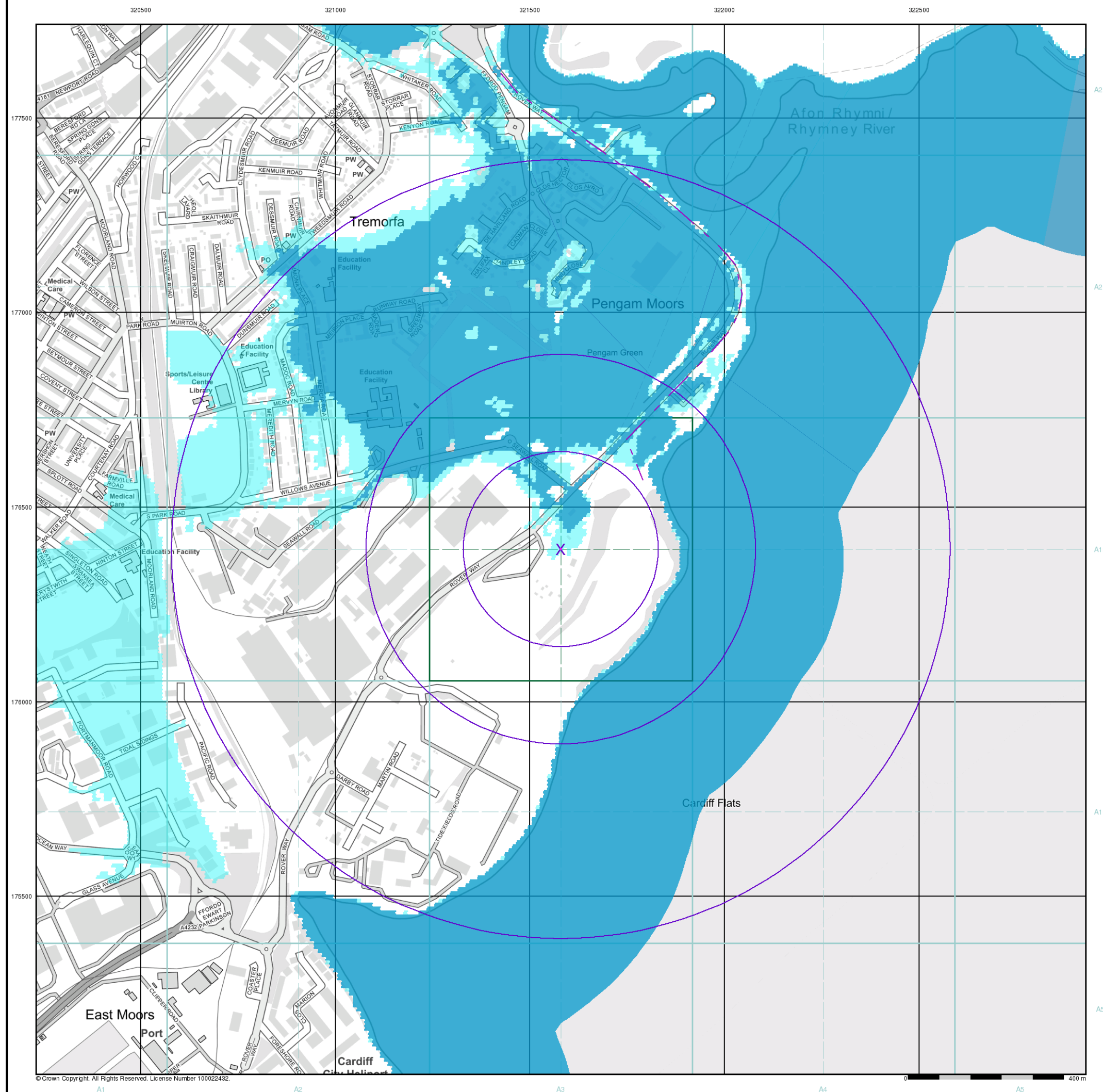


Order Details






Order Number: 188504369_1_1
 Customer Ref: 14958-DE
 National Grid Reference: 321580, 176390
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details






Site at 321570, 176410



General

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

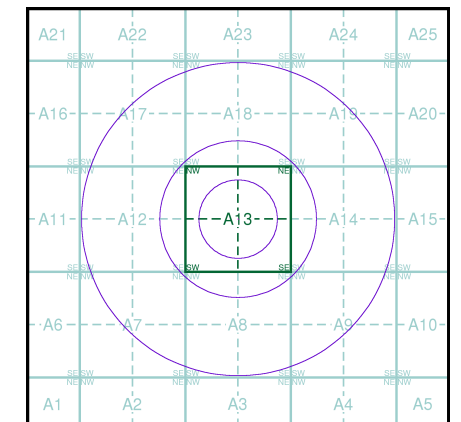
Agency and Hydrological (Boreholes)

-  BGS Borehole Depth 0 - 10m
-  BGS Borehole Depth 10 - 30m
-  BGS Borehole Depth 30m +
-  Confidential
-  Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A

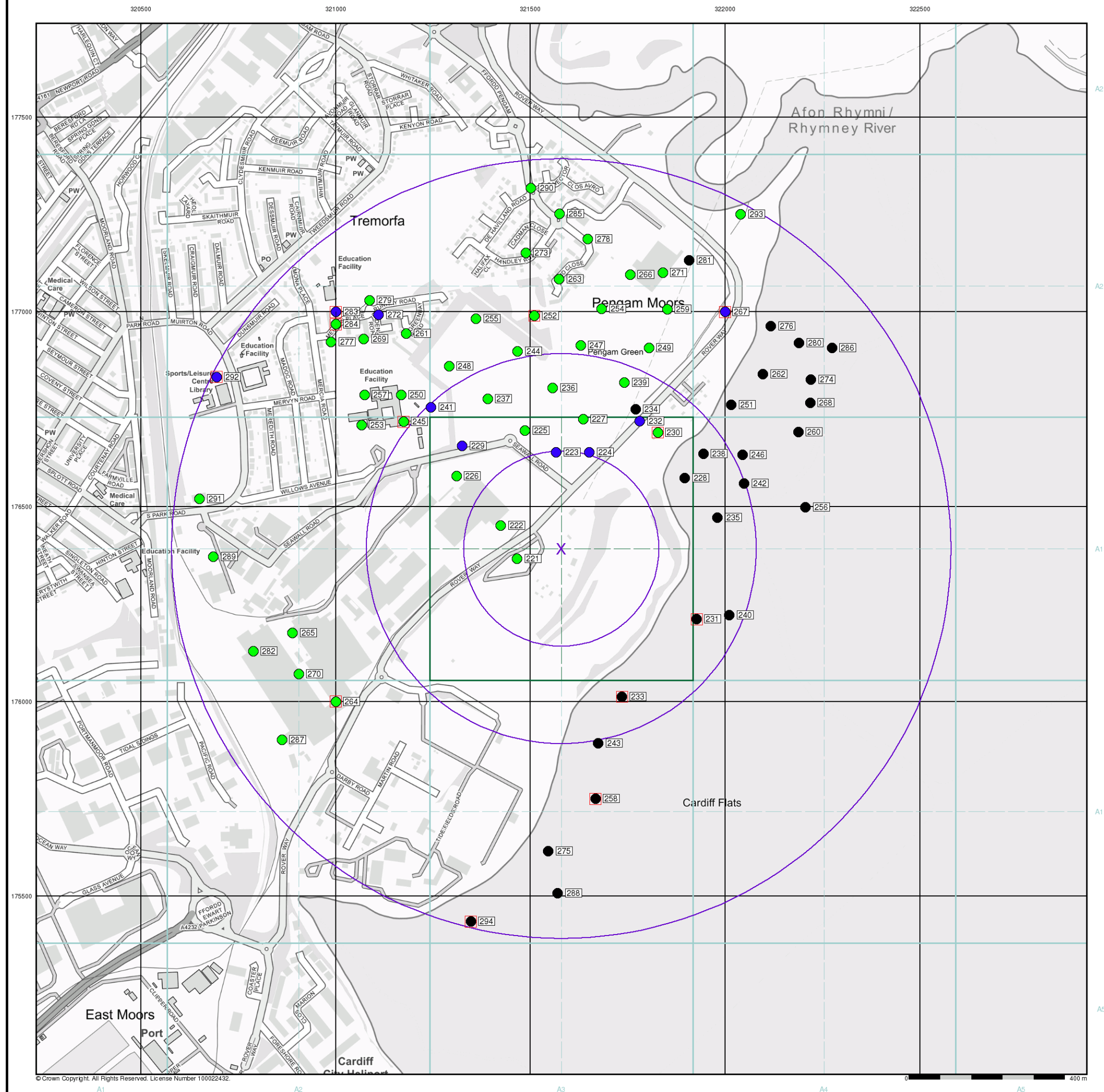


Order Details

Order Number: 188504369_1_1
 Customer Ref: 14958-DE
 National Grid Reference: 321580, 176390
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 321570, 176410



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

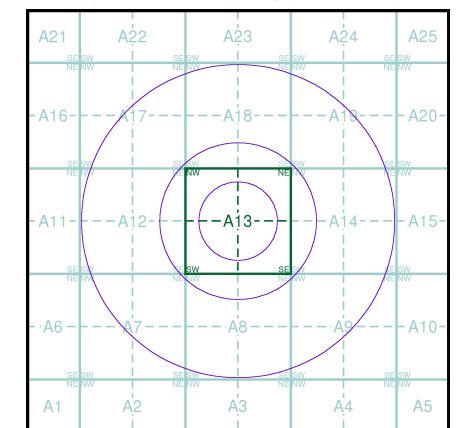
OS Water Network Data

- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |

Contours (height in meters)

- Standard Contour 105 100 95
- Master Contour
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A

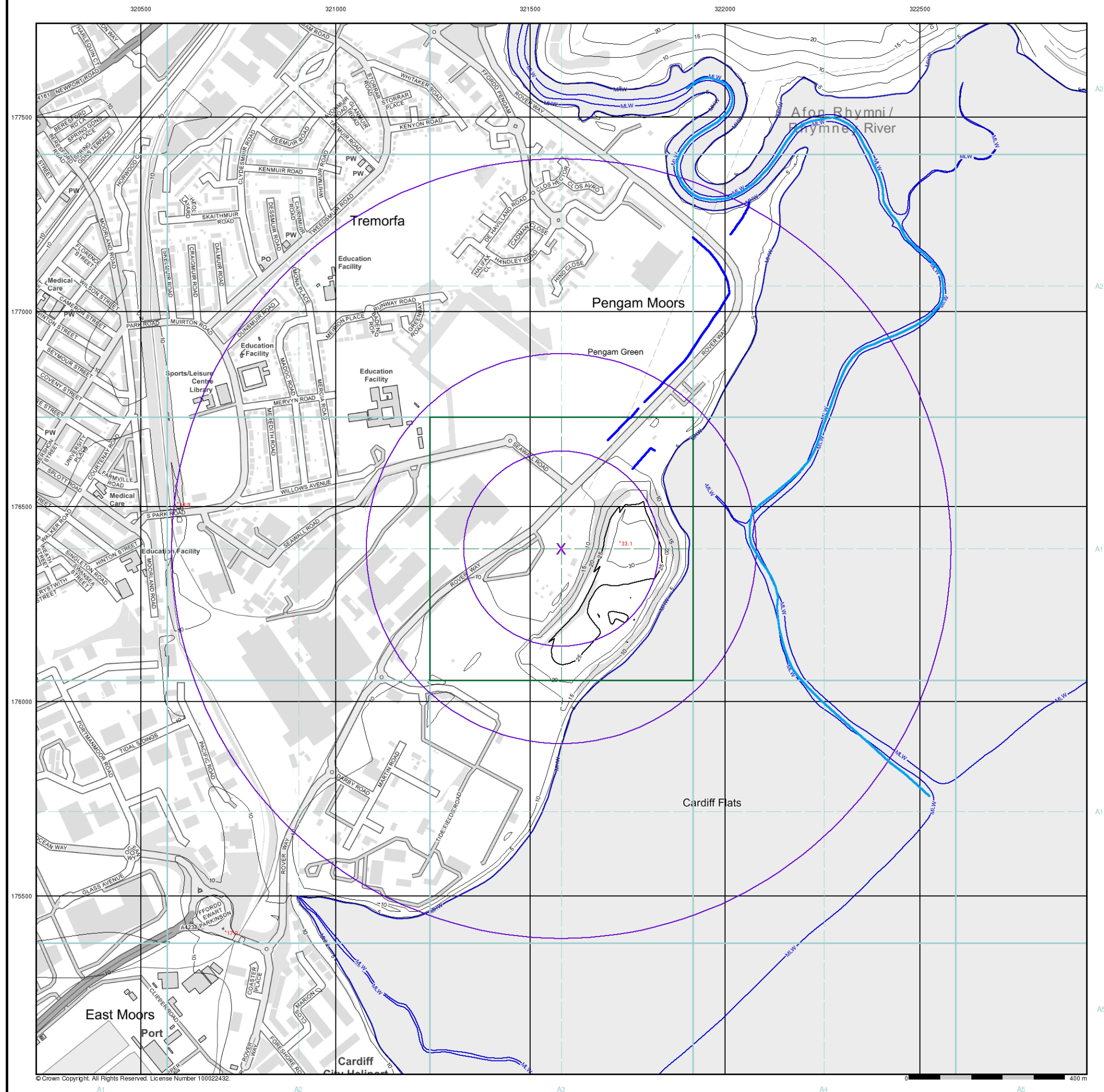


Order Details

Order Number: 188504369_1_1
 Customer Ref: 14958-DE
 National Grid Reference: 321580, 176390
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Site at 321570, 176410





General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

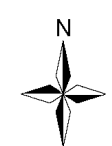
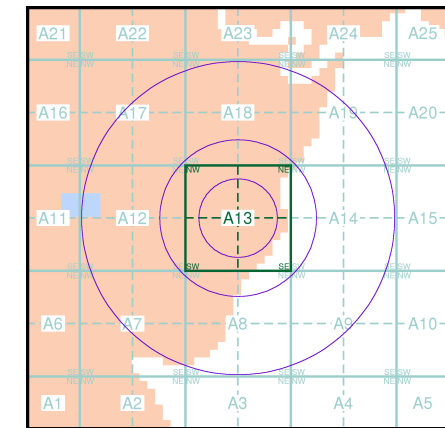
Risk of Flooding from Surface Water

- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property

E/NRW Suitability Map - Slice A



Order Details

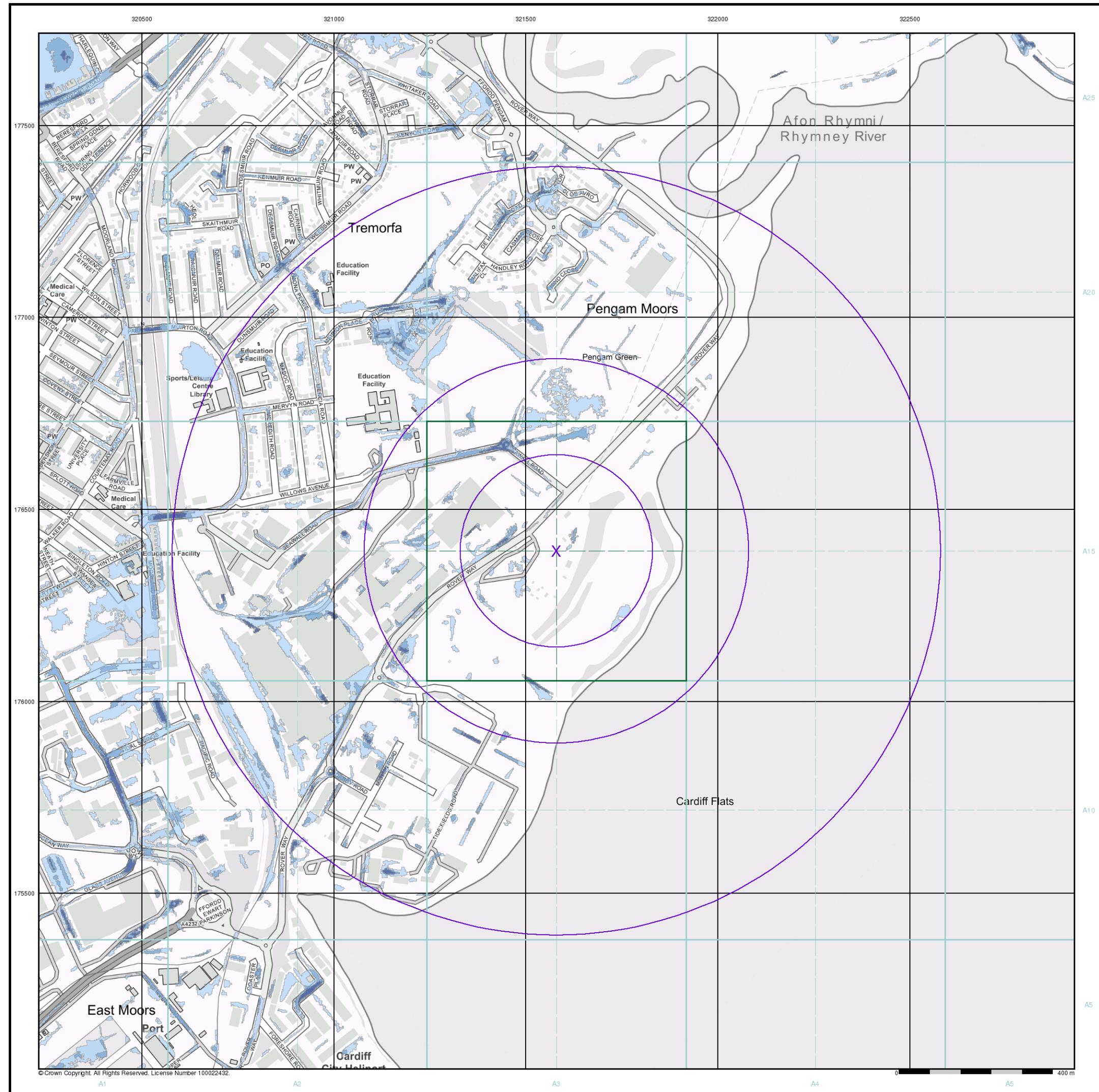
Order Number: 188504369_1_1
Customer Ref: 14958-DE
National Grid Reference: 321580, 176390
Slice: A
Site Area (Ha): 0.01
Search Buffer (m): 1000

Site Details

Site at 321570, 176410



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



ANNEX B
Risk Assessment Definitions

The contaminated land regime is set out in Part IIA of the Environmental Protection Act (EPA) 1990 and was introduced on the 1st April 2000 in England and 1st July 2001 in Wales. A similar regime was introduced in Scotland on 14th July 2000.

Part IIA was introduced to achieve two aims:

- (1) The identification of contaminated land
- (2) The remediation of contaminated land that poses an unacceptable risk to human health and/or the environment

Under Part IIA the statutory definition of 'contaminated land' is:

"any land which appears to the local authority in whose area it is situated, to be in such a condition, by reason of substances in, on, or under the land, that:

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

For land to be classified as 'Contaminated Land' there must be a '**pollutant linkage**'. A pollutant linkage requires three essential elements:

- (1) A **CONTAMINANT** (hazard) - a substance that is in, on or under the land and has the potential to cause harm or to cause pollution of controlled waters
- (2) A **RECEPTOR** (target) - something which could be adversely affected by a contaminant
- (3) A **PATHWAY** - a route or means which either allows the contaminant to cause significant harm to that receptor, or that there is a significant possibility of such harm being caused to the receptor, or that pollution of controlled waters is being or likely to be caused.

The term 'Risk' is widely used in different contexts and situations, but a prescriptive definition is given by the Guidelines for Environmental Risk Assessment and Management (DEFRA *et al*, 2000):

'Risk is a combination of the probability, or frequency, of occurrence of a defined hazard and the magnitude of the consequences of the occurrence'.

A 'Hazard' is defined as '*a property or situation that in particular circumstances could lead to harm*'.

The classification of consequences and probability and determining the risk category are defined in the following sections.

Classification of Consequence

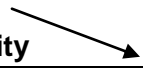
| Table A Classification of Consequence | |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification | Definition |
| Severe | <ul style="list-style-type: none"> • Short term (acute) risk to human health likely to result in significant harm • Short term risk to controlled waters • Catastrophic damage to buildings/structures • Short term risk to an ecosystem or organism within the particular ecosystem |
| Medium | <ul style="list-style-type: none"> • Chronic damage to human health (long term risk) • Pollution of a sensitive water resource • A significant change in an ecosystem or organism within the ecosystem |
| Mild | <ul style="list-style-type: none"> • Pollution of non-sensitive water resources • Significant damage to buildings/structures |
| Negligible | <ul style="list-style-type: none"> • Harm (not necessarily significant) which may result in financial loss • Non permanent health effects to humans (easily prevented by PPE for example) • Easily repairable effects of structural (building) damage |

Classification of Probability

| Table B Classification of Probability | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification | Definition |
| High | <ul style="list-style-type: none"> • There is a complete pollution linkage and an event appears very likely to occur in the short term and is inevitable in the long term. • Evidence of harm to the receptor |
| Medium | <ul style="list-style-type: none"> • There is a complete pollution linkage which means that it is probable that an event will occur • The event is not inevitable but possible in short term and likely in the long term |
| Low | <ul style="list-style-type: none"> • There is a complete pollution linkage and circumstances are possible under which an event could occur • It is not certain that an event will occur in the long term, and it is less likely to occur in the short term |
| Negligible | <ul style="list-style-type: none"> • There is a complete pollution linkage but circumstances are such that it is improbable that an event would occur even in the long term |

Risk Assessment Matrix

By comparing the consequences of a risk and the probability of the risk of a pollution linkage, the likely risk category can be determined as shown in **Table C** below.

| Table C Risk Assessment Matrix | | | | | |
|---------------------------------------------------------------------------------------------------------------|------------|------------------------|--------------|--------------|------------|
| Increasing acceptability  | | Consequence | | | |
| | | Severe | Medium | Mild | Negligible |
| Probability | High | High | High | Medium / Low | Near zero |
| | Medium | High | Medium | Low | Near zero |
| | Low | High / medium | Medium / Low | Low | Near zero |
| | Negligible | High / medium / Low | Medium / Low | Low | Near zero |

High Risk

There is a high probability that severe harm could risk a receptor, or there is evidence that a receptor is being harmed. The risk if realised is likely to result in liability, and urgent investigation or remediation will be required.

Medium Risk

It is probable that harm will arise to a receptor. However it is relatively unlikely that such harm would be severe, or if harm does occur the harm is likely to be relatively mild. Investigation will be required to determine the liability, and some remedial works may be required in the long term.

Low Risk

It is possible that harm may arise to a receptor, but it is likely that the harm would be mild.

Near Zero Risk

There is a very low risk of harm to the receptor. In the event of harm being realised the harm is not likely to be severe.

ANNEX C
Machine and Hand Excavated
Trial Pit Logs



Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:

HD01

Sheet 1 of 1

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords: -
Level:

Date:
04/01/2019

Location:

Dimensions:


Depth
0.20

Scale:

1:25

Logged:

Client:

| Water Strike | Samples & In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|--------------|---------------------------|------|---------|-----------|-----------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---|
| | Depth | Type | Results | | | | | |
| | | | | 0.20 | |  | MADE GROUND: Black, sandy GRAVEL to COBBLE including brick, concrete and slag. | |
| | | | | | | | End of Pit at 0.200m | |
| | | | | | | | | 1 |
| | | | | | | | | 2 |
| | | | | | | | | 3 |
| | | | | | | | | 4 |
| | | | | | | | | 5 |

Stability:

Remarks:



Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:

HD02

Sheet 1 of 1

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords: -
Level:

Date:
04/01/2019


Location:

Dimensions:

Depth
0.20

Scale:
1:25
Logged:

Client:

| Water Strike | Samples & In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|--------------|---------------------------|------|---------|-----------|-----------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---|
| | Depth | Type | Results | | | | | |
| | | | | 0.20 | |  | MADE GROUND: Black, sandy GRAVEL to COBBLE including brick, concrete and slag. | |
| | | | | | | | End of Pit at 0.200m | |
| | | | | | | | | 1 |
| | | | | | | | | 2 |
| | | | | | | | | 3 |
| | | | | | | | | 4 |
| | | | | | | | | 5 |

Stability:

Remarks:



Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:

TP01

Sheet 1 of 1

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords: -
Level:

Date:
11/09/2018

Location:

Dimensions:

Depth
3.60



Scale:
1:25
Logged:

Client:

| Water Strike | Samples & In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|--------------|---------------------------|------|---------|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| | Depth | Type | Results | | | | | |
| | | | | 0.70 | | | MADE GROUND: Grey, sandy, angular to sub-angular, GRAVEL to COBBLE of slag with occasional boulder of slag. Contains very rare metal and timber fragments. Horizon required breaker for excavation. | |
| | | | | 1.50 | | | MADE GROUND: Black, sandy (ashy), angular to sub-rounded GRAVEL to COBBLE of crushed concrete, shale, slag, occasional coal fragment. Contains pockets of yellow sand. Buried railway track and sleepers encountered. Slow digging with toothed bucket. | 1 |
| | | | | 2.60 | | | MADE GROUND: Dark brown to black, sandy GRAVEL including brick, furnace bricks, concrete and very occasional timber and fabric. Difficult to dig with toothed bucket. | 2 |
| | | | | 3.60 | | | MADE GROUND: Black, very sandy, GRAVEL to gravelly SAND. Includes brick fragments, shale and rare coal. Slow dig with toothed bucket. | 3 |
| | | | | | | | End of Pit at 3.600m | 4 |
| | | | | | | | | 5 |

Stability:

Remarks: Trial Pit Dry



Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:

TP03

Sheet 1 of 1

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords: -
Level:

Date:
11/09/2018

Location:

Dimensions:

Depth
3.70



Scale:
1:25
Logged:

Client:

| Water Strike | Samples & In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|--------------|---------------------------|------|---------|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| | Depth | Type | Results | | | | | |
| | | | | 0.60 | | | MADE GROUND: Grey-brown, very slightly silty/clayey, sandy angular GRAVEL to COBBLE of slag. | |
| | | | | 1.50 | | | MADE GROUND: Black, very slightly silty/clayey sandy angular to sub-angular GRAVEL to COBBLE including brick, slag, clinker and very rare metal fragments. | 1 |
| | | | | 2.30 | | | MADE GROUND: Black, sandy GRAVEL to COBBLE including brick and very occasional metal fragment. | 2 |
| | | | | 3.70 | | | MADE GROUND: Black, sandy sub-rounded to angular GRAVEL including shale, vesicular slag, brick and rare coal. Required breaker to excavate. | 3 |
| | | | | | | | End of Pit at 3.700m | 4 |
| | | | | | | | | 5 |

Stability:

Remarks: Trial Pit Dry



Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Trial Pit No:

TP09

Sheet 1 of 1

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords: -
Level:

Date:
11/09/2018

Location:

Dimensions:

Depth
3.80

Scale:
1:25
Logged:

Client:

| Water Strike | Samples & In Situ Testing | | | Depth (m) | Level (m) | Legend | Stratum Description | |
|--------------|---------------------------|------|---------|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| | Depth | Type | Results | | | | | |
| | | | | 0.35 | | | MADE GROUND: Brown, sandy GRAVEL of slag including occasional fragments of metal and timber. | |
| | | | | 1.00 | | | MADE GROUND: Firm, black, sandy SILT/CLAY (Settlement fines?). | |
| | | | | | | | MADE GROUND: Brown to black, very slightly silty, sandy GRAVEL to COBBLE, with occasional boulder, including brick, shale, furnace brick, slag and occasional metal. | 1 |
| | | | | | | | | 2 |
| | | | | | | | | 3 |
| | | | | 3.80 | | | End of Pit at 3.800m | 4 |
| | | | | | | | | 5 |

Stability:

Remarks: Trial Pit Dry

ANNEX D
Rotary Borehole Logs



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH01D

Sheet 1 of 1

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords:

Hole Type
RO

Location:

Level:

Scale
1:100

Client:

Dates: 04/12/2018 -

Logged By

| Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Well | Legend | Stratum Description | |
|---------------|----------------------------|------|---------|-----------|-----------|------|--------|-------------------------------------------------------------------------|----|
| | Depth (m) | Type | Results | | | | | | |
| | | | | 6.50 | | | | MADE GROUND: Black ash and spoil (DRILLERS DESCRIPTION) | 1 |
| | | | | | | | | | 2 |
| | | | | | | | | | 3 |
| | | | | | | | | | 4 |
| | | | | | | | | | 5 |
| | | | | | | | | | 6 |
| | | | | 9.30 | | | | Black to brown, silty sand with gravel fragments (DRILLERS DESCRIPTION) | 7 |
| | | | | | | | | | 8 |
| | | | | | | | | | 9 |
| | | | | | | | | Grey alluvium with gravels (DRILLERS DESCRIPTION) | 10 |
| | | | | | | | | | 11 |
| | | | | | | | | | 12 |
| | | | | | | | | | 13 |
| | | | | | | | | | 14 |
| | | | | | | | | | 15 |
| | | | | | | | | | 16 |
| | | | | | | | | | 17 |
| | | | | 18.30 | | | | | 18 |
| | | | | 19.00 | | | | Brown, silty sandy GRAVEL (DRILLERS DESCRIPTION) | 19 |
| | | | | | | | | End of Borehole at 19.000m | 20 |

Remarks:



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH01S

Sheet 1 of 1

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords:

Hole Type
RO

Location:

Level:

Scale
1:100

Client:

Dates: 06/12/2018 -

Logged By

| Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Well | Legend | Stratum Description | |
|---------------|----------------------------|------|---------|-----------|-----------|------|--------|---------------------------------------------------------|----|
| | Depth (m) | Type | Results | | | | | | |
| | | | | 6.50 | | | | MADE GROUND: Black ash and spoil (DRILLERS DESCRIPTION) | 1 |
| | | | | | | | | | 2 |
| | | | | | | | | | 3 |
| | | | | | | | | | 4 |
| | | | | | | | | | 5 |
| | | | | | | | | | 6 |
| | | | | | | | | End of Borehole at 6.500m | 7 |
| | | | | | | | | | 8 |
| | | | | | | | | | 9 |
| | | | | | | | | | 10 |
| | | | | | | | | | 11 |
| | | | | | | | | | 12 |
| | | | | | | | | | 13 |
| | | | | | | | | | 14 |
| | | | | | | | | | 15 |
| | | | | | | | | | 16 |
| | | | | | | | | | 17 |
| | | | | | | | | | 18 |
| | | | | | | | | | 19 |
| | | | | | | | | | 20 |

Remarks:



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH02D

Sheet 1 of 1

Project Name: Celsa Mineral Site Project No: 14958 Co-ords:

Hole Type
RO

Location: Level: Scale
1:100

Client: Dates: 06/12/2018 - Logged By

| Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Well | Legend | Stratum Description | |
|------------------|----------------------------|------|---------|--------------|--------------|------|--------|----------------------------------------------------------------------------|----|
| | Depth (m) | Type | Results | | | | | | |
| | | | | 6.40 | | | | MADED GROUND: Black ash and spoil (DRILLERS DESCRIPTION) | 1 |
| | | | | | | | | | 2 |
| | | | | | | | | | 3 |
| | | | | | | | | | 4 |
| | | | | | | | | | 5 |
| | | | | | | | | | 6 |
| | | | | | | | | Black and brown, silty sand with gravel and cobbles (DRILLERS DESCRIPTION) | 7 |
| | | | | | | | | | 8 |
| | | | | 9.10 | | | | Grey clay alluvium (DRILLERS DESCRIPTION) | 9 |
| | | | | | | | | | 10 |
| | | | | | | | | | 11 |
| | | | | | | | | | 12 |
| | | | | | | | | | 13 |
| | | | | | | | | | 14 |
| | | | | | | | | | 15 |
| | | | | | | | | | 16 |
| | | | | 16.80 | | | | Red-brown CLAY (DRILLERS DESCRIPTION) | 17 |
| | | | | 17.60 | | | | Red-brown weathered MARL (DRILLERS DESCRIPTION) | 18 |
| | | | | | | | | | 19 |
| | | | | 19.00 | | | | End of Borehole at 19.000m | 20 |

Remarks:



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH02S

Sheet 1 of 1

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords:

Hole Type
RO

Location:

Level:

Scale
1:100

Client:

Dates: 07/12/2018 -

Logged By

| Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Well | Legend | Stratum Description | |
|---------------|----------------------------|------|---------|-----------|-----------|------|--------|---------------------------------------------------------|----|
| | Depth (m) | Type | Results | | | | | | |
| | | | | 3.50 | | | | MADE GROUND: Black ash and spoil (DRILLERS DESCRIPTION) | 1 |
| | | | | | | | | | 2 |
| | | | | | | | | | 3 |
| | | | | | | | | End of Borehole at 3.500m | 4 |
| | | | | | | | | | 5 |
| | | | | | | | | | 6 |
| | | | | | | | | | 7 |
| | | | | | | | | | 8 |
| | | | | | | | | | 9 |
| | | | | | | | | | 10 |
| | | | | | | | | | 11 |
| | | | | | | | | | 12 |
| | | | | | | | | | 13 |
| | | | | | | | | | 14 |
| | | | | | | | | | 15 |
| | | | | | | | | | 16 |
| | | | | | | | | | 17 |
| | | | | | | | | | 18 |
| | | | | | | | | | 19 |
| | | | | | | | | | 20 |

Remarks: Shallow obstruction at 3.5m.



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH03D

Sheet 1 of 2

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords:

Hole Type
RO

Location:

Level:

Scale
1:100

Client:

Dates: 10/12/2018 -

Logged By

| Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Well | Legend | Stratum Description | |
|------------------|----------------------------|------|---------|--------------|--------------|------|--------|-----------------------------------------------|----|
| | Depth (m) | Type | Results | | | | | | |
| | | | | 4.70 | | | | MADE GROUND (DRILLERS DESCRIPTION) | 1 |
| | | | | | | | | | 2 |
| | | | | | | | | | 3 |
| | | | | | | | | | 4 |
| | | | | | | | | Sandy CLAY with gravel (DRILLERS DESCRIPTION) | 5 |
| | | | | | | | | | 6 |
| | | | | | | | | | 7 |
| | | | | 7.80 | | | | CLAY (DRILLERS DESCRIPTION) | 8 |
| | | | | | | | | | 9 |
| | | | | | | | | | 10 |
| | | | | | | | | | 11 |
| | | | | | | | | | 12 |
| | | | | | | | | | 13 |
| | | | | | | | | | 14 |
| | | | | | | | | | 15 |
| | | | | | | | | | 16 |
| | | | | | | | | | 17 |
| | | | | | | | | | 18 |
| | | | | | | | | | 19 |
| | | | | | | | | | 20 |

Remarks:



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH03D

Sheet 2 of 2

Project Name: Celsa Mineral Site

Project No:
14958

Co-ords:

Hole Type
RO

Location:

Level:

Scale
1:100

Client:

Dates: 10/12/2018 -

Logged By

| Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Well | Legend | Stratum Description | |
|---------------|----------------------------|------|---------|-----------|-----------|------|--------|-----------------------------|----|
| | Depth (m) | Type | Results | | | | | | |
| | | | | | | | | CLAY (DRILLERS DESCRIPTION) | 21 |
| | | | | 22.30 | | | | | 22 |
| | | | | | | | | MARL (DRILLERS DESCRIPTION) | 23 |
| | | | | 23.70 | | | | | 24 |
| | | | | | | | | End of Borehole at 23.700m | 25 |
| | | | | | | | | | 26 |
| | | | | | | | | | 27 |
| | | | | | | | | | 28 |
| | | | | | | | | | 29 |
| | | | | | | | | | 30 |
| | | | | | | | | | 31 |
| | | | | | | | | | 32 |
| | | | | | | | | | 33 |
| | | | | | | | | | 34 |
| | | | | | | | | | 35 |
| | | | | | | | | | 36 |
| | | | | | | | | | 37 |
| | | | | | | | | | 38 |
| | | | | | | | | | 39 |
| | | | | | | | | | 40 |

Remarks:



Terra Firma (Wales) Limited
5 Deryn Court, Wharfedale Road
Pentwyn, Cardiff
CF23 7HA

Tel: 02920 735354
info@terrafirmawales.co.uk
www.terrafirmawales.co.uk

Borehole No.

BH03S

Sheet 1 of 1

Project Name: Celsa Mineral Site Project No: 14958 Co-ords:

Hole Type
RO

Location: Level:

Scale
1:100

Client: Dates: 07/12/2018 -

Logged By

| Water Strikes | Sample and In Situ Testing | | | Depth (m) | Level (m) | Well | Legend | Stratum Description | |
|------------------|----------------------------|------|---------|--------------|--------------|------|--------|-------------------------------------------------------|----|
| | Depth (m) | Type | Results | | | | | | |
| | | | | 6.00 | | | | MADE GROUND: Black, ashy spoil (DRILLERS DESCRIPTION) | 1 |
| | | | | | | | | | 2 |
| | | | | | | | | | 3 |
| | | | | | | | | | 4 |
| | | | | | | | | | 5 |
| | | | | | | | | | 6 |
| | | | | | | | | End of Borehole at 6.000m | 7 |
| | | | | | | | | | 8 |
| | | | | | | | | | 9 |
| | | | | | | | | | 10 |
| | | | | | | | | | 11 |
| | | | | | | | | | 12 |
| | | | | | | | | | 13 |
| | | | | | | | | | 14 |
| | | | | | | | | | 15 |
| | | | | | | | | | 16 |
| | | | | | | | | | 17 |
| | | | | | | | | | 18 |
| | | | | | | | | | 19 |
| | | | | | | | | | 20 |

Remarks:

ANNEX E
Soil Chemical Test Results



Certificate of Analysis

Certificate Number 18-26730-1

22-Nov-18

Client Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Our Reference 18-26730-1

Client Reference (not supplied)

Order No (not supplied)

Contract Title CELSA

Description 6 Soil samples.

Date Received 09-Nov-18

Date Started 09-Nov-18

Date Completed 22-Nov-18

Test Procedures Identified by prefix DETSn (details on request).

Notes This report supersedes 18-26730, additional testing added

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Adam Fenwick
Contracts Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 18-26730-1

Client Ref

Contract Title CELSA

| Sample ID | Depth | Lab No | Completed | Matrix Description |
|-----------|-------|---------|------------|----------------------------------------------------------------------------------------------|
| TP01 | 1 | 1418750 | 16/11/2018 | Black sandy GRAVEL (Made ground - coal (sample matrix outside MCERTS scope of accreditation) |
| TP03 | 0.4 | 1418751 | 16/11/2018 | Grey GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| TP03 | 0.7 | 1418752 | 16/11/2018 | Very dark brown gravelly, clayey SAND (Possible made ground - brick) |
| TP03 | 1.8 | 1418753 | 16/11/2018 | Very dark brown gravelly, clayey SAND |
| TP09 | 0.3 | 1418754 | 16/11/2018 | Dark brown sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| TP09 | 1.1 | 1418755 | 16/11/2018 | Dark brown gravelly, clayey SAND |

Summary of Chemical Analysis

Soil Samples

Our Ref 18-26730-1

Client Ref

Contract Title CELSA

| Lab No | 1418750 | 1418751 | 1418752 | 1418753 | 1418754 | 1418755 |
|---------------|----------|----------|----------|----------|----------|----------|
| Sample ID | TP01 | TP03 | TP03 | TP03 | TP09 | TP09 |
| Depth | 1.00 | 0.40 | 0.70 | 1.80 | 0.30 | 1.10 |
| Other ID | | | | | | |
| Sample Type | SOIL | SOIL | SOIL | SOIL | SOIL | SOIL |
| Sampling Date | 06/11/18 | 06/11/18 | 06/11/18 | 06/11/18 | 06/11/18 | 06/11/18 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | | |
|---------------------------------|-------------|------|-------|--------|--------|--------|--------|--------|--------|
| Asbestos Quantification | DETSC 1102 | 0 | | | | | | Y | Y |
| Preparation | | | | | | | | | |
| Moisture Content | DETSC 1004 | 0.1 | % | 3.0 | 4.1 | 9.0 | 9.5 | 2.9 | 4.6 |
| Metals | | | | | | | | | |
| Antimony | DETSC 2301* | 1 | mg/kg | 3.2 | 18 | 18 | 13 | 12 | 27 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 150 | 3.1 | 25 | 15 | 34 | 13 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 0.9 | 0.4 | 0.4 | 0.3 | 0.5 | 0.4 |
| Boron, Water Soluble | DETSC 2123# | 0.2 | mg/kg | 2.6 | 12 | 5.9 | 3.9 | 13 | 13 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 0.4 | 0.9 | 3.7 | 2.3 | 1.4 | 20 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 82 | 1200 | 1100 | 740 | 790 | 680 |
| Chromium III | DETSC 2301* | 0.15 | mg/kg | 82 | 1200 | 1100 | 740 | 790 | 680 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 61 | 420 | 180 | 88 | 4300 | 980 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 40 | 120 | 290 | 220 | 94 | 1700 |
| Manganese | DETSC 2301# | 20 | mg/kg | 1000 | 27000 | 22000 | 32000 | 15000 | 11000 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.28 | 0.07 | 1.7 | 0.86 | 0.24 | 1.3 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 3.2 | 16 | 7.6 | 6.6 | 9.5 | 26 |
| Nickel | DETSC 2301# | 1 | mg/kg | 37 | 370 | 110 | 270 | 31 | 120 |
| Selenium | DETSC 2301# | 0.5 | mg/kg | 2.5 | 6.6 | 5.4 | 11 | 4.9 | 2.7 |
| Zinc | DETSC 2301# | 1 | mg/kg | 110 | 580 | 880 | 470 | 480 | 8300 |
| Inorganics | | | | | | | | | |
| Loss on Ignition at 440oC | DETSC 2003# | 0.01 | % | 36 | | | | | |
| pH | DETSC 2008# | | | 9.8 | 11.3 | 11.4 | 11.5 | 11.4 | 10.0 |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | < 0.1 | < 0.1 | 1.1 | 2.1 | 0.5 | 3.8 |
| Cyanide, Complex | DETSC 2130* | 0.2 | mg/kg | < 0.2 | < 0.2 | 1.1 | 2.1 | 0.5 | 3.8 |
| Organic matter | DETSC 2002# | 0.1 | % | > 25 | 0.4 | 4.9 | 2.5 | 3.9 | 4.8 |
| Sulphate Aqueous Extract as SO4 | DETSC 2076# | 10 | mg/l | 130 | 110 | 79 | 59 | 110 | 270 |
| Sulphate as SO4, Total | DETSC 2321# | 0.01 | % | 0.11 | 0.30 | 0.26 | 0.28 | 0.24 | 0.55 |
| Petroleum Hydrocarbons | | | | | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | 1.6 | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 | < 1.2 | 7.2 | 5.6 | 10 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | 16 | < 1.5 | 19 | 37 | 59 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | < 3.4 | 79 | 48 | 110 | 200 | 360 |
| Aliphatic C35-C44 | DETSC 3072* | 3.4 | mg/kg | < 3.4 | 7.8 | < 3.4 | 6.7 | 16 | 33 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | 96 | 49 | 130 | 250 | 430 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 | 1.1 | 1.8 | < 0.9 | < 0.9 |



Summary of Chemical Analysis

Soil Samples

Our Ref 18-26730-1

Client Ref

Contract Title CELSA

| Lab No | 1418750 | 1418751 | 1418752 | 1418753 | 1418754 | 1418755 |
|---------------|----------|----------|----------|----------|----------|----------|
| Sample ID | TP01 | TP03 | TP03 | TP03 | TP09 | TP09 |
| Depth | 1.00 | 0.40 | 0.70 | 1.80 | 0.30 | 1.10 |
| Other ID | | | | | | |
| Sample Type | SOIL | SOIL | SOIL | SOIL | SOIL | SOIL |
| Sampling Date | 06/11/18 | 06/11/18 | 06/11/18 | 06/11/18 | 06/11/18 | 06/11/18 |
| Sampling Time | n/s | n/s | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | | | |
|-------------------------|-------------|------|-------|--------|--------|--------|--------|--------|------|
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 | 6.7 | 11 | 2.5 | 2.8 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | < 0.6 | 31 | 51 | 38 | 49 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | < 1.4 | 150 | 260 | 250 | 310 |
| Aromatic C35-C44 | DETSC 3072* | 1.4 | mg/kg | < 1.4 | < 1.4 | 13 | 22 | 37 | 47 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 | 190 | 330 | 290 | 370 |
| TPH Ali/Aro Total | DETSC 3072* | 10 | mg/kg | < 10 | 96 | 240 | 460 | 530 | 790 |
| PAHs | | | | | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.44 | 0.04 | 0.38 | < 0.30 | 0.16 | 0.16 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.30 | < 0.30 | < 0.03 | 0.05 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.24 | < 0.03 | < 0.30 | < 0.30 | 0.05 | 0.05 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.22 | < 0.03 | 0.45 | < 0.30 | 0.04 | 0.07 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.62 | 0.11 | 1.0 | 0.34 | 0.35 | 0.68 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.08 | < 0.03 | 4.9 | < 0.30 | 0.05 | 0.14 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.15 | 0.18 | 3.1 | 1.2 | 0.33 | 0.99 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.13 | 0.18 | 2.9 | 1.1 | 0.32 | 1.3 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.06 | 0.06 | 1.4 | 0.75 | < 0.03 | 0.35 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.15 | 0.11 | 1.5 | 0.69 | < 0.03 | 0.66 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.06 | 0.08 | 1.7 | 0.91 | 0.19 | 0.96 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.03 | 0.84 | 0.42 | 0.06 | 0.34 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.03 | 0.03 | 1.2 | 0.67 | 0.10 | 0.59 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | 0.03 | 0.67 | 0.38 | 0.08 | 0.48 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 | < 0.30 | < 0.30 | < 0.03 | 0.15 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.04 | 0.04 | 0.87 | 0.43 | 0.10 | 0.70 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 2.2 | 0.91 | 21 | < 6.36 | 1.8 | 7.6 |
| PCBs | | | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | 0.02 | < 0.01 | < 0.01 | 0.12 | 1.1 |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.57 |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.05 | 0.42 |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.27 |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.20 |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.34 |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.07 |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | < 0.01 | 0.02 | < 0.01 | < 0.01 | 0.17 | 2.9 |
| Phenols | | | | | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 | 1.0 |

Summary of Asbestos Analysis Soil Samples

Our Ref 18-26730-1

Client Ref

Contract Title CELSA

| Lab No | Sample ID | Material Type | Result | Comment* | Analyst |
|---------|-----------|---------------|------------|------------------------------------------------------------------------------------------------------|-----------------|
| 1418750 | TP01 1.00 | SOIL | NAD | none | A Christodoulou |
| 1418751 | TP03 0.40 | SOIL | NAD | none | A Christodoulou |
| 1418752 | TP03 0.70 | SOIL | NAD | none | A Christodoulou |
| 1418753 | TP03 1.80 | SOIL | NAD | none | A Christodoulou |
| 1418754 | TP09 0.30 | SOIL | Chrysotile | Chrysotile Present in microscopic bitumen fragments | A Christodoulou |
| 1418755 | TP09 1.10 | SOIL | Chrysotile | Chrysotile Present in microscopic loose fibrous asbestos debris and in microscopic bitumen fragments | A Christodoulou |

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis

Soil Samples

Our Ref 18-26730-1

Client Ref

Contract Title CELSA

| | | |
|---------------|----------|----------|
| Lab No | 1418754 | 1418755 |
| Sample ID | TP09 | TP09 |
| Depth | 0.30 | 1.10 |
| Other ID | | |
| Sample Type | SOIL | SOIL |
| Sampling Date | 06/11/18 | 06/11/18 |
| Sampling Time | | |

| Test | Method | Units | | | |
|-----------------------------------------|-----------|----------|---------|-------|--|
| Total Mass% Asbestos (a+b+c) | DETS 1102 | Mass % | < 0.001 | 0.026 | |
| Gravimetric Quantification (a) | DETS 1102 | Mass % | 0.001 | 0.026 | |
| Detailed Gravimetric Quantification (b) | DETS 1102 | Mass % | na | na | |
| Quantification by PCOM (c) | DETS 1102 | Mass % | na | na | |
| Potentially Respirable Fibres (d) | DETS 1102 | Fibres/g | na | na | |

Breakdown of Gravimetric Analysis (a)

| | | | | | |
|-----------------------|--|------|---------|--------|---------|
| Mass of Sample | | g | 162.42 | 165.62 | |
| ACMs present* | | type | Bitumen | LFAD | Bitumen |
| Mass of ACM in sample | | g | 0.01 | 0.05 | 0.01 |
| % ACM by mass | | % | 0.01 | 0.03 | 0.00 |
| % asbestos in ACM | | % | 8.00 | 85 | 8 |
| % asbestos in sample | | % | 0.00 | 0.026 | 0.000 |

Breakdown of Detailed Gravimetric Analysis (b)

| | | | | | |
|--------------------------------|--|--------|----|----|--|
| % Amphibole bundles in sample | | Mass % | na | na | |
| % Chrysotile bundles in sample | | Mass % | na | na | |

Breakdown of PCOM Analysis (c)

| | | | | | |
|-------------------------------|--|--------|----|----|--|
| % Amphibole fibres in sample | | Mass % | na | na | |
| % Chrysotile fibres in sample | | Mass % | na | na | |

Breakdown of Potentially Respirable Fibre Analysis (d)

| | | | | | |
|-------------------|--|----------|----|----|--|
| Amphibole fibres | | Fibres/g | na | na | |
| Chrysotile fibres | | Fibres/g | na | na | |

* Denotes test or material description outside of UKAS accreditation.
 % asbestos in Asbestos Containing Materials (ACMs) is determined by
 by reference to HSG 264.
 Recommended sample size for quantification is approximately 1kg
 # denotes deviating sample

Information in Support of the Analytical Results

Our Ref 18-26730-1

Client Ref

Contract CELSA

Containers Received & Deviating Samples

| Lab No | Sample ID | Date Sampled | Containers Received | Holding time exceeded for tests | Inappropriate container for tests |
|---------|----------------|--------------|---------------------|---------------------------------|-----------------------------------|
| 1418750 | TP01 1.00 SOIL | 06/11/18 | GJ 250ml, PT 500ml | | |
| 1418751 | TP03 0.40 SOIL | 06/11/18 | GJ 250ml, PT 500ml | | |
| 1418752 | TP03 0.70 SOIL | 06/11/18 | GJ 250ml, PT 500ml | | |
| 1418753 | TP03 1.80 SOIL | 06/11/18 | GJ 250ml, PT 500ml | | |
| 1418754 | TP09 0.30 SOIL | 06/11/18 | GJ 250ml, PT 500ml | | |
| 1418755 | TP09 1.10 SOIL | 06/11/18 | GJ 250ml, PT 500ml | | |

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Appendix A - Details of Analysis

| Method | Parameter | Units | Limit of Detection | Sample Preparation | Sub-Contracted | UKAS | MCERTS |
|------------|---------------------------------------------|----------|--------------------|--------------------|----------------|------|--------|
| DETSC 2002 | Organic matter | % | 0.1 | Air Dried | No | Yes | Yes |
| DETSC 2003 | Loss on ignition | % | 0.01 | Air Dried | No | Yes | Yes |
| DETSC 2008 | pH | pH Units | 1 | Air Dried | No | Yes | Yes |
| DETSC 2024 | Sulphide | mg/kg | 10 | Air Dried | No | Yes | Yes |
| DETSC 2076 | Sulphate Aqueous Extract as SO ₄ | mg/l | 10 | Air Dried | No | Yes | Yes |
| DETSC 2084 | Total Carbon | % | 0.5 | Air Dried | No | Yes | Yes |
| DETSC 2084 | Total Organic Carbon | % | 0.5 | Air Dried | No | Yes | Yes |
| DETSC 2119 | Ammoniacal Nitrogen as N | mg/kg | 0.5 | Air Dried | No | Yes | Yes |
| DETSC 2130 | Cyanide free | mg/kg | 0.1 | Air Dried | No | Yes | Yes |
| DETSC 2130 | Cyanide total | mg/kg | 0.1 | Air Dried | No | Yes | Yes |
| DETSC 2130 | Phenol - Monohydric | mg/kg | 0.3 | Air Dried | No | Yes | Yes |
| DETSC 2130 | Thiocyanate | mg/kg | 0.6 | Air Dried | No | Yes | Yes |
| DETSC 2321 | Total Sulphate as SO ₄ | % | 0.01 | Air Dried | No | Yes | Yes |
| DETSC 2325 | Mercury | mg/kg | 0.05 | Air Dried | No | Yes | Yes |
| DETSC 3049 | Sulphur (free) | mg/kg | 0.75 | Air Dried | No | Yes | Yes |
| DETSC2123 | Boron (water soluble) | mg/kg | 0.2 | Air Dried | No | Yes | Yes |
| DETSC2301 | Arsenic | mg/kg | 0.2 | Air Dried | No | Yes | Yes |
| DETSC2301 | Barium | mg/kg | 1.5 | Air Dried | No | Yes | Yes |
| DETSC2301 | Beryllium | mg/kg | 0.2 | Air Dried | No | Yes | Yes |
| DETSC2301 | Cadmium Available | mg/kg | 0.1 | Air Dried | No | Yes | Yes |
| DETSC2301 | Cadmium | mg/kg | 0.1 | Air Dried | No | Yes | Yes |
| DETSC2301 | Cobalt | mg/kg | 0.7 | Air Dried | No | Yes | Yes |
| DETSC2301 | Chromium | mg/kg | 0.15 | Air Dried | No | Yes | Yes |
| DETSC2301 | Copper | mg/kg | 0.2 | Air Dried | No | Yes | Yes |
| DETSC2301 | Manganese | mg/kg | 20 | Air Dried | No | Yes | Yes |
| DETSC2301 | Molybdenum | mg/kg | 0.4 | Air Dried | No | Yes | Yes |
| DETSC2301 | Nickel | mg/kg | 1 | Air Dried | No | Yes | Yes |
| DETSC2301 | Lead | mg/kg | 0.3 | Air Dried | No | Yes | Yes |
| DETSC2301 | Selenium | mg/kg | 0.5 | Air Dried | No | Yes | Yes |
| DETSC2301 | Zinc | mg/kg | 1 | Air Dried | No | Yes | Yes |
| DETSC 3072 | Ali/Aro C10-C35 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C10-C12 | mg/kg | 1.5 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C10-C12 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C10-C35 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C12-C16 | mg/kg | 1.2 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C12-C16 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C16-C21 | mg/kg | 1.5 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C16-C21 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C21-C35 | mg/kg | 3.4 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C21-C35 | mg/kg | 3.4 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C10-C12 | mg/kg | 0.9 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C10-C12 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C10-C35 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C12-C16 | mg/kg | 0.5 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C12-C16 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C16-C21 | mg/kg | 0.6 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C16-C21 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C21-C35 | mg/kg | 1.4 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C21-C35 | mg/kg | 1.4 | As Received | No | Yes | Yes |
| DETS 062 | Benzene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | Ethylbenzene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | Toluene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | Xylene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | m+p Xylene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | o Xylene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3311 | C10-C24 Diesel Range Organics (DRO) | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3311 | C24-C40 Lube Oil Range Organics (LORO) | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3311 | EPH (C10-C40) | mg/kg | 10 | As Received | No | Yes | Yes |

Appendix A - Details of Analysis

| Method | Parameter | Units | Limit of Detection | Sample Preparation | Sub-Contracted | UKAS | MCERTS |
|------------|-------------------------|-------|--------------------|--------------------|----------------|------|--------|
| DETSC 3303 | Acenaphthene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Acenaphthylene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(a)pyrene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(a)anthracene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(b)fluoranthene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(k)fluoranthene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(g,h,i)perylene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Dibenzo(a,h)anthracene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Fluoranthene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Indeno(1,2,3-c,d)pyrene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Naphthalene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Phenanthrene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Pyrene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 28 + PCB 31 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 52 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 101 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 118 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 153 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 138 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 180 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB Total | mg/kg | 0.01 | As Received | No | Yes | Yes |

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.



Certificate of Analysis

Certificate Number 19-00239

14-Jan-19

Client Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Our Reference 19-00239

Client Reference (not supplied)

Order No 14958

Contract Title CELSA

Description 2 Soil samples.

Date Received 08-Jan-19

Date Started 08-Jan-19

Date Completed 14-Jan-19

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

A handwritten signature in blue ink, appearing to read "A Fenwick", is written over a light blue horizontal line.

Adam Fenwick
Contracts Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 19-00239

Client Ref

Contract Title CELSA

| Sample ID | Depth | Lab No | Completed | Matrix Description |
|-----------|-------|---------|------------|------------------------------------------------------------------------------|
| HD01 | 0.1 | 1442212 | 14/01/2019 | Dark grey sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |
| HD02 | 0.1 | 1442213 | 14/01/2019 | Dark grey sandy GRAVEL (sample matrix outside MCERTS scope of accreditation) |

Summary of Chemical Analysis

Soil Samples

Our Ref 19-00239

Client Ref

Contract Title CELSA

| | | |
|---------------|----------|----------|
| Lab No | 1442212 | 1442213 |
| Sample ID | HD01 | HD02 |
| Depth | 0.10 | 0.10 |
| Other ID | | |
| Sample Type | SOIL | SOIL |
| Sampling Date | 04/01/19 | 04/01/19 |
| Sampling Time | n/s | n/s |

| Test | Method | LOD | Units | | |
|-------------------------------------|-------------|------|-------|--------|--------|
| Preparation | | | | | |
| Moisture Content | DETSC 1004 | 0.1 | % | 7.4 | 8.3 |
| Metals | | | | | |
| Antimony | DETSC 2301* | 1 | mg/kg | 15 | 13 |
| Arsenic | DETSC 2301# | 0.2 | mg/kg | 20 | 16 |
| Beryllium | DETSC 2301# | 0.2 | mg/kg | 0.6 | 0.5 |
| Boron, Water Soluble | DETSC 2123# | 0.2 | mg/kg | 6.3 | 6.7 |
| Cadmium | DETSC 2301# | 0.1 | mg/kg | 1.9 | 2.5 |
| Chromium | DETSC 2301# | 0.15 | mg/kg | 970 | 820 |
| Chromium III | DETSC 2301* | 0.15 | mg/kg | 970 | 820 |
| Chromium, Hexavalent | DETSC 2204* | 1 | mg/kg | < 1.0 | < 1.0 |
| Copper | DETSC 2301# | 0.2 | mg/kg | 150 | 150 |
| Lead | DETSC 2301# | 0.3 | mg/kg | 99 | 110 |
| Manganese | DETSC 2301# | 20 | mg/kg | 10000 | 9400 |
| Mercury | DETSC 2325# | 0.05 | mg/kg | 0.18 | 0.15 |
| Molybdenum | DETSC 2301# | 0.4 | mg/kg | 9.9 | 9.4 |
| Nickel | DETSC 2301# | 1 | mg/kg | 29 | 30 |
| Selenium | DETSC 2301# | 0.5 | mg/kg | 3.6 | 2.9 |
| Zinc | DETSC 2301# | 1 | mg/kg | 950 | 1100 |
| Inorganics | | | | | |
| pH | DETSC 2008# | | | 11.4 | 11.3 |
| Cyanide, Total | DETSC 2130# | 0.1 | mg/kg | 0.4 | 0.7 |
| Cyanide, Complex | DETSC 2130* | 0.2 | mg/kg | 0.4 | 0.7 |
| Organic matter | DETSC 2002# | 0.1 | % | 15 | 17 |
| Sulphate as SO ₄ , Total | DETSC 2321# | 0.01 | % | 0.21 | 0.20 |
| Petroleum Hydrocarbons | | | | | |
| Aliphatic C5-C6 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 |
| Aliphatic C6-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 |
| Aliphatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 |
| Aliphatic C10-C12 | DETSC 3072# | 1.5 | mg/kg | < 1.5 | < 1.5 |
| Aliphatic C12-C16 | DETSC 3072# | 1.2 | mg/kg | < 1.2 | < 1.2 |
| Aliphatic C16-C21 | DETSC 3072# | 1.5 | mg/kg | 3.6 | < 1.5 |
| Aliphatic C21-C35 | DETSC 3072# | 3.4 | mg/kg | 30 | < 3.4 |
| Aliphatic C35-C40 | DETSC 3072* | 3.4 | mg/kg | < 3.4 | < 3.4 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | mg/kg | 34 | < 10 |
| Aromatic C5-C7 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 |
| Aromatic C7-C8 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 |
| Aromatic C8-C10 | DETSC 3321* | 0.01 | mg/kg | < 0.01 | < 0.01 |
| Aromatic C10-C12 | DETSC 3072# | 0.9 | mg/kg | < 0.9 | < 0.9 |
| Aromatic C12-C16 | DETSC 3072# | 0.5 | mg/kg | < 0.5 | < 0.5 |
| Aromatic C16-C21 | DETSC 3072# | 0.6 | mg/kg | < 0.6 | < 0.6 |
| Aromatic C21-C35 | DETSC 3072# | 1.4 | mg/kg | < 1.4 | < 1.4 |

Summary of Chemical Analysis

Soil Samples

Our Ref 19-00239

Client Ref

Contract Title CELSA

| | | |
|---------------|----------|----------|
| Lab No | 1442212 | 1442213 |
| Sample ID | HD01 | HD02 |
| Depth | 0.10 | 0.10 |
| Other ID | | |
| Sample Type | SOIL | SOIL |
| Sampling Date | 04/01/19 | 04/01/19 |
| Sampling Time | n/s | n/s |

| Test | Method | LOD | Units | | |
|-------------------------|-------------|------|-------|--------|--------|
| Aromatic C35-C40 | DETSC 3072* | 1.4 | mg/kg | < 1.4 | < 1.4 |
| Aromatic C5-C35 | DETSC 3072* | 10 | mg/kg | < 10 | < 10 |
| TPH Ali/Aro Total | DETSC 3072* | 10 | mg/kg | 34 | < 10 |
| PAHs | | | | | |
| Naphthalene | DETSC 3303# | 0.03 | mg/kg | 0.30 | 0.15 |
| Acenaphthylene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 |
| Acenaphthene | DETSC 3303# | 0.03 | mg/kg | 0.16 | 0.11 |
| Fluorene | DETSC 3303 | 0.03 | mg/kg | 0.15 | 0.11 |
| Phenanthrene | DETSC 3303# | 0.03 | mg/kg | 0.45 | 0.49 |
| Anthracene | DETSC 3303 | 0.03 | mg/kg | 0.08 | 0.10 |
| Fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.38 | 0.51 |
| Pyrene | DETSC 3303# | 0.03 | mg/kg | 0.32 | 0.42 |
| Benzo(a)anthracene | DETSC 3303# | 0.03 | mg/kg | 0.14 | 0.20 |
| Chrysene | DETSC 3303 | 0.03 | mg/kg | 0.20 | 0.26 |
| Benzo(b)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.24 | 0.23 |
| Benzo(k)fluoranthene | DETSC 3303# | 0.03 | mg/kg | 0.23 | 0.09 |
| Benzo(a)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.11 | 0.13 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3303# | 0.03 | mg/kg | 0.07 | 0.09 |
| Dibenzo(a,h)anthracene | DETSC 3303# | 0.03 | mg/kg | < 0.03 | < 0.03 |
| Benzo(g,h,i)perylene | DETSC 3303# | 0.03 | mg/kg | 0.08 | 0.10 |
| PAH - USEPA 16, Total | DETSC 3303 | 0.1 | mg/kg | 2.9 | 3.0 |
| PCBs | | | | | |
| PCB 28 + PCB 31 | DETSC 3401# | 0.01 | mg/kg | 0.05 | 0.03 |
| PCB 52 | DETSC 3401# | 0.01 | mg/kg | 0.02 | 0.01 |
| PCB 101 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 |
| PCB 118 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 |
| PCB 153 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 |
| PCB 138 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 |
| PCB 180 | DETSC 3401# | 0.01 | mg/kg | < 0.01 | < 0.01 |
| PCB 7 Total | DETSC 3401# | 0.01 | mg/kg | 0.06 | 0.05 |
| Phenols | | | | | |
| Phenol - Monohydric | DETSC 2130# | 0.3 | mg/kg | < 0.3 | < 0.3 |

Summary of Asbestos Analysis Soil Samples

Our Ref 19-00239

Client Ref

Contract Title CELSA

| Lab No | Sample ID | Material Type | Result | Comment* | Analyst |
|---------|-----------|---------------|--------|----------|---------------|
| 1442212 | HD01 0.10 | SOIL | NAD | none | Colin Patrick |
| 1442213 | HD02 0.10 | SOIL | NAD | none | Colin Patrick |

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 19-00239

Client Ref

Contract CELSA

Containers Received & Deviating Samples

| Lab No | Sample ID | Date Sampled | Containers Received | Holding time exceeded for tests | Inappropriate container for tests |
|---------|----------------|--------------|---------------------|---------------------------------|-----------------------------------|
| 1442212 | HD01 0.10 SOIL | 04/01/19 | GJ 250ml, PT 1L | | |
| 1442213 | HD02 0.10 SOIL | 04/01/19 | GJ 250ml, PT 1L | | |

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Appendix A - Details of Analysis

| Method | Parameter | Units | Limit of Detection | Sample Preparation | Sub-Contracted | UKAS | MCERTS |
|------------|---------------------------------------------|----------|--------------------|--------------------|----------------|------|--------|
| DETSC 2002 | Organic matter | % | 0.1 | Air Dried | No | Yes | Yes |
| DETSC 2003 | Loss on ignition | % | 0.01 | Air Dried | No | Yes | Yes |
| DETSC 2008 | pH | pH Units | 1 | Air Dried | No | Yes | Yes |
| DETSC 2024 | Sulphide | mg/kg | 10 | Air Dried | No | Yes | Yes |
| DETSC 2076 | Sulphate Aqueous Extract as SO ₄ | mg/l | 10 | Air Dried | No | Yes | Yes |
| DETSC 2084 | Total Carbon | % | 0.5 | Air Dried | No | Yes | Yes |
| DETSC 2084 | Total Organic Carbon | % | 0.5 | Air Dried | No | Yes | Yes |
| DETSC 2119 | Ammoniacal Nitrogen as N | mg/kg | 0.5 | Air Dried | No | Yes | Yes |
| DETSC 2130 | Cyanide free | mg/kg | 0.1 | Air Dried | No | Yes | Yes |
| DETSC 2130 | Cyanide total | mg/kg | 0.1 | Air Dried | No | Yes | Yes |
| DETSC 2130 | Phenol - Monohydric | mg/kg | 0.3 | Air Dried | No | Yes | Yes |
| DETSC 2130 | Thiocyanate | mg/kg | 0.6 | Air Dried | No | Yes | Yes |
| DETSC 2321 | Total Sulphate as SO ₄ | % | 0.01 | Air Dried | No | Yes | Yes |
| DETSC 2325 | Mercury | mg/kg | 0.05 | Air Dried | No | Yes | Yes |
| DETSC 3049 | Sulphur (free) | mg/kg | 0.75 | Air Dried | No | Yes | Yes |
| DETSC2123 | Boron (water soluble) | mg/kg | 0.2 | Air Dried | No | Yes | Yes |
| DETSC2301 | Arsenic | mg/kg | 0.2 | Air Dried | No | Yes | Yes |
| DETSC2301 | Barium | mg/kg | 1.5 | Air Dried | No | Yes | Yes |
| DETSC2301 | Beryllium | mg/kg | 0.2 | Air Dried | No | Yes | Yes |
| DETSC2301 | Cadmium Available | mg/kg | 0.1 | Air Dried | No | Yes | Yes |
| DETSC2301 | Cadmium | mg/kg | 0.1 | Air Dried | No | Yes | Yes |
| DETSC2301 | Cobalt | mg/kg | 0.7 | Air Dried | No | Yes | Yes |
| DETSC2301 | Chromium | mg/kg | 0.15 | Air Dried | No | Yes | Yes |
| DETSC2301 | Copper | mg/kg | 0.2 | Air Dried | No | Yes | Yes |
| DETSC2301 | Manganese | mg/kg | 20 | Air Dried | No | Yes | Yes |
| DETSC2301 | Molybdenum | mg/kg | 0.4 | Air Dried | No | Yes | Yes |
| DETSC2301 | Nickel | mg/kg | 1 | Air Dried | No | Yes | Yes |
| DETSC2301 | Lead | mg/kg | 0.3 | Air Dried | No | Yes | Yes |
| DETSC2301 | Selenium | mg/kg | 0.5 | Air Dried | No | Yes | Yes |
| DETSC2301 | Zinc | mg/kg | 1 | Air Dried | No | Yes | Yes |
| DETSC 3072 | Ali/Aro C10-C35 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C10-C12 | mg/kg | 1.5 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C10-C12 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C10-C35 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C12-C16 | mg/kg | 1.2 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C12-C16 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C16-C21 | mg/kg | 1.5 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C16-C21 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C21-C35 | mg/kg | 3.4 | As Received | No | Yes | Yes |
| DETSC 3072 | Aliphatic C21-C35 | mg/kg | 3.4 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C10-C12 | mg/kg | 0.9 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C10-C12 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C10-C35 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C12-C16 | mg/kg | 0.5 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C12-C16 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C16-C21 | mg/kg | 0.6 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C16-C21 | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C21-C35 | mg/kg | 1.4 | As Received | No | Yes | Yes |
| DETSC 3072 | Aromatic C21-C35 | mg/kg | 1.4 | As Received | No | Yes | Yes |
| DETS 062 | Benzene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | Ethylbenzene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | Toluene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | Xylene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | m+p Xylene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETS 062 | o Xylene | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3311 | C10-C24 Diesel Range Organics (DRO) | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3311 | C24-C40 Lube Oil Range Organics (LORO) | mg/kg | 10 | As Received | No | Yes | Yes |
| DETSC 3311 | EPH (C10-C40) | mg/kg | 10 | As Received | No | Yes | Yes |

Appendix A - Details of Analysis

| Method | Parameter | Units | Limit of Detection | Sample Preparation | Sub-Contracted | UKAS | MCERTS |
|------------|-------------------------|-------|--------------------|--------------------|----------------|------|--------|
| DETSC 3303 | Acenaphthene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Acenaphthylene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(a)pyrene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(a)anthracene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(b)fluoranthene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(k)fluoranthene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Benzo(g,h,i)perylene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Dibenzo(a,h)anthracene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Fluoranthene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Indeno(1,2,3-c,d)pyrene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Naphthalene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Phenanthrene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3303 | Pyrene | mg/kg | 0.03 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 28 + PCB 31 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 52 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 101 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 118 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 153 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 138 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB 180 | mg/kg | 0.01 | As Received | No | Yes | Yes |
| DETSC 3401 | PCB Total | mg/kg | 0.01 | As Received | No | Yes | Yes |

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

ANNEX F
Groundwater Chemical Test
Results



Certificate of Analysis

Certificate Number 18-29247

24-Dec-18

Client Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Our Reference 18-29247

Client Reference (not supplied)

Order No 14958

Contract Title Celsa

Description One Water sample.

Date Received 13-Dec-18

Date Started 13-Dec-18

Date Completed 24-Dec-18

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Adam Fenwick
Contracts Manager



Summary of Chemical Analysis

Water Samples

Our Ref 18-29247

Client Ref

Contract Title Celsa

| | |
|---------------|----------|
| Lab No | 1435398 |
| Sample ID | BH03 D |
| Depth | |
| Other ID | |
| Sample Type | WATER |
| Sampling Date | 11/12/18 |
| Sampling Time | n/s |

| Test | Method | LOD | Units | |
|----------------------------------|-------------|-------|-------|---------|
| Metals | | | | |
| Arsenic, Dissolved | DETSC 2306 | 0.16 | ug/l | 14 |
| Cadmium, Dissolved | DETSC 2306 | 0.03 | ug/l | 0.07 |
| Chromium, Dissolved | DETSC 2306 | 0.25 | ug/l | 15 |
| Chromium III, Dissolved | DETSC 2306* | 1 | ug/l | 15 |
| Chromium, Hexavalent | DETSC 2203 | 0.007 | mg/l | < 0.007 |
| Copper, Dissolved | DETSC 2306 | 0.4 | ug/l | 4.4 |
| Lead, Dissolved | DETSC 2306 | 0.09 | ug/l | 1.2 |
| Mercury, Dissolved | DETSC 2306 | 0.01 | ug/l | < 0.01 |
| Nickel, Dissolved | DETSC 2306 | 0.5 | ug/l | 23 |
| Selenium, Dissolved | DETSC 2306 | 0.25 | ug/l | 1.9 |
| Zinc, Dissolved | DETSC 2306 | 1.3 | ug/l | 270 |
| Inorganics | | | | |
| Conductivity | DETSC 2009 | 1 | uS/cm | 27500 |
| pH | DETSC 2008 | | | 7.4 |
| Biochemical Oxygen Demand, Total | DETSC 2031 | 1 | mg/l | 36 |
| Chemical Oxygen Demand, Total | DETSC 2032 | 10 | mg/l | 890 |
| Cyanide, Total | DETSC 2130 | 40 | ug/l | < 40 |
| Hardness | DETSC 2303 | 0.1 | mg/l | 2760 |
| Sulphate as SO4 | DETSC 2055 | 0.1 | mg/l | 500 |
| Sulphide | DETSC 2208 | 10 | ug/l | < 10 |
| Petroleum Hydrocarbons | | | | |
| Aliphatic C5-C6 | DETSC 3322 | 0.1 | ug/l | < 0.1 |
| Aliphatic C6-C8 | DETSC 3322 | 0.1 | ug/l | < 0.1 |
| Aliphatic C8-C10 | DETSC 3322 | 0.1 | ug/l | < 0.1 |
| Aliphatic C10-C12 | DETSC 3072* | 1 | ug/l | < 1.0 |
| Aliphatic C12-C16 | DETSC 3072* | 1 | ug/l | < 1.0 |
| Aliphatic C16-C21 | DETSC 3072* | 1 | ug/l | < 1.0 |
| Aliphatic C21-C35 | DETSC 3072* | 1 | ug/l | < 1.0 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | ug/l | < 10 |
| Aromatic C5-C7 | DETSC 3322 | 0.1 | ug/l | < 0.1 |
| Aromatic C7-C8 | DETSC 3322 | 0.1 | ug/l | < 0.1 |
| Aromatic C8-C10 | DETSC 3322 | 0.1 | ug/l | < 0.1 |
| Aromatic C10-C12 | DETSC 3072* | 1 | ug/l | < 1.0 |
| Aromatic C12-C16 | DETSC 3072* | 1 | ug/l | < 1.0 |
| Aromatic C16-C21 | DETSC 3072* | 1 | ug/l | < 1.0 |
| Aromatic C21-C35 | DETSC 3072* | 1 | ug/l | < 1.0 |
| Aromatic C5-C35 | DETSC 3072* | 10 | ug/l | < 10 |
| TPH Ali/Aro Total | DETSC 3072* | 10 | ug/l | < 10 |
| EPH (C10-C40) | DETSC 3311 | 10 | ug/l | < 10 |
| PAHs | | | | |
| Naphthalene | DETSC 3304 | 0.05 | ug/l | < 0.05 |

Summary of Chemical Analysis

Water Samples

Our Ref 18-29247

Client Ref

Contract Title Celsa

| | |
|---------------|----------|
| Lab No | 1435398 |
| Sample ID | BH03 D |
| Depth | |
| Other ID | |
| Sample Type | WATER |
| Sampling Date | 11/12/18 |
| Sampling Time | n/s |

| Test | Method | LOD | Units | |
|-------------------------|-------------|------|-------|--------|
| Acenaphthylene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Acenaphthene | DETSC 3304 | 0.01 | ug/l | 0.04 |
| Fluorene | DETSC 3304 | 0.01 | ug/l | 0.03 |
| Phenanthrene | DETSC 3304 | 0.01 | ug/l | 0.07 |
| Anthracene | DETSC 3304 | 0.01 | ug/l | 0.01 |
| Fluoranthene | DETSC 3304 | 0.01 | ug/l | 0.02 |
| Pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Benzo(a)anthracene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Chrysene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Benzo(b)fluoranthene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Benzo(k)fluoranthene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Benzo(a)pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Dibenzo(a,h)anthracene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| Benzo(g,h,i)perylene | DETSC 3304 | 0.01 | ug/l | < 0.01 |
| PAH Total | DETSC 3304 | 0.2 | ug/l | 0.23 |
| PCBs | | | | |
| PCB 28 + PCB 31 | DETSC 3402 | 0.3 | ug/l | < 0.3 |
| PCB 52 | DETSC 3402 | 0.2 | ug/l | < 0.2 |
| PCB 101 | DETSC 3402 | 0.3 | ug/l | < 0.3 |
| PCB 118 + PCB 123 | DETSC 3402 | 0.6 | ug/l | < 0.6 |
| PCB 138 | DETSC 3402 | 0.2 | ug/l | < 0.2 |
| PCB 153 | DETSC 3402 | 0.2 | ug/l | < 0.2 |
| PCB 180 | DETSC 3402 | 0.2 | ug/l | < 0.2 |
| PCB 7 Total | DETSC 3402 | 1 | ug/l | < 1.0 |
| Phenols | | | | |
| Phenol | DETSC 3451* | 0.1 | ug/l | < 0.10 |
| 4-Chloro-3-methylphenol | DETSC 3451* | 0.1 | ug/l | < 0.10 |
| 2,4-Dichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.10 |
| 2,4-Dimethylphenol | DETSC 3451* | 0.1 | ug/l | < 0.10 |
| p-cresol | DETSC 3451* | 0.1 | ug/l | < 0.10 |
| 2,6-Dimethylphenol | DETSC 3451* | 0.1 | ug/l | < 0.10 |
| 2,6-Dichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.10 |
| 2,4,6-Trichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.10 |

Information in Support of the Analytical Results

Our Ref 18-29247

Client Ref

Contract Celsa

Containers Received & Deviating Samples

| Lab No | Sample ID | Date | | Holding time exceeded for tests | Inappropriate container for tests |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|---------------------|---------------------------------------|-----------------------------------------|
| | | Sampled | Containers Received | | |
| 1435398 | BH03 D WATER | 11/12/18 | GB 1L, PB 1L | | |
| Key: G-Glass P-Plastic B-Bottle | | | | | |
| DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable. | | | | | |

Disposal

| |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| From the issue date of this test certificate, samples will be held for the following times prior to disposal :- Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



Certificate of Analysis

Certificate Number 19-00123

11-Jan-19

Client Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Our Reference 19-00123

Client Reference (not supplied)

Order No 14958

Contract Title CELSA

Description 4 Water samples.

Date Received 04-Jan-19

Date Started 04-Jan-19

Date Completed 11-Jan-19

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Adam Fenwick
Contracts Manager



Summary of Chemical Analysis

Water Samples

Our Ref 19-00123

Client Ref

Contract Title CELSA

| Lab No | 1441557 | 1441558 | 1441559 | 1441560 |
|---------------|----------|----------|----------|----------|
| Sample ID | BH01 D | BH02 D | BH03 D | BH03 S |
| Depth | | | | |
| Other ID | | | | |
| Sample Type | WATER | WATER | WATER | WATER |
| Sampling Date | 02/01/19 | 02/01/19 | 02/01/19 | 02/01/19 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|----------------------------------|-------------|-------|-------|---------|---------|---------|---------|
| Metals | | | | | | | |
| Arsenic, Dissolved | DETSC 2306 | 0.16 | ug/l | 48 | 10 | 16 | 21 |
| Cadmium, Dissolved | DETSC 2306 | 0.03 | ug/l | < 0.03 | < 0.03 | < 0.03 | 0.04 |
| Chromium, Dissolved | DETSC 2306 | 0.25 | ug/l | < 0.25 | 0.85 | 0.37 | 0.74 |
| Chromium III, Dissolved | DETSC 2306* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chromium, Hexavalent | DETSC 2203 | 0.007 | mg/l | < 0.007 | < 0.007 | < 0.007 | < 0.007 |
| Copper, Dissolved | DETSC 2306 | 0.4 | ug/l | 1.3 | 1.9 | 1.4 | 0.8 |
| Lead, Dissolved | DETSC 2306 | 0.09 | ug/l | 0.60 | 0.10 | < 0.09 | 1.1 |
| Mercury, Dissolved | DETSC 2306 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Nickel, Dissolved | DETSC 2306 | 0.5 | ug/l | 3.1 | 1.6 | 1.4 | 4.7 |
| Selenium, Dissolved | DETSC 2306 | 0.25 | ug/l | 1.0 | 16 | 6.8 | 8.4 |
| Zinc, Dissolved | DETSC 2306 | 1.3 | ug/l | 16 | 12 | 9.2 | 4.3 |
| Inorganics | | | | | | | |
| Conductivity | DETSC 2009 | 1 | uS/cm | 2510 | 2210 | 2240 | 1820 |
| pH | DETSC 2008 | | | 6.5 | 8.3 | 8.1 | 11.7 |
| Biochemical Oxygen Demand, Total | DETSC 2031 | 1 | mg/l | 5.4 | 5.7 | 12 | 13 |
| Chemical Oxygen Demand, Total | DETSC 2032 | 10 | mg/l | 25 | 72 | 42 | 150 |
| Cyanide, Total | DETSC 2130 | 40 | ug/l | 93 | 220 | 320 | 220 |
| Hardness | DETSC 2303 | 0.1 | mg/l | 337 | 425 | 456 | 225 |
| Sulphate as SO4 | DETSC 2055 | 0.1 | mg/l | 300 | 450 | 490 | 150 |
| Sulphide | DETSC 2208 | 10 | ug/l | < 10 | < 10 | < 10 | 60 |
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C6-C8 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C8-C10 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C10-C12 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C12-C16 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C16-C21 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C21-C35 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | ug/l | < 10 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C7-C8 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C8-C10 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C10-C12 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C12-C16 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C16-C21 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C21-C35 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C5-C35 | DETSC 3072* | 10 | ug/l | < 10 | < 10 | < 10 | < 10 |
| TPH Ali/Aro Total | DETSC 3072* | 10 | ug/l | < 10 | < 10 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311 | 10 | ug/l | 180 | 87 | 83 | 140 |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3304 | 0.05 | ug/l | < 0.05 | < 0.05 | < 0.05 | 0.95 |

Summary of Chemical Analysis

Water Samples

Our Ref 19-00123

Client Ref

Contract Title CELSA

| | | | | |
|---------------|----------|----------|----------|----------|
| Lab No | 1441557 | 1441558 | 1441559 | 1441560 |
| Sample ID | BH01 D | BH02 D | BH03 D | BH03 S |
| Depth | | | | |
| Other ID | | | | |
| Sample Type | WATER | WATER | WATER | WATER |
| Sampling Date | 02/01/19 | 02/01/19 | 02/01/19 | 02/01/19 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------|-------------|------|-------|--------|--------|--------|--------|
| Acenaphthylene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | 0.01 | 0.26 |
| Acenaphthene | DETSC 3304 | 0.01 | ug/l | 0.12 | < 0.01 | < 0.01 | 3.5 |
| Fluorene | DETSC 3304 | 0.01 | ug/l | 0.06 | < 0.01 | < 0.01 | 3.3 |
| Phenanthrene | DETSC 3304 | 0.01 | ug/l | 0.03 | < 0.01 | 0.02 | 5.0 |
| Anthracene | DETSC 3304 | 0.01 | ug/l | 0.02 | < 0.01 | < 0.01 | 7.0 |
| Fluoranthene | DETSC 3304 | 0.01 | ug/l | 0.02 | < 0.01 | < 0.01 | 0.90 |
| Pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.50 |
| Benzo(a)anthracene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.16 |
| Chrysene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.24 |
| Benzo(b)fluoranthene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.27 |
| Benzo(k)fluoranthene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.37 |
| Benzo(a)pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.14 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.15 |
| Dibenzo(a,h)anthracene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(g,h,i)perylene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.15 |
| PAH Total | DETSC 3304 | 0.2 | ug/l | 0.28 | < 0.20 | < 0.20 | 23 |
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3402 | 0.3 | ug/l | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| PCB 52 | DETSC 3402 | 0.2 | ug/l | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 101 | DETSC 3402 | 0.3 | ug/l | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| PCB 118 + PCB 123 | DETSC 3402 | 0.6 | ug/l | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| PCB 138 | DETSC 3402 | 0.2 | ug/l | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 153 | DETSC 3402 | 0.2 | ug/l | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 180 | DETSC 3402 | 0.2 | ug/l | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 7 Total | DETSC 3402 | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Phenols | | | | | | | |
| Phenol | DETSC 3451* | 0.1 | ug/l | < 0.10 | < 0.10 | < 0.13 | < 0.10 |
| 4-Chloro-3-methylphenol | DETSC 3451* | 0.1 | ug/l | < 0.10 | < 0.10 | < 0.13 | < 0.10 |
| 2,4-Dichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.10 | < 0.10 | < 0.13 | < 0.10 |
| 2,4-Dimethylphenol | DETSC 3451* | 0.1 | ug/l | < 0.10 | < 0.10 | < 0.13 | < 0.10 |
| p-cresol | DETSC 3451* | 0.1 | ug/l | < 0.10 | < 0.10 | < 0.13 | < 0.10 |
| 2,6-Dimethylphenol | DETSC 3451* | 0.1 | ug/l | < 0.10 | < 0.10 | < 0.13 | < 0.10 |
| 2,6-Dichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.10 | < 0.10 | < 0.13 | < 0.10 |
| 2,4,6-Trichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.10 | < 0.10 | < 0.13 | < 0.10 |

Information in Support of the Analytical Results

Our Ref 19-00123

Client Ref

Contract CELSA

Containers Received & Deviating Samples

| Lab No | Sample ID | Date Sampled | Containers Received | Holding time exceeded for tests | Inappropriate container for tests |
|---------|--------------|--------------|---------------------|---------------------------------|-----------------------------------|
| 1441557 | BH01 D WATER | 02/01/19 | GB 1L, PB 1L | | |
| 1441558 | BH02 D WATER | 02/01/19 | GB 1L, PB 1L | | |
| 1441559 | BH03 D WATER | 02/01/19 | GB 1L, PB 1L | | |
| 1441560 | BH03 S WATER | 02/01/19 | GB 1L, PB 1L | | |

Key: G-Glass P-Plastic B-Bottle

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



Certificate of Analysis

Certificate Number 19-00773

22-Jan-19

Client Terra Firma (Wales) Ltd
5 Deryn Court
Wharfdale Road
Pentwyn
Cardiff
CF23 7HB

Our Reference 19-00773

Client Reference (not supplied)

Order No 14958

Contract Title Celsa

Description 4 Water samples.

Date Received 16-Jan-19

Date Started 16-Jan-19

Date Completed 22-Jan-19

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Adam Fenwick
Contracts Manager



Summary of Chemical Analysis

Water Samples

Our Ref 19-00773

Client Ref

Contract Title Celsa

| | | | | |
|---------------|----------|----------|----------|----------|
| Lab No | 1445474 | 1445475 | 1445476 | 1445477 |
| Sample ID | BH01 D | BH02 D | BH03 D | BH03 S |
| Depth | | | | |
| Other ID | | | | |
| Sample Type | WATER | WATER | WATER | WATER |
| Sampling Date | 15/01/19 | 15/01/19 | 15/01/19 | 15/01/19 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|----------------------------------|-------------|-------|-------|---------|---------|---------|---------|
| Metals | | | | | | | |
| Arsenic, Dissolved | DETSC 2306 | 0.16 | ug/l | 25 | 12 | 18 | 22 |
| Cadmium, Dissolved | DETSC 2306 | 0.03 | ug/l | < 0.03 | < 0.03 | 0.04 | < 0.03 |
| Chromium, Dissolved | DETSC 2306 | 0.25 | ug/l | < 0.25 | < 0.25 | 11 | < 0.25 |
| Chromium III, Dissolved | DETSC 2306* | 1 | ug/l | < 1.0 | < 1.0 | 11 | < 1.0 |
| Chromium, Hexavalent | DETSC 2203 | 0.007 | mg/l | < 0.007 | < 0.007 | < 0.007 | < 0.007 |
| Copper, Dissolved | DETSC 2306 | 0.4 | ug/l | < 0.4 | < 0.4 | 2.2 | < 0.4 |
| Lead, Dissolved | DETSC 2306 | 0.09 | ug/l | < 0.09 | < 0.09 | 0.40 | 0.41 |
| Mercury, Dissolved | DETSC 2306 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Nickel, Dissolved | DETSC 2306 | 0.5 | ug/l | 2.6 | 0.8 | 4.2 | 2.2 |
| Selenium, Dissolved | DETSC 2306 | 0.25 | ug/l | 0.25 | 0.34 | 6.4 | 2.3 |
| Zinc, Dissolved | DETSC 2306 | 1.3 | ug/l | 16 | 150 | 30 | 1.8 |
| Inorganics | | | | | | | |
| Conductivity | DETSC 2009 | 1 | uS/cm | 2550 | 2150 | 885 | 1500 |
| pH | DETSC 2008 | | | 7.0 | 10.3 | 7.0 | 11.6 |
| Biochemical Oxygen Demand, Total | DETSC 2031 | 1 | mg/l | 7.3 | 5.5 | 5.5 | 46 |
| Chemical Oxygen Demand, Total | DETSC 2032 | 10 | mg/l | 59 | 10 | 11 | 310 |
| Cyanide, Total | DETSC 2130 | 40 | ug/l | 46 | 420 | 80 | 190 |
| Hardness | DETSC 2303 | 0.1 | mg/l | 413 | 487 | 157 | 206 |
| Sulphate as SO4 | DETSC 2055 | 0.1 | mg/l | 230 | 450 | 120 | 120 |
| Sulphide | DETSC 2208 | 10 | ug/l | 13 | < 10 | < 10 | 410 |
| Petroleum Hydrocarbons | | | | | | | |
| Aliphatic C5-C6 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C6-C8 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C8-C10 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aliphatic C10-C12 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C12-C16 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C16-C21 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C21-C35 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aliphatic C5-C35 | DETSC 3072* | 10 | ug/l | < 10 | < 10 | < 10 | < 10 |
| Aromatic C5-C7 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C7-C8 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C8-C10 | DETSC 3322 | 0.1 | ug/l | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aromatic C10-C12 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C12-C16 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C16-C21 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C21-C35 | DETSC 3072* | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Aromatic C5-C35 | DETSC 3072* | 10 | ug/l | < 10 | < 10 | < 10 | < 10 |
| TPH Ali/Aro Total | DETSC 3072* | 10 | ug/l | < 10 | < 10 | < 10 | < 10 |
| EPH (C10-C40) | DETSC 3311 | 10 | ug/l | 110 | < 10 | 150 | 38 |
| PAHs | | | | | | | |
| Naphthalene | DETSC 3304 | 0.05 | ug/l | 0.07 | 0.10 | 0.16 | 0.41 |

Summary of Chemical Analysis

Water Samples

Our Ref 19-00773

Client Ref

Contract Title Celsa

| | | | | |
|---------------|----------|----------|----------|----------|
| Lab No | 1445474 | 1445475 | 1445476 | 1445477 |
| Sample ID | BH01 D | BH02 D | BH03 D | BH03 S |
| Depth | | | | |
| Other ID | | | | |
| Sample Type | WATER | WATER | WATER | WATER |
| Sampling Date | 15/01/19 | 15/01/19 | 15/01/19 | 15/01/19 |
| Sampling Time | n/s | n/s | n/s | n/s |

| Test | Method | LOD | Units | | | | |
|-------------------------|-------------|------|-------|--------|--------|--------|--------|
| Acenaphthylene | DETSC 3304 | 0.01 | ug/l | < 0.01 | 0.05 | < 0.01 | 0.06 |
| Acenaphthene | DETSC 3304 | 0.01 | ug/l | 0.12 | 0.04 | 0.57 | 0.34 |
| Fluorene | DETSC 3304 | 0.01 | ug/l | 0.08 | 0.03 | 0.09 | 0.32 |
| Phenanthrene | DETSC 3304 | 0.01 | ug/l | 0.12 | 0.04 | < 0.01 | 0.62 |
| Anthracene | DETSC 3304 | 0.01 | ug/l | 0.02 | < 0.01 | < 0.01 | 0.12 |
| Fluoranthene | DETSC 3304 | 0.01 | ug/l | 0.03 | 0.02 | 0.03 | 0.28 |
| Pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 | 0.02 | < 0.01 | 0.19 |
| Benzo(a)anthracene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.12 |
| Chrysene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.13 |
| Benzo(b)fluoranthene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.18 |
| Benzo(k)fluoranthene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.09 |
| Benzo(a)pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.13 |
| Indeno(1,2,3-c,d)pyrene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.09 |
| Dibenzo(a,h)anthracene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(g,h,i)perylene | DETSC 3304 | 0.01 | ug/l | < 0.01 | < 0.01 | < 0.01 | 0.09 |
| PAH Total | DETSC 3304 | 0.2 | ug/l | 0.44 | 0.30 | 0.85 | 3.2 |
| PCBs | | | | | | | |
| PCB 28 + PCB 31 | DETSC 3402 | 0.3 | ug/l | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| PCB 52 | DETSC 3402 | 0.2 | ug/l | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 101 | DETSC 3402 | 0.3 | ug/l | < 0.3 | < 0.3 | < 0.3 | < 0.3 |
| PCB 118 + PCB 123 | DETSC 3402 | 0.6 | ug/l | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| PCB 138 | DETSC 3402 | 0.2 | ug/l | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 153 | DETSC 3402 | 0.2 | ug/l | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 180 | DETSC 3402 | 0.2 | ug/l | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| PCB 7 Total | DETSC 3402 | 1 | ug/l | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Phenols | | | | | | | |
| Phenol | DETSC 3451* | 0.1 | ug/l | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 4-Chloro-3-methylphenol | DETSC 3451* | 0.1 | ug/l | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,4-Dichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,4-Dimethylphenol | DETSC 3451* | 0.1 | ug/l | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| p-cresol | DETSC 3451* | 0.1 | ug/l | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,6-Dimethylphenol | DETSC 3451* | 0.1 | ug/l | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,6-Dichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.20 | < 0.20 | < 0.50 | < 0.20 |
| 2,4,6-Trichlorophenol | DETSC 3451* | 0.1 | ug/l | < 0.20 | < 0.20 | < 0.50 | < 0.20 |

Information in Support of the Analytical Results

Our Ref 19-00773

Client Ref

Contract Celsa

Containers Received & Deviating Samples

| Lab No | Sample ID | Date Sampled | Containers Received | Holding time exceeded for tests | Inappropriate container for tests |
|---------|--------------|--------------|---------------------|---------------------------------|-----------------------------------|
| 1445474 | BH01 D WATER | 15/01/19 | GB 1L, PB 1L | | |
| 1445475 | BH02 D WATER | 15/01/19 | GB 1L, PB 1L | | |
| 1445476 | BH03 D WATER | 15/01/19 | GB 1L x2 | | |
| 1445477 | BH03 S WATER | 15/01/19 | GB 1L, PB 1L | | |

Key: G-Glass P-Plastic B-Bottle

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

ANNEX G
Gas Monitoring Results

SITE: CELSA SCRAP YARD

| | | | | | | |
|--------|------------|-----|------|-----|-----|------|
| DATE | 11/12/2018 | AP | 1021 | mb | | |
| | | | | | | |
| | CH4 | CO2 | O2 | CO | H2S | Flow |
| | (%) | (%) | (%) | ppm | ppm | l/hr |
| BH01 S | 0.1 | 0.0 | 9.3 | 0 | 0 | 0 |
| BH02 S | 0.1 | 0.0 | 20.0 | 0 | 0 | 0 |
| BH03 S | 0.2 | 0.0 | 18.9 | 0 | 0 | 0 |

| | | | | | | |
|--------|------------|-----|------|-----|-----|------|
| DATE | 04/01/2019 | AP | 1041 | mb | | |
| | | | | | | |
| | CH4 | CO2 | O2 | CO | H2S | Flow |
| | (%) | (%) | (%) | ppm | ppm | l/hr |
| BH01 S | 0.0 | 0.2 | 8.7 | 0 | 0 | 0 |
| BH02 S | 0.0 | 0.0 | 20.1 | 0 | 0 | 0 |
| BH03 S | 0.0 | 0.2 | 17.3 | 0 | 0 | 0 |

| | | | | | | |
|--------|-----|-----|-----|-----|-----|------|
| DATE | | AP | 11 | mb | | |
| | | | | | | |
| | CH4 | CO2 | O2 | CO | H2S | Flow |
| | (%) | (%) | (%) | ppm | ppm | l/hr |
| BH01 S | | | | | | |
| BH02 S | | | | | | |
| BH03 S | | | | | | |

| | | | | | | |
|--------|-----|-----|-----|-----|-----|------|
| DATE | | AP | | mb | | |
| | | | | | | |
| | CH4 | CO2 | O2 | CO | H2S | Flow |
| | (%) | (%) | (%) | ppm | ppm | l/hr |
| BH01 S | | | | | | |
| BH02 S | | | | | | |
| BH03 S | | | | | | |

| | | | | | | |
|--------|-----|-----|-----|-----|-----|------|
| DATE | | AP | | mb | | |
| | | | | | | |
| | CH4 | CO2 | O2 | CO | H2S | Flow |
| | (%) | (%) | (%) | ppm | ppm | l/hr |
| BH01 S | | | | | | |
| BH02 S | | | | | | |
| BH03 S | | | | | | |

| | | | | | | |
|--------|-----|-----|-----|-----|-----|------|
| DATE | | AP | | mb | | |
| | | | | | | |
| | CH4 | CO2 | O2 | CO | H2S | Flow |
| | (%) | (%) | (%) | ppm | ppm | l/hr |
| BH01 S | | | | | | |
| BH02 S | | | | | | |
| BH03 S | | | | | | |