APPLICATION FOR AN ENVIRONMENTAL PERMIT VARIATION UNDER THE ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2016 (AS AMENDED)

SITE CONDITION REPORT

P B GELATINS U.K. LIMITED,
UNIT A6, SEVERN ROAD,
TREFOREST INDUSTRIAL ESTATE,
PONTYPRIDD, CF37 5SQ

ECL Ref: PBGE.01.09/SCR
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ACRONYMS/TERMS USED IN THE TEXT

AOD	**Above ordinance datum**
BGS	**British Geological Survey**
DAA	**Directly Associated Activities**
DAF	**Dissolved Air Floatation**
DCWW	**Dwr Cymru Welsh Water**
EA	**Environmental Agency**
ECL	**Environmental Compliance Limited**
EMS	**Environmental Management System**
EP Regulations	**Environmental Permitting (England and Wales) Regulations 2016**
EP	**Environmental Permit**
EQS	**Environmental Quality System**
ERA	**Environmental Risk Assessment**
mgbl	**Metres below ground level**
MNA	**Monitored Natural Attenuation**
CAR	**Compliance Assessment Report**
NaOH	**Sodium Hydroxide**
NGR	**National Grid Reference**
NRW	**Natural Resources Wales**
PAHs	**Polycyclic Aromatic Hydrocarbons**
PB Gelatins	**P B Gelatins U.K. Limited**
PFAs	**Polyfluoroalkyl Substances**
SCR	**Site Condition Report**
SPZ	**Special Protection Zone**
SVOCs	**Semi Volatile Organic Compounds**
The Installation	**P B Gelatins U.K. Limited Gelatin Manufacturing Site**
UKHSA	**UK Health Security Agency**
Veolia	**Veolia Energy and Utility Services**
VOCs	**Volatile Organic Compounds**

1. INTRODUCTION

1.1. Context and Objectives of Site Condition Report

1.1.1. Environmental Compliance Limited ("ECL") has been commissioned by P B Gelatins U.K. Limited ("PB Gelatins") to prepare an updated Site Condition Report ("SCR") to form part of the Environmental Permit variation application at their gelatin manufacturing site, hereafter referred to as "the Installation" located on Unit A6, Severn Road, Treforest Industrial Estate, Pontypridd, CF37 5SQ.

1.1.2. The report has been produced in accordance with Natural Resources Wales ("NRW") H5 'Site Condition Report Guidance and Templates (Version 5.0, Dated October 2014).

1.1.3. As part of the Environmental Permit variation application, expansion of the Environmental Permit boundary is proposed for the inclusion of additional storage areas within Buildings A12 and A13.

1.1.4. Consequently, the SCR has been updated to take account of the proposed additional areas which will be included within the expanded Environmental Permit boundary.

1.1.5. The aim of the SCR is to describe the condition of the land at the site and, in particular, to identify any substance in, on, or under the land that may present a pollution risk.

1.1.6. This SCR, therefore, sets out the current (at time of writing) condition of the site and takes into account any pollution incidents that may have occurred at the site and details of any measures put into place to mitigate the effects of any such incidents. It serves two main purposes:

- firstly, it will act as a reference point, along with operating records, for measuring any potential deterioration of the site whilst operating under the Permit (on surrender of the Permit); and
- secondly, the SCR will give information on the physical attributes and vulnerability of the site; it will assist in understanding the environmental setting of the site, and understanding the nature, extent and behaviour of any contaminants that may be present; local hydrology, hydrogeology, geology and general setting are taken into account.

2. SITE DETAILS

2.1. The Applicant

2.1.1. The applicant is PB Gelatins UK Limited. The company number is 01477674. The Installation address is Unit A6, Severn Road, Treforest Industrial Estate, Pontypridd, CF37 5SQ.

2.1.2. The site manufactures high purity gelatin for use within various industries, including food, photographic and pharmaceutical applications.

2.1.3. The main raw material input to the Installation consists of small chippings/shavings of animal bone known as ossein, which are subjected to various chemical processing techniques within the 'old farm' and 'new farm' buildings, including the addition of lime and other caustic and acidic solutions, before being transported to the 'production and blender building' for further physical and chemical processing to complete the gelatin production.

2.2. Site Location

2.2.1. The Installation is located at the northern end of Treforest Industrial Estate, in an extensive area of generally light industrial and commercial developments. The Installation occupies an approximate area of 3.85ha and the main reception building is centred on National Grid Reference ("NGR") 310198, 186871.

2.2.2. The Installation is arranged as a number of discrete areas within the Treforest Industrial Estate as shown on Site Layout Plan (PBGE.01.09-01) contained in Appendix I of this report. The indicative site location and surrounding land uses are show below in Figure 1

Figure 1: Site Location Plan

2.2.3. The following site plans have been prepared which are contained in Appendix I:

- Site Layout Plan – PBGE.01.09-01; and
- Drainage Arrangements Plan – PBGE.01.09-02.

2.2.4. These drawings show the expanded Environmental Permit boundary which now includes Buildings A12 and A13.

2.3. Site Condition Report Document History

2.3.1. The original Permit application included the Site Condition Report - Document Reference 11121/CS/13/SCR, dated March 2013 which was prepared by Integral Geotechnique (Wales) Limited.

2.3.2. Subsequent site condition is detailed within Document Reference 12588/CS/19/SCR prepared by Integral Geotechnique (Wales) Limited in January 2020.

2.3.3. These reports are contained in Appendix II of this SCR.

2.3.4. A geo-environmental ground investigation assessment report was prepared in December 2020 (Document Reference ECL.109.01.01/GIR) focusing on the 'Old Farm' area of the Installation. This report was submitted to NRW.

2.3.5. In October 2022, an updated site investigation was designed and undertaken to comply with their Environmental Permit ("EP") EPR/DP3030ZC, specifically Permit Condition 3.1.3. which states:

'Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.'

2.3.6. It was known at the time of the intrusive site investigation that the Environmental Permit boundary was to be expanded to incorporate the additional storage areas in Building A12 and A13 and therefore, the intrusive site investigation also included intrusive sampling in close proximity to these areas.

2.3.7. The intrusive site investigation was detailed within an updated Site Condition Report (PBGE.01.06/SCR) which is superseded by this SCR (PBGE.01.09/SCR). However, the site investigation report contained within PBGE.01.06/SCR is still relevant and should be read in conjunction with this SCR. The findings from the intrusive site investigation undertaken in October 2022 are provided in Appendix III of this SCR.

3. CONDITION OF THE LAND

3.1. Geology

3.1.1. According to the British Geological Survey ("BGS") Geology Viewer[1], the bedrock geology underlying the Installation consists of the Brithdir Member - Sandstone.

3.1.2. Superficial deposits are described as Alluvium - Clay, silt, sand and gravel. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period.

3.1.3. The nearest historical borehole record held by the BGS is ST18NW/158E (BSG ID: 380749), located on-site, drilled 18th December 1975. The borehole record, available through the BGS GeoIndex Onshore[2] summarised the encountered geology as follows; fill of ash and stone to 0.2mbgl, underlain by filling of clay and gravel to 1.5mbgl, followed by very compact coarse brown sand and gravel with cobble and boulders to a confirmed depth of 15m below ground level.

3.2. Hydrogeology

3.2.1. The Environment Agency ("EA") groundwater vulnerability map and aquifer database classifies both the bedrock and the alluvium beneath the Installation as Secondary A aquifers, defined as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

3.2.2. According to the Radon Affected Area mapping tool[3] for the UK produced by the UK Health Security Agency ("UKHSA"), some parts of the 1km grid square related to the Installation's postcode are in bands of elevated radon potential, with the maximum being 10-30 %.

3.2.3. There is one groundwater abstraction licence within 2km of the Installation which is detailed in Table 1 below.

Table 1: Goundwater Abstraction Licences Within 2km of the Installation

NGR	Licence Number	Operator	Distance from Site (m)	Details of Use
312310 187510	21/57/25/0080	Messrs T Roberts & Son	1897	General Farming and Domestic

[1] British Geological Survey. Geology of Britain Viewer, available online at https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/, accessed July 2023.

[2] British Geological Survey. GeoIndex Onshore mapping tool, available online at https://www.bgs.ac.uk/information-hub/borehole-records/ , accessed July 2023.

[3] UK Health Security Agency. Radon Affected Areas Mapping Tool. Available online at https://www.ukradon.org/information/ukmaps , accessed July 2023.

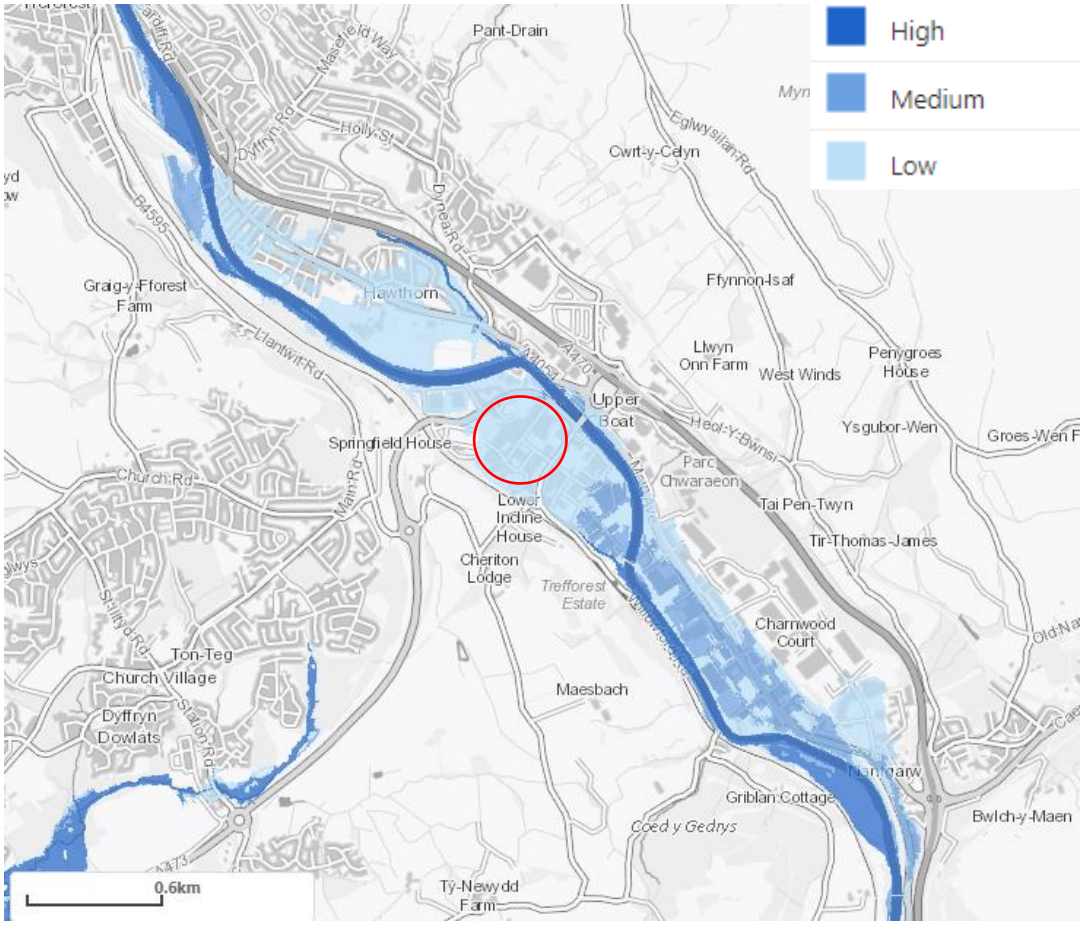
3.3. Surface Waters

3.3.1. The Installation is not located within a Source Protection Zone ("SPZ").

3.3.2. The Installation is located on the floor of a wide flat-bottomed valley carrying the River Taff, the channel of which is located some 20m to the northeast of the site at its closest. In the vicinity of the Installation, the River Taff benefits from comprehensive flood defences. The site is situated at an approximate elevation of 46m above ordnance datum ("AOD").

3.3.3. As shown on the NRW Long Term Flood Risk Map[4] provided in Figure 2, the Installation is at low risk of flooding from rivers and seas. Low risk is defined as having 0.1% to 1% chance of flooding from rivers or seas annually.

Figure 2: Long Term Flood Risk Map – Rivers and the Sea

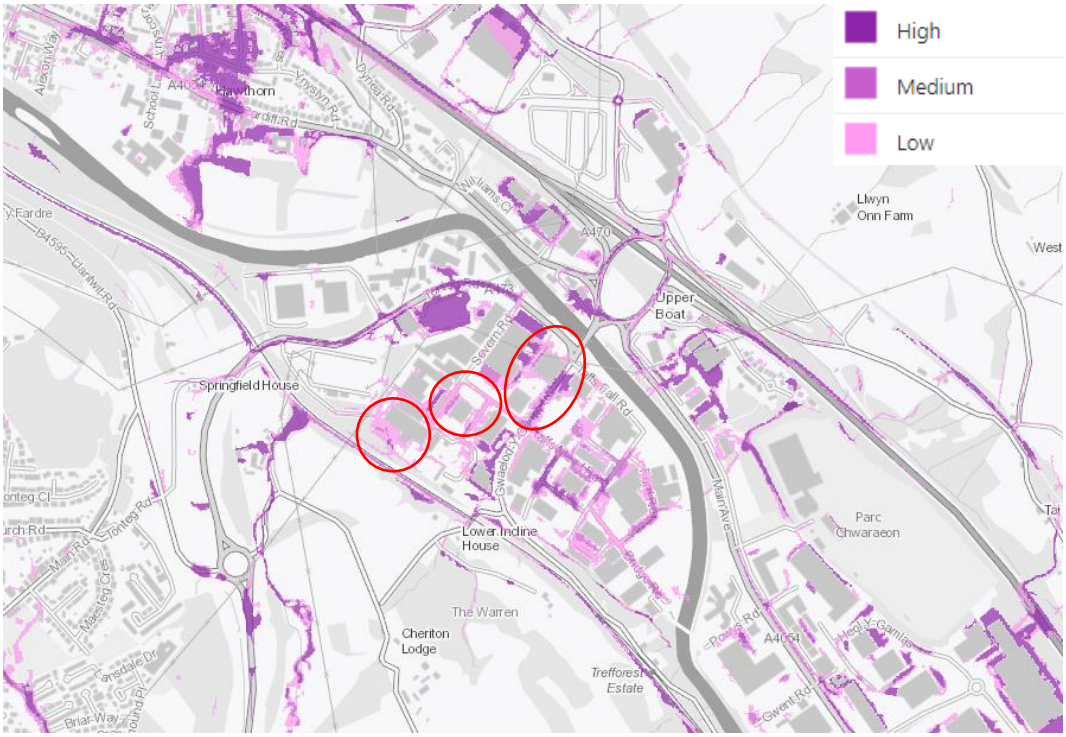


3.3.4. As demonstrated in Figure 3, due to the layout of the Installation, there are a range of risk levels for flooding from surface water and small watercourses across the Installation. The majority of areas possess a low risk of flooding annually (0.1% - 1%).

[4] NRW Long Term Flood Risk maps, available online at: https://naturalresources.wales/flooding/check-your-flood-risk-on-a-map-flood-risk-assessment-wales-map/?lang=en. Accessed July 2023.

3.3.5. There are discrete areas on the Permit boundary of the New Farm and Old Farm permitted areas which possess a high risk of flooding from surface water and small watercourses. High risk is defined by NRW as greater than 3.3% chance of flooding each year.

Figure 3: Long Term Flood Risk Map – Surface Water and Small Watercourses



3.3.6. In February 2020, Treforest Industrial Estate flooded as a result of Storm Dennis. The flooding event was considered to be extreme and was estimated to be in excess of a 1 in 200 annual probability flood event according to NRW.[5]

3.3.7. The surface water abstraction licences within 2km of the Installation are detailed in Table 2.

Table 2: Surface Water Abstraction Licences Within 2km of the Installation

NGR	Licence Number	Operator	Distance from Site (m)	Details of Use
309910 187170	21/57/25/0063	PB Gelatins (UK) Ltd	318	Food and Drink: General use
309886 187221	21/57/25/0063	PB Gelatins (UK) Ltd	373	Food and Drink: General use

[5] Rhondda Cynon Taff, Section 19 Flood Investigation Report, available online at: https://www.rctcbc.gov.uk/EN/Resident/ParkingRoadsandTravel/Roadspavementsandpaths/FloodAlleviation/RelatedDocuments/Floodreports/jan31st/FloodandWaterManagmentActSection19RCT16UpperBoatNantgarw.pdf, dated January 2022.

Table 2: Surface Water Abstraction Licences Within 2km of the Installation (Cont.)

NGR	Licence Number	Operator	Distance from Site (m)	Details of Use
310720 186330	21/57/25/0072	Huruk (Central) Limited	585	Textiles and Leather: General use
310720 186330	21/57/25/0072	Pmg Developments Plc	565	Textiles and Leather: General use
310720 186330	21/57/25/0072	Stewart Singlam Fabrics Ltd	565	Textiles and Leather: General use
310720 186330	21/57/25/0072	Norfleet Properties (Holdings) Ltd	586	Textiles and Leather: General use
310780 186250	21/57/25/0070	Treforest Textile Printers Limited	665	Textiles and Leather: General use
309200 185300	21/57/25/0053	Barratt (South Wales) Limited	1698	Impounding

3.4. Pollution History

Historic and Existing Activities

3.4.1. A review of the OS maps of the Installation and surrounding area from 1875 to 2019 has been undertaken based on the Envirocheck report contained within Integral Geotechnique report reference 12588/PB/20/SCR. The findings are presented in Table 3.

Table 3: Historical Review

Date	Scale	The Installation	Surrounding Area
1875-1877	1:2,500	Open fields can be observed. A road is shown to cross the northeast part of the site, as well as footpath crossing the central part of the site. Streams are shown in southern part of site.	• Watercourse immediately southwest of Installation. • River Taff is shown approximately 20m north. • Railway line on an embankment/terrace indicated immediately southwest of watercourse, running northwest-southeast. • A Trial shaft is shown, approximately 80m southeast of site. • Maes-mawr colliery is 200m south, on opposite side of railway line.
1900	1:10,560	No changes can be observed.	• Trial shaft to southeast is now labelled as 'Old air shaft/Old shaft.
1919-1920	1:2,500	No changes can be observed.	• There is a generating station (South Wales Electrical Power Distribution Co.) shown 22m to the northeast and Maes-mawr colliery is now labelled as disused.
1936	1:2,500	Pylons crossing the site heading north.	• Pylons crossing site to substation approximately 100m north of site.

Table 3: Historical Review (Cont.)

Date	Scale	The Installation	Surrounding Area
1943-1947	1:10,560	Buildings developed across all site areas.	• Generating station has now expanded in size and included additional railway lines and materials stockpiles.
1953	1:10,560	More buildings developed on site. Existing buildings have increased in size.	• Several large buildings shown adjacent to and running along the whole of the northern boundary.
1958-1959	1:1,1250	Map labels most onsite buildings as 'factory'. Buildings shown south and southwestern are shown as 'works', with several tanks, with a drain and two streams flowing offsite towards the northeast through rough ground.	• Railway line to the southeast has expanded in size, with spur lines now running from the centre of the site to the mainline. • Generating station now labelled as 'works' with additional rail lines and transmission lines connected to it.
1973-1976	1:1,1250	Northwest building labelled as a metal alloy works. Rest of site forms part of Gelatine works. Additional tanks constructed in southern site area.	• Spur railway lines from the factory are no longer shown. • Route of electricity pylons changed and no longer cross the site. • Adjacent factory units are labelled as: fibre and board works, paint works, textile factory, cigarette paper factory, zip fastener factory, chemical distillery and dry-cleaning works. • Second electricity substation indicated approximately 50m west of the site.
1988-1991	1:1,1250	Several rectangular tanks located in northwestern area of site.	• Three large tanks shown immediately adjacent to the eastern site boundary.
1989-1992	1:1,1250	Metal alloy works building no longer present on site. Pumping station is shown within eastern site boundary.	• Three large tanks adjacent to the pumping station are no longer shown.
1999	1:10,000	No changes can be observed.	• Expansion of industrial units approximately 50m north of site boundary.
2006	1:10,000	No changes can be observed.	• Park approximately 500m northwest is now residential properties.
2019	1:10,000	No observable changes.	• University of South Wales building approximately 500m northeast of installation boundary.

Pollution Incidents

3.4.2. The Envirocheck report contained within Integral Geotechnique report reference 12588/PB/20/SCR lists the recorded pollution incidents within 1km of the Installation. These incidents are detailed in Table 4.

Table 4: Recorded Pollution Incidents within 1km of Installation Boundary

NGR	Date of Incident	Pollution Description	Distance from Site (m)	Incident Severity
310520 186950	01/10/1994	Unknown	36	Category 3 – Minor Incident (Water)
310500 187050	03/08/1996	Unknown	48	Category 3 – Minor Incident (Water)
310300 186700	13/12/1995	Chemicals- other organic	85	Category 3 – Minor Incident (Water)
310600 186900	23/11/1994	Farmland run-off	129	Category 3 – Minor Incident (Water)
310600 186895	21/10/1994	Unknown	131	Category 3 – Minor Incident (Water)
310800 187100	18/10/1991	Unknown	333	Category 3 – Minor Incident (Water)
310705 188405	02/04/1997	Cement/mortar	495	Category 3 – Minor Incident (Water)
310705 186400	02/04/1997	Cement/mortar	499	Category 3 – Minor Incident (Water)
310750 186400	15/08/1995	Chlorinated water	526	Category 3 – Minor Incident (Water)
310700 186400	17/08/1991	Algae	496	Category 3 – Minor Incident (Water)
310700 186395	06/02/1995	Miscellaneous- Tip Leachate	500	Category 3 – Minor Incident (Water)
310705 186395	20/04/1997	Crude Sewage	503	Category 3 – Minor Incident (Water)
310700 186350	06/07/1995	Crude Sewage	538	Category 3 – Minor Incident (Water)
310700 186345	06/05/1992	Coal Solids	542	Category 2- Significant Incident (Water)
310705 186345	25/03/1992	Crude sewage	545	Category 2- Significant Incident (Water)
310750 186350	29/04/1992	Miscellaneous- Vehicle washings and de waxing	566	Category 3 – Minor Incident (Water)
310700 186300	22/04/1991	Farm Effluent/slurry	581	Category 2- Significant Incident (Water)

Table 4: Recorded Pollution Incidents within 1km of Installation Boundary (Cont.)

NGR	Date of Incident	Pollution Description	Distance from Site (m)	Incident Severity
310700 186295	26/11/1998	Chemicals-other organic	585	Category 2- Significant Incident (Water)
310750 186300	16/07/1996	Chemicals-paints/dyes	607	Category 3 – Minor Incident (Water)
310750 186295	16/07/1996	Chemicals-paints/dyes	611	Category 3 – Minor Incident (Water)
310755 186295	16/07/1996	Miscellaneous-vehicles	614	Category 3 – Minor Incident (Water)
310800 186300	06/03/1996	Oils-diesel (including agriculture)	636	Category 3 – Minor Incident (Water)
310800 186295	06/03/1996	Oils-diesel (including agriculture)	640	Category 3 – Minor Incident (Water)
310770 186270	04/08/1995	Crude sewage	643	Category 2- Significant Incident (Water)
310775 186270	04/08/1995	Crude sewage	646	Category 2- Significant Incident (Water)
310770 186265	04/08/1995	Oils-petrol	647	Category 3 – Minor Incident (Water)
310775 186265	04/08/1995	Crude sewage	650	Category 2- Significant Incident (Water)
309500 187300	21/04/1995	Farm effluent/slurry	705	Category 3 – Minor Incident (Water)
30990 187600	10/07/1995	Light Oil	720	Category 3 – Minor Incident (Water)
309400 187400	05/08/1995	Foam/soap suds	845	Category 3 – Minor Incident (Water)
311200 186200	21/08/1996	Crude sewage	992	Category 3 – Minor Incident (Water)

Potential Pollution Impacts

3.4.3. The following potential sources of contamination were identified from the historic map review (see Section 2.4.1 of this document):

- On site – the predominantly historic use of land as a metal alloy works and also heavy and light industrial uses, including gelatin manufacture, are likely to be potential sources of contamination. Potential contaminants associated from their use include: metals and metalloids, non-metals/inorganics, semi metals, polycyclic aromatic hydrocarbons ("PAHs"), volatile organic compounds ("VOCs"), semi volatile organic compounds ("SVOCs") and hydrocarbons including; fuels/oils, solvents, mineral/organic acids, acids and alkalis.
- Off-site – the predominantly historic industrial use of land in close proximity to the Installation includes the Taff Vale railway line, Maes-mawr colliery, power station and heavy and light industrial uses including fibre and board works, paint works, textile factory, cigarette paper factory, zip fastener factory, chemical distillery, dry cleaning works and tanks. All of these uses are likely to be potential sources of contamination resulting from their use of: heavy metals, sulphates, asbestos, herbicides, ash, clinker, hydrocarbons, PAHs, coal wastes, bulk rock materials, heavy fuel oil, perfluoroalkyl and polyfluoroalkyl substances ("PFAs"), clinker (furnace bottom ash), various chemicals including acids, metals and semi metals, SVOCs/VOCs and acids and alkalis.

3.5. Site Pollution Incidents

3.5.1. Known site pollution incidents are also taken into account when establishing site condition.

May 2020 – Sodium Hydroxide

3.5.2. ECL have previously been commissioned by PB Gelatins to undertake a site investigation following an environmental incident involving the spillage of sodium hydroxide on the 26th of May 2020. This report (ECL.109.01.01/GIR) was submitted to NRW.

3.5.3. The incident on the 26th of May 2020 involved the accidental release of approximately 14 tonnes of liquid sodium hydroxide ("NaOH") from a bulk storage container, onto the concrete apron surrounding the storage vessel and into the Farm drainage system, following the delivery of 20 tonnes of NaOH.

3.5.4. A geo-environmental assessment, based on the findings of an intrusive investigation, was completed in order to assess the potential risk to human health and controlled waters.

3.5.5. A Dynamic Sampling (window sampling) rig was utilised to obtain the necessary soil samples from beneath the concrete pad in order to ascertain the level of contamination and satisfy 'Action 4' of Compliance Assessment Report ID: CAR_NRW0036724 (dated 22/06/2020). Soil geo-chemical analyses were scheduled on samples obtained from within the spill impacted area and one location (HDP1), not known to have been impacted by the spillage of NaOH.

3.5.6. The analysed soil samples, from beneath the concrete hardstanding, did not show evidence of impact from the NaOH spillage. The concrete hardstanding and drainage system, within the investigated site area, was observed to be in good condition with no visible cracks or other immediate pathways for contaminants at ground surface to reach ground materials below; pipework and services from the bulk storage containers were noted to run above ground.

June 2020 – Sodium Hydroxide

3.5.7. ECL has previously been commissioned to undertake a site investigation in response to a sodium hydroxide spill within the PB Gelatins' EP boundary in a site area operated by Veolia Energy and Utility Services UK Plc ("Veolia") permitted by Directly Associated Activity ("DAA") EP EPR/BB3097ZS.

3.5.8. The incident occurred on the 11th June 2020 and involved the uncontrolled release of approximately 20 tonnes of liquid NaOH onto land.

3.5.9. The immediate spill response involved isolation of the caustic supply at source within the PB Gelatins factory building as well as locking the pipeline off at the delivery point to Veolia's site.

3.5.10. The initial clean -up process took place on the afternoon of Thursday the 11th June. The surface liquid was removed by vacuum tanker. The spill area was then washed down and the resulting washings were also removed by vacuum tanker.

3.5.11. ECL's report assessed the soil, soil leachate and groundwater conditions at the site. No exceedances of the relevant site screening values, based on a commercial land use, were identified. However, exceedances of the environmental quality standards for groundwaters were identified.

3.5.12. Following this investigation, recommended localised remedial works were undertaken in response to the spill. At the time of writing, a programme of Monitored Natural Attenuation ("MNA"), to include six months of groundwater sampling is being undertaken within the Veolia operated area following NRW approval of the scope of the MNA works.

June 2022 – Effluent

3.5.13. PB Gelatins were notified by NRW on Monday 6th June 2022 that a substance likely to have arisen from within PB Gelatins' Installation boundary had been discharged into the River Taff (a controlled water).

3.5.14. It is understood by PB Gelatins that NRW also undertook further investigation of the release to the River Taff as it was strongly suspected to comprise bone and effluent alleged to have arisen from the Installation.

3.5.15. An investigation into the cause and impact of the incident was launched by PB Gelatins.

3.5.16. Investigation of the effluent discharge by PB Gelatins found that the incident arose due to the degradation of the below ground drainage system at the Installation. Following identification, inspections of the drainage were undertaken, and rectification measures were undertaken on the pipework. The proposed changes as part of the Permit variation include new effluent treatment for the effluent resulting from Building A21 activities and also involves the reconfiguration of the drainage network to eliminate the use of aged pipework across the Industrial Estate connecting the A21 and the Old and New Farm buildings. This is discussed in more detail in Section 4 of this report.

3.6. Soil and Groundwater Reference Data

3.6.1. As previously discussed, there have been a number of site investigations undertaken at the site.

Geotechnique Site Investigation 2009

3.6.2. There was a site investigation to assess ground conditions for an extension of the eastern section of the new farm annex building in 2009 (Geotechnique site investigation report 10299/GNS/09) which comprised three machine excavated and one hand dug trial pit in addition to two deeper percussive boreholes.

3.6.3. Made ground was noted in all exploratory locations comprising relatively homogeneous hardcore like materials onto heterogeneous made ground deposits characterised by the presence of man-made materials including brick, ash, clinker, metal, concrete and pottery. The presence of cobbles and boulders was noted in the heterogeneous made ground, the greatest thickness of made ground extended to 1.6m depth.

3.6.4. A slight hydrocarbon odour was noted on the western side of one trial pit, between 0.9 and 1.1m depth. A buried concrete obstruction was also encountered in one of the pits, at 1.3m depth.

3.6.5. The made ground was immediately underlain by granular superficial deposits comprising sands, gravels, and cobbles, below which at depths in excess of 4m soft alluvial clay was encountered. The alluvial clay extended to a proven depth of 18.5m and was underlain by medium dense gravels and cobbles which were proved in one of the boreholes down to 23m depth.

3.6.6. Groundwater was encountered as a minor seepage at 3.4m depth in one trail pit, with no other significant occurrences of groundwater strikes being recorded in the trial pits.

3.6.7. Groundwater was encountered in BH1 at 3.2m depth and rose to 2.9m after twenty minutes. During the drilling works the groundwater fell to 10.6m on completion of the hole. Groundwater in BH2 was recorded at 18.5m depth and rapidly rose to 10.7 depth after twenty minutes, suggesting that the deep groundwater within the gravels at depth was/is under some artesian pressure. The groundwater stayed consistently around 10m depth during the drilling works, and on completion of the hole, was measured at 9.4m depth.

3.6.8. Soil sampling and laboratory analysis identified a number of contaminants including metals, semi metals, PAHs and hydrocarbon compounds in the made ground materials, although these were not considered to be at concentrations likely to migrate to affect controlled waters.

Geotechnique Site Investigation 2011

3.6.9. Another investigation compiled by Integral Geotechnique involved assessing the ground conditions for the construction of two new effluent tanks (Geotechnique site investigation report 10762/GNS/11). The investigation comprised two machine excavated trial trenches and two deep shell and auger boreholes.

3.6.10. Made ground was encountered at each exploratory point and comprised heterogeneous deposits characterised by the presence of man-made materials including brick, ash, clinker, metal, concrete and pottery. The presence of cobbles and boulders was noted in the heterogeneous made ground. The greatest thickness of made ground extended to 1.6m depth.

3.6.11. Numerous obstructions were noted in the made ground and included 0.3m to 0.5m thick concrete slabs and 1m wider former brickwork drainage channels. Numerous cobbles and boulders were also noted.

3.6.12. The made ground was immediately underlain by a thin mantle of superficial clay which was in turn underlain by superficial deposits comprising sands, gravels and cobbles, below which at depths in excess of 4.5m variable but predominantly cohesive alluvial soils were recorded. These soils extended to a proven depth of between 19.7m and 27m below ground level and were underlain by medium dense sands, gravels and cobbles which were proven to 29m depth.

3.6.13. Minor water seepages were recorded at the base of the made ground within the trial trenches. Groundwater was also noted in BH1 at 3.4m depth and BH2 at 3.6m, which subsequently rose to 2.9m and 3m respectively after twenty minutes.

3.6.14. Soil sampling and laboratory analysis identified a number of contaminants including metals, semi-metals and PAHs in the made ground materials, although these were not considered to be at concentrations likely to migrate to affect controlled waters.

Geotechnique Site Investigation 2020

3.6.15. The desk study review of the site completed by Integral Geotechnique in January 2020 identified a number of historical ‘factories’ onsite as well as the ‘gelatin works’ which were first labelled in 1973, but which are likely to have been operational prior to that date. It is probable therefore that the chemicals currently used within the existing facility have been in use since at least 1973, and the likelihood therefore exists of unrecorded/ unknown contamination of the ground beneath the installation.

3.6.16. Further site investigations completed by Integral Geotechnique for both the extension to the new farm annex and the investigation for new effluent tanks (see Integral 2020 SCR report), concluded that the shallow made ground at the site was contaminated with a number of determinants, including hydrocarbons, PAHs, metals and inorganics. Although the investigations were not focused on those contaminants utilised within the gelatin production process, there were a number of noticeable determinants identified which are utilised within this process.

ECL Site Investigation 2022

3.6.17. An Intrusive Site Investigation was undertaken in October 2022 by ECL to satisfy three regulatory requirements:

- EP condition 3.1.1 requiring 5 and 10-year soil and groundwater sampling;
- action 4 detailed in Compliance Assessment Report ("CAR") reference CAR_NRW0040197 which required PB Gelatins to investigate if soil and groundwater contamination has occurred due to the failed effluent system; and
- to obtain soil and groundwater baseline data for the additional area which is to be included in the expanded Permit boundary as part of the Permit variation application.

3.6.18. Consequently, the findings of the 2022 intrusive investigation are detailed in Section 7 'Quality Monitoring' of this SCR in accordance with NRW's SCR template.

4. PERMITTED ACTIVITIES

4.1. Permitted Activities

4.1.1. The currently permitted Schedule 1 Activity under the Environmental Permitting (England and Wales) Regulations 2016 as amended ("EP Regulations") is detailed in Table 5.

Table 5: Schedule 1 Activities

Schedule 1 Activity	Description of Specified Activity	Limits of Specified Activity
S6.8 Part A1 (c)	Disposing of or recycling animal carcasses or animal waste, at a plant with a treatment capacity exceeding 10 tonnes per day of animal carcasses or animal waste or both in aggregate.	From receipt of ossein and other raw materials to the extraction and storage of gelatin.
S5.4 A (1) (a) (ii)	Disposal of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by physico-chemical treatment.	From collection of process effluent to discharge to sewer, including the Dissolved Air Flotation ("DAF") plant.

4.1.2. The Directly Associated Activities ("DAA") currently permitted are detailed in Table 6.

Table 6: Directly Associated Activities

Description of DAA	Limits of Specified Activity
Storage and handling of by-products and wastes generated by the process	From receipt of by-products and wastes from the process to dispatch from site.
Storage of finished products	From receipt of finished products to despatch of products.
Raw materials storage and handling	From receipt of raw materials to transfer to the manufacturing process
Chemical storage and handling	From receipt of materials to their use on-site or disposal off-site.

4.2. Non-Permitted Activities

4.2.1. PB Gelatin does not operate any non-Permitted activities at the Installation.

4.3. Document References

4.3.1. The Site Layout Plan (PBGE.01.09-01) and Drainage Arrangements Plan (PBGE.01.09-02) provided in Appendix I show the location of infrastructure including tanks, process vessels, emission points and drainage arrangements.

4.3.2. An Environmental Risk Assessment ("ERA") (PBGE.01.09/ERA) has been prepared for this Environmental Permit variation application and details all potential environmental risks and associated control measures to ensure the risks are not considered to be significant.

5. CHANGES TO THE ACTIVITY

5.1. Environmental Permit Boundary

5.1.1. PB Gelatins is proposing the expansion of their existing EP boundary to incorporate additional storage areas in Building A12 and A13 for 'work in progress' material/intermediate product prior to blending, as well as storage of finished product prior to dispatch from the Installation.

5.1.2. The updated Site Layout Plan (PBGE.01.09-01) showing the expanded EP boundary is provided in Appendix I.

5.2. Changes to Permitted Activities

5.2.1. There will be no change to the Schedule 1 Activities included in Table 7 or the DAAs included in Table 8 as a result of this variation application.

5.2.2. The Permit variation proposes the following:

- new effluent treatment plant associated with building A21 operations, altered site drainage and one additional point source emission to sewer designated DP2;
- expansion of the Environmental Permit boundary for the inclusion of additional storage areas within Buildings A12 and A13;
- installation of two new biofilters – one to service the 'A18 New and Millennium Farm' Buildings and a second unit for the A18 'Old Farm' building;
- incorporation of ten additional point source emissions to air designated EP20-EP29;
- installation of a new bunded 15m^3 hydrogen peroxide tank and a 30m^3 salt saturator (brine) vessel adjacent to the A21 building.

5.2.3. Following the June 2022 effluent spill detailed in Section 3.5 of this SCR, the proposed variation includes installation of a new effluent treatment plant to serve building A21 and also altered drainage arrangements at the Installation following assessment of the continued suitability of the effluent subsurface drainage system as required by the Compliance Assessment Report ("CAR") (CAR_NRW0040197).

5.2.4. The new effluent treatment proposals include effluent settlement and pH correction and the drainage network connecting the two discrete areas of the Installation (buildings A21 and A18) will be made redundant. As a result of this change, an additional discharge point to sewer, designated DP2, is also proposed. This discharge will be authorised by a new Dwr Cymru Welsh Water ("DCWW") Trade Effluent Consent. The existing point source emission to sewer, designated as DP1, will remain and the existing Trade Effluent Consent will be varied to reflect the proposed changes.

6. MEASURES TAKEN TO PROTECT THE LAND

6.1. Pollution Prevention Measures

6.1.1. PB Gelatin has established a documented Environmental Management System ("EMS") which:

- ensures compliance with all relevant legislation;
- ensures compliance with the Installation's Environmental Permit and Trade Effluent Consent;
- identifies, assesses and minimises the risks of pollution arising from the Installation's activities;
- comprises a range of written procedures that cover all aspects of the Installation's activities;
- identifies, sets, monitors and reviews environmental objectives and key performance indicators; and
- includes a requirement to report annually on environmental performance, objectives, targets and future planned improvements.

6.1.2. The proposed improvement works at the Installation includes significant investment in new and improved site infrastructure, including effluent treatment, concrete hardstanding, drainage network, storage vessels and associated bunding.

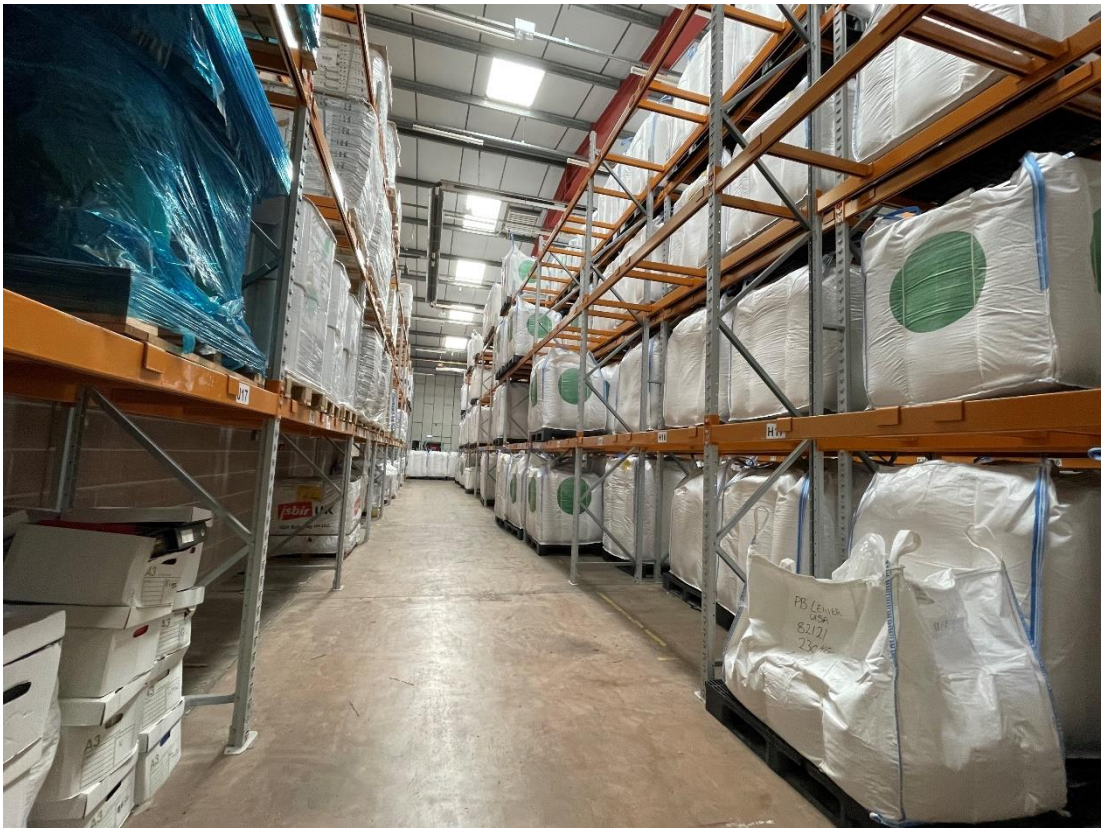
6.1.3. Regular infrastructure inspections and maintenance schedules are also implemented at the Installation which will be reviewed and amended to incorporate the proposed new infrastructure.

6.1.4. Infrastructure inspections are undertaken on a weekly basis and are recorded, and rectification/maintenance actions determined. External tank integrity inspections are also undertaken annually and actions addressed as part of an annual action plan.

6.2. Site Walkover Survey – Additional Proposed Area

6.2.1. A site walkover survey was undertaken within Building A12 and A13 on the 22nd March 2023 by ECL and PB Gelatins personnel. Figure 4 shows the general site character for the additional buildings.

Figure 4: General Site Character – New Buildings



6.2.2. Figure 4 shows the condition of the concrete hardstanding within the new buildings at the Installation. The concrete hardstanding is considered to be in good condition showing no signs of significant cracks or depressions. The buildings are isolated from the drainage network and there was no evidence of spills or loss of containment. Therefore, the risk to ground and groundwater from the proposed activities is considered not significant.

7. QUALITY MONITORING – SITE INVESTIGATION 2022

7.1. Site Investigation Report – October 2022

7.1.1. An intrusive site investigation was designed by ECL to satisfy EP condition 3.1.1 (5 and 10-year soil and groundwater sampling) of Environmental Permit EPR/DP3030ZC and in response to Compliance Assessment Report ("CAR") reference CAR_NRW0040197.

7.1.2. This intrusive investigation builds upon information already available for the site from previous works undertaken by Integral Geotechnique (Wales) Limited – Site Investigation Reports 10299/GNS/09 and 10762/GNS/11 included in their 2020 SCR as well as ECL Report ECL.109.01.01/GIR. ECL's conceptual understanding of the site is based on the information contained within these reports.

7.1.3. The 2022 investigation comprised the progression of three rotary cored boreholes to 15 metres below ground level ("mbgl") and 11 Window Sampling (Dynamic Sampling) boreholes for the purposes of soil and groundwater sampling.

7.1.4. A more detailed description of the intrusive investigation can be found in Appendix III of this SCR.

7.1.5. The intrusive investigation, undertaken on the 3rd, 4th and 5th October 2022, covered the two main operational areas of the PB Gelatins Installation, with additional off-site monitoring for the purpose of collecting cross-gradient soil samples between the site areas.

7.1.6. The off- site locations also aimed to check for any potential ground contamination in soils nearby the suspected failure point of the effluent drainage line.

7.1.7. Furthermore, sample point WS4 was located adjacent to Building A12 and A13 to provide an indication of ground baseline condition for this new proposed area. The intrusive investigation location plan (PBGE.01.06-01) is provided in Appendix III of this SCR.

7.1.8. The analytical soil suite and all certificates of analysis are provided in Appendix III of the Intrusive Site Investigation Report contained in Appendix III of this SCR.

7.1.9. The encountered materials were predominantly made ground underlain by superficial depositions comprising sands, silts and gravels. The borehole logs are also enclosed within Appendix IV of the Site Investigation Report contained in Appendix III of this SCR.

7.1.10. The analytical results for the ground materials sampled have been assessed by the screening of individual analyses against the relevant Tier 1 Site Screening Values adopted. The results are provided in Table A3 and Table A5 within Appendix III of this SCR.

7.1.11. In the absence of groundwater samples from WS4, leachability analysis was undertaken. The soil leachability analysis provides indicative groundwater quality for shallow perched waters in the absence of water samples.

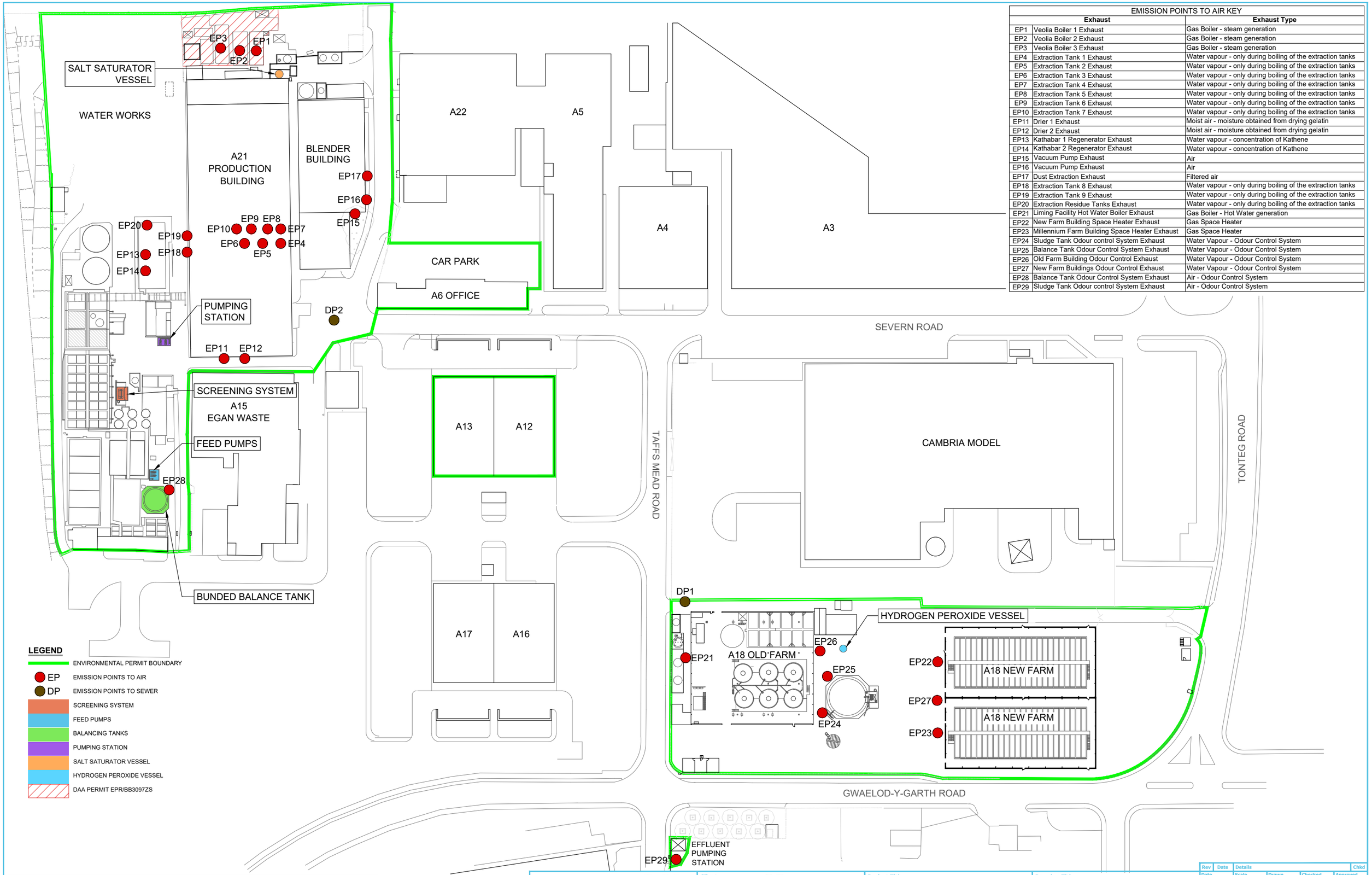
7.1.12. The results are provided in Table A5 of Appendix III of this SCR. Exceedances of the relevant environmental quality standards ("EQS") have been identified for aluminium and iron, potentially resultant of the site's historic usage as a metal works.

7.1.13. In regard to the wider site investigation, no breaches of 'commercial' site screening values within both made ground and natural ground materials; However, concentrations of heavy metals were noted to be elevated and minor hydrocarbon presence was recorded. Asbestos fibres were also recorded within made ground materials.

7.1.14. Groundwater sampling recorded exceedances of the relevant quality standards for metals and hydrocarbons, however these appear predominantly in the upgradient BH1. Downgradient groundwater samples appear to be of improved quality when compared to BH1. Thus, indicating that there are sources of these potentially polluting substances upstream of the Installation. It is therefore considered that the exceedances are unlikely to be attributable to PB Gelatins operations.

7.1.15. Elevated calcium concentrations were recorded downgradient of the suspected effluent drainage line breach. Whilst no EQS for calcium applies, calcium is utilised within the liming process by PB Gelatins therefore it is possible that downgradient groundwater may be impacted. However, it should be noted that calcium is a major component of many rock-forming minerals, and concentrations of calcium in groundwater are likely to be of natural origin. However, it was recommended that further sampling of groundwater would be required to confirm any trends in concentrations.

APPENDIX I
DRAWINGS



EMISSION POINTS TO AIR KEY		
	Exhaust	**Exhaust Type**
EP1	Veolia Boiler 1 Exhaust	Gas Boiler - steam generation
EP2	Veolia Boiler 2 Exhaust	Gas Boiler - steam generation
EP3	Veolia Boiler 3 Exhaust	Gas Boiler - steam generation
EP4	Extraction Tank 1 Exhaust	Water vapour - only during boiling of the extraction tanks
EP5	Extraction Tank 2 Exhaust	Water vapour - only during boiling of the extraction tanks
EP6	Extraction Tank 3 Exhaust	Water vapour - only during boiling of the extraction tanks
EP7	Extraction Tank 4 Exhaust	Water vapour - only during boiling of the extraction tanks
EP8	Extraction Tank 5 Exhaust	Water vapour - only during boiling of the extraction tanks
EP9	Extraction Tank 6 Exhaust	Water vapour - only during boiling of the extraction tanks
EP10	Extraction Tank 7 Exhaust	Water vapour - only during boiling of the extraction tanks
EP11	Drier 1 Exhaust	Moist air - moisture obtained from drying gelatin
EP12	Drier 2 Exhaust	Moist air - moisture obtained from drying gelatin
EP13	Kathabar 1 Regenerator Exhaust	Water vapour - concentration of Kathene
EP14	Kathabar 2 Regenerator Exhaust	Water vapour - concentration of Kathene
EP15	Vacuum Pump Exhaust	Air
EP16	Vacuum Pump Exhaust	Air
EP17	Dust Extraction Exhaust	Filtered air
EP18	Extraction Tank 8 Exhaust	Water vapour - only during boiling of the extraction tanks
EP19	Extraction Tank 9 Exhaust	Water vapour - only during boiling of the extraction tanks
EP20	Extraction Residue Tanks Exhaust	Water vapour - only during boiling of the extraction tanks
EP21	Liming Facility Hot Water Boiler Exhaust	Gas Boiler - Hot Water generation
EP22	New Farm Building Space Heater Exhaust	Gas Space Heater
EP23	Millennium Farm Building Space Heater Exhaust	Gas Space Heater
EP24	Sludge Tank Odour control System Exhaust	Water Vapour - Odour Control System
EP25	Balance Tank Odour Control System Exhaust	Water Vapour - Odour Control System
EP26	Old Farm Building Odour Control Exhaust	Water Vapour - Odour Control System
EP27	New Farm Buildings Odour Control Exhaust	Water Vapour - Odour Control System
EP28	Balance Tank Odour Control System Exhaust	Air - Odour Control System
EP29	Sludge Tank Odour control System Exhaust	Air - Odour Control System

Environmental Compliance Ltd.
Unit G1
The Willowford
Main Avenue
Treforest Industrial Estate
Pontypridd.
CF37 5BF
Tel: 01443 801215
Email: info@ecl.world
Web: www.ecl.world

Client: PB LEINER

Project Title: PB GELATINS / PB LEINER UK
UNIT A6, SEVERN ROAD
TREFOREST INDUSTRIAL ESTATE
PONTYPRIDD.
CF37 5SQ

Drawing Title: SITE LAYOUT PLAN

Rev	Date	Details	Chkd

Date	Scale	Drawn by	Checked by	Approved by
29/09/2023	1:1250 @ A3	GTB	SM	SM

Drawing Status: WORKING DRAWING

Drawing Number: PBGE.01.09-01

Rev: -

SALT SATURATOR VESSEL
E1
WATER WORKS
E24
A21
PRODUCTION
BUILDING
BLENDER
BUILDING
A22
A5
A4
A3
CAR PARK
A6 OFFICE
E22
E21
DP2
PUMPING
STATION
E26
E2
E3
E1
E25
SCREENING SYSTEM
A15
EGAN WASTE
E4B
E5
FEED PUMPS
A13
A12
SEVERN ROAD
TAFFS MEAD ROAD
CAMBRIA MODEL
TONTEG ROAD
BUNDED BALANCE TANK
E6
E7
DP1
DAF Liquid
Effluent
F17
HYDROGEN PEROXIDE VESSEL
A17
A16
E8
E9
E10
A18 OLD FARM
E20
E19
A18 NEW FARM
E18
A18 NEW FARM
E17
E14
E15
E15
E11
S16
GWAELOD-Y-GARTH ROAD
E12
E13
S17
PUMPING STATION OVERFLOW
EFFLUENT
PUMPING
STATION

LEGEND

- ENVIRONMENTAL PERMIT BOUNDARY
- EXISTING EFFLUENT DRAINAGE
- PROPOSED EFFLUENT DRAINAGE
- DCWW FOUL DRAINAGE
- REDUNDANT DRAINAGE
- SCREENING SYSTEM
- FEED PUMPS
- BALANCING TANKS
- PUMPING STATION
- SALT SATURATOR VESSEL
- HYDROGEN PEROXIDE VESSEL
- DAA PERMIT EPR/BB3097ZS

NOTES

The drains from the East & Western side of A21 will be diverted to the pumping station.
The effluent will be pumped from the collection, to the screening systems to remove the material larger than 0.5mm. The solids will be collected in a roll on, roll off skip and the liquid phase will be gravity feed into the settling pits, for balancing. The effluent will be stored in these vessels with a retention time of approximately 8 hours, before being pumped through a static mixer, to carry out the pH correction. The treated effluent will be monitored before being discharged into a suitable DCWW, foul drain, in Severn Road.

0m 25m 50m 75m 100m 125m

N

Environmental Compliance Ltd.
Unit G1
The Willowford
Main Avenue
Treforest Industrial Estate
Pontypridd.
CF37 5BF
Tel: 01443 801215
Email: info@ecl.world
Web: www.ecl.world

Client: PB LEINER

Project Title: PB GELATINS / PB LEINER UK
UNIT A6, SEVERN ROAD
TREFOREST INDUSTRIAL ESTATE
PONTYPRIDD.
CF37 5SQ

Drawing Title: DRAINAGE ARRANGEMENTS PLAN

Rev	Date	Details	Chkd

Date	Scale	Drawn by	Checked by	Approved by
10/05/2023	1:1250 @ A3	GTB	SM	SM

Drawing Status: WORKING DRAWING

Drawing Number: PBGE.01.09-02

Rev: -

APPENDIX II
INTEGRAL GEOTECHNIQUE – SITE CONDITION REPORTS 2013 & 2020

PB Gelatins UK

Environmental Permit Application Support

Site Condition Report

11121/CS/13/SCR

Intégral
Géotechnique

CLIENT: **PB GELATINS UK**

PROJECT: **ENVIRONMENTAL PERMIT APPLICATION SUPPORT**

TITLE: **SITE CONDITION REPORT**

JOB NO: **11121**

DOCUMENT REF: **11121/CS/13/SCR**

Revision	Purpose Description	Originated	Reviewed	Authorised	Date
0	Final Draft	CS	MJE	MJE	Mar '13

Geotechnical Engineers:

Intégral Géotechnique (Wales) Limited
Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX

Tel: 029 2080 7991
Fax: 029 2086 2176

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Figure 1 Site Location
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Figure 3 Locations of Bulk Storage
Figure 4 Conceptual Site Model

1.0 INTRODUCTION

1.1 GENERAL

This Site Condition Report (SCR) has been prepared by Intégral Géotechnique (Wales) Limited, to support an application by PB Gelatins for an Environmental Permit at their gelatin production facility in Treforest (The Installation).

The report is intended to satisfy the Environment Agency (EA) requirements for an SCR by:

- Identifying the environmental setting and land pollution history of the site;
- Identifying activities that will be conducted at the installation that may lead to land pollution; and
- Identifying and assessing the preventative measures that will be in place to protect the land.

To achieve the above, a desk study review of available regulatory information has been undertaken including the reviews of an Envirocheck report and an historical site investigation.

This information has been used to describe the ground conditions at the site, and in particular to identify baseline conditions, by identifying any polluting substances that may be present in or on the land. Potentially polluting substances that may be used, or generated on site and pollution preventative measures are also identified and described.

1.2 SCOPE OF WORKS

This report has been prepared in accordance with the EA Environmental Permit Regulations (EPR) H5 guidance and the scope of work has comprised the following:

- The collection of data regarding site operations to be permitted under EPR, in particular to identify any risks of future releases to land;
- A review of the history of the site and the local area using historical Ordnance Survey (OS) maps and any information held on site;
- An assessment of the environmental sensitivity (geology, hydrogeology, hydrology and ecology) of the area through established sources such as the British Geological Survey (BGS) and collection of information from the public register via a search of the Landmark Database;

1.2 SCOPE OF WORKS (CONTINUED)

- A review of any previous site investigations completed to identify any information relevant to the ground conditions and any contamination present; and
- The completion of a site reconnaissance to identify any visual evidence of contamination, assess pollution prevention infrastructure and allow discussions with staff familiar with the history of the site.

Samples of photographs obtained during these site visits are included within Appendix B.

1.3 LIMITATIONS

"Contamination" is taken throughout the report to mean the "presence of one or more potentially harmful substances as a result of human activity". The use of the term in this way does not imply that harm is being or might be caused by the contamination. It should be noted that "contamination" can have different meanings under different regulatory regimes, including the Environmental Permitting Regulations, planning, building control and Part IIA of the Environmental Protection Act 1990. Naturally elevated concentrations of potentially harmful substances may also be present and the significance of any that have been identified is also evaluated in this report.

We have not undertaken a site investigation as part of this work and any discussion of ground conditions is based upon review of data provided to us and obtained by us from third parties. Our assessment is based upon third party information including the list of substances utilised in the installation; we are reliant upon the accuracy of this information and have not attempted to verify or confirm third party information.

This report has been prepared for the sole use of PB Gelatins UK and their advisors and should not be passed to others without the express consent of Intégral Géotechnique (Wales) Limited.

2.0 THE SITE

2.1 SITE LOCATION AND DESCRIPTION

The site (The Installation) is located at the northern end of the Treforest Industrial Estate at a National Grid Reference of approximately 310260,186870 (see Figure 1).

The site consists of a number of relatively discrete parcels of land within an industrial estate, occupying a total land area of approximately 3.83 hectares. The boundaries of the site as a whole are generally defined by Gwaelod-y-Garth Road to the east, Tonteg Road to the north, Severn Road to the north and the Taff Vale railway to the south. A site plan is presented in Figure 2.

The site is situated on relatively level ground at an approximate elevation of 46m AOD. The channel of the River Taff is approximately 20m to the northeast at its closest.

The type and condition of surface cover varies across the site, with the majority of internal building floors being of concrete construction. This was generally observed to be in fair condition, though there were areas where surface cracking was observed; the thickness and construction of the concrete flooring is not known. The type and condition of surface cover external to buildings was also highly variable, with numerous asphalt cement (tarmac) and concrete access roads, but also a number of large areas of permeable gravel covered surfaces.

Active services are present and in use on site and site drainage may act as a preferential pathway for potential contaminants from leaks and spills.

Dense vegetation grows alongside the southern boundary of the site. This may include invasive plant species including Japanese Knotweed, though it is outside of the growing season and was not assessed further.

2.2 SURROUNDING LAND USE

The site is located within Treforest Industrial Estate and hence in an extensive area of generally light industrial and commercial developments.

- To the north and north west are electricity sub-stations and switching stations;
- To the north east are a number of car showrooms, with the River Taff further beyond;
- To the east are a number of light industrial and commercial units; and
- To the south and west is the Taff Vale railway line with a non-developed hillside beyond.

2.3 ACTIVITIES TO BE OPERATED WITHIN THE INSTALLATION

The site manufactures high purity gelatins for use within various industries, including photographic and pharmaceutical applications. As mentioned in Section 2.1, the site is arranged as a number of relatively discrete land parcels and buildings; these are shown on the site layout drawing in Figure 2. For further ease of reference, throughout this report the site will also be zoned and discussed according to these land parcels.

Description of Operations

The main bulk raw material input to the facility consists of small chippings/shavings of animal bones known as Ossein. These are delivered to Zone A18 area of site, where they are subjected to various chemical processing techniques in the 'Old Farm' and 'New Farm' buildings, mainly including the addition of lime and other caustic and acidic solutions, before being transported by truck to the A21 'Production and Blender Building' area of site. Further physical and chemical processes are undertaken in the A21 building complex in Zone A21, again including the utilisation of caustics and acids as the gelatin production is completed.

River abstraction water is used in the production process and the preparation of this process water is undertaken in the 'Waterworks' Zone, including the addition of water treatment chemicals, before this 'clean' process water is piped to the various areas of site for usage.

In Zone A6 the single building is used as an office block, with offices and a materials/quality testing laboratory on the ground floor and office space on the first floor, whilst the warehouse in Zone A13 is used as a solid materials (finished gelatin) storage facility.

The various process areas of site are linked by below ground drainage pipes, all of which channel effluent via the 'Effluent Plant'. This is effectively a below and above ground concrete sump which gathers the various 'dirty' process waters and pumps them to the 'Balance Tank' which is situated in the A18 area of site. General filtering is completed in the balance tank, which discharges to the 'DAF' plant in the Old Farm building for treatment. In general the dirty process waters are understood to consist of relatively neutral to slightly alkaline pH, but which exert high biological / chemical oxygen demand (BOD/COD). Following treatment, organic rich waters are pumped to the 'Sludge Tank' which is situated also in the A18 area of site.

The site management have confirmed that there are currently no variations planned to the operational layout of the site or the processing operations prior to EPR permitting.

2.3 ACTIVITIES TO BE OPERATED WITHIN THE INSTALLATION (CONTINUED)

PB Gelatins have confirmed that the site operates under an existing documented Environmental Management System (EMS) which is currently being assessed and updated, with the intention of achieving ISO 14001 compliance.

The EMS includes regular infrastructure inspections and maintenance schedules and has established procedures for materials (including chemical) deliveries and bund draining / emptying. Infrastructure inspections are undertaken on a weekly basis and are officially recorded and rectification/maintenance actions determined.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE)

The gelatin manufacturing process utilises a variety of chemicals. As described in Section 2.3, for ease of reference the site has been zoned as shown on Figure 2.

The methods and storage areas utilised for chemical storage vary greatly across the site, with hardstanding and site drainage being present in all locations internal to buildings. General spillages of lime were observed in a number of internal building locations, but no significant spillages of other chemicals were observed at the time of the visit.

All tanks assessed at the installation consisted of above ground storage tanks (ASTs) and no underground storage tanks (USTs) were identified. The majority of the tanks were observed as being in fair condition, with the bunds where applicable also being in fair condition although there were a number of fill points located outside of bunds and a number of bunds had pipework penetrating the walls. A number of bunds external to buildings were observed to contain small volumes of rain water. There are a small number of circumstances where chemicals are stored upon non-hardstanding areas.

There are no hydrocarbon fuelled vehicles used on-site within the production process, with the exception of the single truck which is used to transport Ossein from Zone A18 to Zone A21, this truck is refuelled at an off-site public filling station.

There are three electrical transformers known to be on site.

The only tanks indicated as having overflow/high level alarms are the bulk Acetic Acid (BC10) in Zone A21, the TRUFLOC TAC40 in the Waterworks Zone and the Effluent Plant Balance Tank in Zone A18. A number of tanks are fitted with level switches and sensors.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Tables 1 to 4 list the location, volume and storage methods of the bulk chemical storage. These are listed relative to the various site zones and storage locations are shown on Figure 3.

Zones A6 and A13

The only chemicals utilised within Zone A6 are small volumes for use in laboratory testing procedures. These are all stored in small secure containers within the laboratory itself. The laboratory is contained within the ground floor of the office block and is well contained, with sealed concrete flooring, brick walls and no floor level surface drainage.

There are no significant volumes of liquid chemicals used or stored in Zone A13, which is utilised as a warehouse for the finished solid gelatin materials; the gelatin is stored in c.0.8 Ton sacks upon multilevel racking, with space for a maximum of 720 sacks (c.576 Tons). The floor is of unbroken concrete construction and a brick wall surrounds the building envelope completely, with the exception of entrances.

Any spillage of chemicals within these two zones is likely to be small scale and general cleaning and operational procedures will prevent any potential pollution of land or groundwater occurring. As a result these two site zones have not been considered further as sources of potential future pollution.

Zone A18

Zone A18 contains two buildings, the 'New Farm (and New Farm Annex)' building which consists of a metal portal framed shed with comprehensive internal concrete flooring and the 'Old Farm' building which also has comprehensive concrete flooring, though some internal areas were subject to surface cracking. Both of these buildings have a relatively comprehensive internal surface drainage system, which drains all process effluent and any spillages to the Effluent Plant via below ground drainage runs. There are only a small number of access points through the walls for vehicular and pedestrian entry, but there is limited containment for liquid spillages (i.e. raised steps/lips) at these access points.

External to the buildings, the remainder of Zone A18 consists of tarmac and concrete vehicular access areas and a number of large permeable non-hardstanding areas which were generally gravelled.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Table 1 : Area A18 - Storage and Usage of Bulk Raw Materials				
Chemical / Material Type	**No**	**Maximum Capacity**	**Storage Method**	**Location/description**
Ossein (bone)	R1	12 m^3	Concrete Pit	The Ossein is tipped into an external concrete pit, then washed and pumped into the plant with clean water.
New Farm (and New Farm Annex) Building				
Lime Solution (1%)	C2	96No. ASTs of c.69m^3	Above ground concrete tanks	Within building
Phosphoric Acid (75%)	C3	c.0.33m^3	Plastic tank with steel spill tray	Within building. Fill pipe is above ground from BC01.
Hydrogen Peroxide (35%)	C4	1m^3	IBC on spill tray	Within building
Old Farm Building				
Lime Solution (1%)	C5	10No. ASTs of c.55m^3	Above ground concrete tanks	Within building
Lime Solution (high concentration)	C6	c.147m^3	Above ground concrete tank/silo	Within building
Sodium hypochlorite (14/15%)	C7	c.1m^3	Plastic container no spill tray	Within building
COFLOC	C9	c.2No. x 1m^3	IBCs on plastic spill trays	Within building

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
Sulphuric Acid (77%)	C17	c.1m^3	IBC on spill tray	Within building
TRUFLOC TAF3400	C17	c.10 x 25L	Plastic drums on pallet	Within building
TRUFLOC - AWE30	C17	c.2No. x 1m^3	IBCs on plastic spill trays	Within building
Phosphoric Acid (75%)	C18	c.0.35m^3	Steel container in brick bund	Within building
External to Buildings				
TRUFLOC TAF3400	C13	25L	Small container with direct feed to sewer	On external hardstanding Drainage to road drainage
Phosphoric Acid (75%)	BC01	20.73m^3	HDPE self bunded AST	On external hardstanding with drainage to effluent plant but little containment
Sulphuric Acid (77%)	BC11	21.36m^3	HDPE self bunded AST	On external hardstanding with drainage to effluent plant but little containment
Sulphuric Acid (77%)	C14	N/A	N/A	Fill point for sulphuric acid tank - has concrete drip drain beneath to effluent plant, but is located adjacent to area of gravel surfacing.
Effluent Tank (high COD/BOD, pH up to 9/10)	C15	832m^3	Steel AST with steel bund	Balance Tank – located on extensive gravelled area
Effluent Sludge Tank (high BOD/ COD)	C16	117m^3	Steel AST – no bund	Located on extensive gravelled area. Fill pipe is below ground. Loading point is un-bunded at ground level.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Zone A21

Zone A21 contains two buildings, the 'Production Building' and the 'Blender Building'. These buildings are where the remainder of the gelatin processing and production is undertaken. Internally the buildings are metal framed sheds, with comprehensive concrete flooring surfaces, which are unbroken except for a relatively comprehensive surface drainage system, which collect process effluent and surface spillages from within the building and direct them to the Effluent Plant via below ground drainage runs. The concrete floor in some locations is spalling and cracking badly. There are a small number of access points through the walls, but there is limited containment for liquid spillages (i.e. raised steps/lips) at the access points.

Externally, the buildings are surrounded by areas of both hardstanding and permeable gravelled surfaces.

There are a number of externally situated bulk storage tanks, BC05, BC06, BC07, BC08 and BC10 which are located to the rear of the Production Building, on an area of hardstanding which drains to the adjacent road surface drains.

Table 2 : Area A21 - Storage and Usage of Bulk Raw Materials

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
A21 Production Building				
Relite Resin (solid)	C19	c.14 Ton	In 25kg bags on pallets	Internal to building on concrete hardstanding
Sedipur	C19	Small quantities	Stored in bags	Internal to building on concrete hardstanding
Aluminium sulphate (17% - solid)	C19	1 tonne	In 25kg bags on pallets	Internal to building on concrete hardstanding

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
Monopropylene Glycol	C25	3.9m^3	Stainless steel AST	
Phosphoric Acid	C25	0.11m^3	Various steel and plastic containers	
Hydrogen Peroxide	C25	0.15m^3 total		
Caustic Soda	C25	c.1.5m^3 in small internal containers		
Lithium Chloride	C25	c.1m^3 in two internal containers		
Acetic Acid	C25	1m^3		
Oils / lubricants	C26	Small volumes	Various small containers	In maintenance shop within building
External to Buildings				
Hydrochloric Acid (32%)	BC05	35m^3	HDPE AST with integral HDPE bund	Bund incomplete with penetrations. Surrounding hardstanding drains to road drains.
Recovered Acid (<10%)	BC06	58m^3	HDPE AST with integral HDPE bund	On hardstanding with gravel surround. Surrounding hardstanding drains to road drains.
Phosphoric Acid (75%)	BC07	16m^3	HDPE AST with brick bund	Bund showing some cracking Fill point external to bund Number of bund penetrations Surrounding hardstanding drains to road drains.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
Hydrogen Peroxide (35%)	BC08	13m^3	HDPE AST with brick bund	Fill point outside bund on hardstanding Bund penetrations
Acetic Acid (80%)	BC10	7.5m^3	Plastic AST with brick bund	Fill point outside bund on hardstanding Bund penetrations

Waterworks Zone

The 'Waterworks' Zone is located immediately adjacent to Zone A21 and consists of a number of external, open concrete tanks which contain water abstracted from the River Taff. Water treatment chemicals are added to the abstracted water in these tanks to produce water suitable for use in the production processes, in general the percentage by volume of treatment chemicals to water in these tanks is <c.0.1%. In addition there are a number of bulk chemical storage tanks in this zone, which feed into the Production Building via above ground pipelines.

The surface covering across the waterworks zone is generally permeable gravel, with limited areas of hardstanding.

Table 3 : Waterworks Area - Storage and Usage of Bulk Raw Materials

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
External to Building				
TRUFLOC TAC40 flocculent	BC02	18m^3	HDPE AST with brick bund	Bund has drain at base (with lock) Fill point outside bund No tertiary hardstanding - gravel surface adjacent to bund
Sodium hypochlorite (14/15%)	C20	2 x 1m^3	IBCs, one internal within a building, one external on small area of hardstanding	No spill tray on external IBC Internal IBC has spill tray and hardstanding with drainage to Effluent Plant Gravel surface adjacent to external IBC
Caustic Soda	BC03	73m^3	Plastic AST within concrete bund	Fill point inside spill bund with drainage to effluent plant Above ground pipe to Production Building No tertiary hardstanding - gravel surface adjacent to bund

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
Caustic Soda	BC04	11m^3	Plastic AST within concrete bund	Fill point inside spill bund with drainage to effluent plant Above ground pipe to Production Building No tertiary hardstanding - gravel surface adjacent to bund

Dalkia Zone

Dalkia Utilities operate a gas fired energy and steam generation unit (boilers) adjacent and to the north of the Production Building (see Figure 2). In the event of a major gas supply interruption, Dalkia Utilities maintain a supply of 18,000 litres of fuel oil in tanks within this facility, for the sole use of PB Gelatins. The fuel oil supply is directly connected to the three boilers via above ground pipelines.

Table 4 : Dalkia Zone - Storage and Usage of Bulk Raw Materials

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
External to Building				
Fuel Oil	F1	18m^3	2 x 9,000L steel AST within concrete block bund	Fill point outside bund with very small solid metal drip tray beneath Above ground supply pipe to boilers No tertiary hardstanding - gravel surface adjacent to and surrounding bund

Effluent Treatment and Site Drainage

The production process utilises a large volume of water to process the Ossein at each stage of treatment. This creates a large volume of liquid effluent which at various stages contains pH changing acids and alkalis and also organic materials which cause elevated COD/BOD. However the volume of water used is very high and the pH of the effluent is generally neutral and although sometimes elevated, is not anticipated to rise above 10; however the BOD/COD of the effluent is understood to be very high.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

All process effluent is directed to the effluent plant via a series of underground drainage runs. These are all directed through a central location, the 'pumping station' in the Effluent Plant (see Figure 2), which collects the effluent in a concrete sump before pumping it to the 'Balance Tank' in Zone A18. It is stored in the Balance Tank before which Ossein solids greater than 0.7mm are removed by screening, before being directed to the DAF unit for treatment via a series of coagulants and flocculants to remove further particulate matter. Organic constituents are separated as much as possible and stored in the 'Sludge Tank' in Zone A18 prior to removal off-site by a contractor for re-use as fertiliser, whilst the remaining treated waters are discharged to foul sewer. The routing of the drains is understood and a drainage plan will be included within the main application, a camera survey has been undertaken of the drains, however integrity testing has not.

All surface water run-off, including hardstanding feeds into the Effluent Drainage System.

Waste Management

Detailed information on waste handling and storage from the production process will be provided within the main application.

The only wastes reported from the production process are approximately 300 Tons per week of effluent sludge which is removed by an external contractor for recycling/re-use as a fertiliser, on average 1600m^3/day of liquid effluent which is disposed of to foul sewer and 60 Tons per month of bone chips which are removed by an external contractor for recycling/re-use within rendering.

General wastes including office wastes such as paper, cardboard etc are stored in a collection of plastic and metal bins and skips at various locations around the facility, prior to collection by a third party contractor for recycling and / or disposal as appropriate. These are all solid wastes, with no other liquid wastes produced from the production process.

2.5 AVAILABLE SITE INVESTIGATION DATA

There have been previous site investigations undertaken at the site and although these were undertaken mainly to assess geotechnical ground conditions and were not contamination focused, they did enable an assessment of the ground as discussed in the following sections:

2.5 AVAILABLE SITE INVESTIGATION DATA (CONTINUED)

Site investigation undertaken by Intégral Géotechnique (Wales) Limited – Site Investigation Report 10299/GNS/09 - Proposed Extension to New Tank Farm Annex (Zone A18)

This site investigation assessed ground conditions for an extension of the eastern section of the New Tank Farm Annex building. It comprised three machine excavated and one hand dug trial pits in addition to two deeper cable percussive boreholes.

Made ground was noted in all exploratory locations comprising relatively homogenous hardcore like materials onto heterogeneous made ground deposits characterised by the presence of man-made materials including brick, ash, clinker, metal, concrete and pottery. The presence of cobbles and boulders was noted in the heterogeneous made ground. The greatest thickness of made ground extended to 1.6m depth.

A slight hydrocarbon odour was noted in the western side of one trial pit at between 0.9 and 1.1m depth. A buried concrete obstruction was also encountered in one of the pits, at 1.3m depth.

The made ground was immediately underlain by granular superficial deposits comprising sands, gravels and cobbles, below which at depths in excess of 4.0m soft alluvial clay was encountered. The alluvial clay extended to a proven depth of 18.5m and was underlain by medium dense gravels and cobbles which were proved in one of the boreholes down to 23m depth.

Groundwater was encountered as a minor seepage at 3.4m depth in one trial pit, with no other significant occurrences of groundwater strikes being recorded in the trial pits.

Groundwater was encountered in BH1 at 3.2m depth and rose to 2.9m after twenty minutes. During the drilling works the groundwater fell to 10.6m on completion of the hole. Groundwater within BH2 was recorded at 18.5m depth and rapidly rose to 10.7m depth after twenty minutes, suggesting that the deep groundwater within the gravels at depth was/is under some artesian pressure. The groundwater stayed consistently around 10.0m depth during the drilling works, and on completion of the hole was measured at 9.4m depth.

Soil sampling and laboratory analysis identified a number of contaminants including metals, semi-metals, PAHs and hydrocarbon compounds in the made ground materials, although these were not considered to be at concentrations likely to migrate to affect controlled waters.

2.5 AVAILABLE SITE INVESTIGATION DATA (CONTINUED)

Site investigation undertaken by Intégral Géotechnique (Wales) Limited – Site Investigation Report 10762/GNS/11 - Proposed Effluent Tanks (Zone A18)

This site investigation assessed ground conditions for the construction of two new effluent tanks within the Zone A18 area of the installation (these are the existing 'Balance' and 'Sludge' tanks adjacent to the A18 'Old Farm' building). The investigation comprised two machine excavated trial trenches and two deep shell and auger boreholes.

Made ground was encountered at each exploratory point and comprised heterogeneous deposits characterised by the presence of man-made materials including brick, ash, clinker, metal, concrete and pottery. The presence of cobbles and boulders was noted in the heterogeneous made ground. The greatest thickness of made ground extended to 1.6m depth.

Numerous obstructions were noted in the made ground and included 0.3m to 0.5m thick concrete slabs and 1.0m wide former brickwork drainage channels. Numerous cobbles and boulders were also noted.

The made ground was immediately underlain by a thin mantle of superficial clay which was in turn underlain by superficial deposits comprising sands, gravels and cobbles, below which at depths in excess of 4.5m variable but predominantly cohesive alluvial soils were recorded. These variable but predominantly cohesive alluvial soils extended to a proven depth of between 19.7m and 27.0m below ground level and were underlain by medium dense sands, gravels and cobbles which were proven down to 29m depth.

Minor water seepages were recorded at the base of the made ground within the trial trenches. Groundwater was also noted in BH1 at 3.4m depth and BH2 at 3.6m, which subsequently rose to 2.9m and 3.0m respectively after twenty minutes.

Soil sampling and laboratory analysis identified a number of contaminants including metals, semi-metals and PAHs in the made ground materials, although these were not considered to be at concentrations likely to migrate to affect controlled waters.

3.0 SITE HISTORY

The recent history of the site has been traced with the aid of an Envirocheck Report, a copy of which is included in Appendix A. The Envirocheck Report includes the following scaled historical maps:

Map Scale	Dates
1:2,500	1875-1877, 1900, 1919-1920, 1936, 1960-1962,
1:1,1250	1958-1959, 1973-1976, 1978, 1988-1991, 1989-1992, 1993,
1:10,560	1885, 1901, 1921, 1947, 1953
1:10,000	1965, 1970-1976, 1981-1984, 1993, 2006

The 1875-1877 map shows the majority of the site to comprise part of a network of open fields. A road is shown to cross the northeast part of the site (Zone A18 area), trending approximately north-south, and a footpath is shown to cross the central part of the site trending approximately northwest-southeast. Part of the southwest part of the site is shown to comprise rough pasture and part of deciduous forestry. A number of small streams are also shown in the southern part of the site, flowing towards a larger watercourse which is shown immediately southwest of the site, flowing approximately southeast. The River Taff is shown approximately 20m north of the site at the closest, flowing towards the southeast. A railway line on an embankment/terrace is indicated immediately southwest of the watercourse, running approximately northwest-southeast. A 'Trial Shaft' is shown, approximately 80m southeast of the site. Maes-mawr colliery is situated 200m to the south, on the opposite side of the railway line.

The 1900 map shows no significant changes on site. The trial shaft to the south east of the site is now labelled as 'Old Air Shaft / Old Shaft'.

The 1919-1920 map shows no significant changes on site. There is a 'Generating Station (South Wales Electrical Power Distribution Co.)' shown 225m to the northwest and Maes-mawr colliery is now labelled as disused.

The 1936 map shows electricity pylons crossing the site heading towards a substation approximately 100m north of the site. By 1943/1947 a number of large buildings had been developed across all site areas and a number of large buildings had been developed to the southeast. The generating station had expanded in size and included a number of additional railway lines and materials stockpiles.

3.0 SITE HISTORY (CONTINUED)

By 1953 a number of further buildings had been constructed across the site and the existing buildings had increased in size to cover the majority of the various site areas. There were also several large buildings shown adjacent to and running along the whole of the northern boundary.

The 1958-1959 map labels nearly all of the on-site and the adjacent off-site buildings to the north and southeast as 'Factory'. These factory buildings occupy the whole site with the exception of the far south and south-western areas; these are shown as 'works' with a number of tanks and rough ground respectively, with a drain and two streams flowing off site towards the northwest through the rough ground. The railway line to the southwest is shown to have expanded in size and there are a number of spur lines shown running from the centre of the site to the main line. The Generating Station to the north is now labelled as 'Works' and a number of additional rail lines and electricity transmission lines connect to it.

The 1973-1976 map shows the northernmost building in Zone A18 to be a metal alloy works, whilst the rest of the site forms part of a Gelatine Works. A number of additional tanks have been constructed within the southern site area, encompassing the previous rough ground where there are three large diameter tanks shown. The spur railway lines from the factory are no longer shown. The route of the electricity pylons has been changed slightly so that they no longer cross the site. The adjacent factory units are indicated to be occupied by a fibre and board works, paint works, textile factory, cigarette paper factory, zip fastener factory, chemical distillery and dry cleaning works. A second electricity sub-station is indicated approximately 50m west of the site.

The 1988-1991 historical plans show little change to the layout of the site or the surrounding area. There are a number of rectangular tanks shown within the far north-western area of Zone A21. There are also three large tanks shown immediately adjacent to the eastern boundary.

By 1989-1992, the metal alloy works building is no longer present in the north of the site (Zone A18). A pumping station is shown just within the far eastern site boundary and the three large tanks which were situated adjacent to its location are no longer shown. No other significant changes are shown to the site or surrounding area.

By 2012 the only significant change to the site and surrounding area is the construction of a new building in the far northern area of the site (Zone A18).

No other significant changes are shown to the site or surrounding area to the present day.

4.0 SITE ENVIRONMENTAL SETTING

4.1 PHYSICAL SETTING

The site is located on the floor of a wide flat bottomed valley carrying the River Taff, the channel of which is located some 20m to the northeast of the site at its closest. In the vicinity of the site the River Taff has comprehensive flood defences. The site is situated at an approximate elevation of 46m AOD.

4.2 GEOLOGY

The 1:50,000 scale geological map of the area (British Geological Survey [BGS] Sheet 249) indicates the site to be underlain by the Brithdir Beds from the Carboniferous Upper Coal Measures comprising grey sandstones, with thin mudstone/siltstone and seatearth interbeds and mainly thin coal seams. Two normal faults are conjectured to cross the site or very near to the site, both trending approximately northwest-southeast. The Maesmawr Fault is to the southwest with the downthrown side on the northeast and the Daren Ddu Fault is to the northeast with the downthrown side on the southwest. The conjectured outcrop of the Cefn Glas coal seam is shown to cross the site between the two faults, trending approximately east-west, with the conjectured outcrops of the Daren Ddu, No.3 Llantwit and No. 2 Llantwit coal seams to the south of the site. The dip of the bedrock is shown to be to the south east.

The solid strata is indicated to be overlain by superficial deposits of alluvium, which according to the BGS is likely to comprise soft to firm consolidated, compressible silty clay, but which can contain layers of silt, sand, peat and basal gravel.

A variable thickness of made ground is anticipated above the superficial deposits across the site due to the historical industrial usage.

A summary of the anticipated geological succession is given below in Table 1.

Table 5 : Summary of Anticipated Site Geology

Geological unit	Horizon	Description
Recent	Made ground	Various materials
Quaternary	Alluvium	Sands and gravels with varying matrix
Carboniferous	Brithdir Member of the Upper Coal Measures	Sandstones, with mudstone/siltstone and seatearth interbeds and mainly thin coal seams.

4.2 GEOLOGY (CONTINUED)

The Envirocheck report indicates that the site has a moderate potential for compressible and landslide ground stability hazards.

The site is not indicated to be in a Radon affected area, with less than 1% of homes above the action level (Envirocheck report). Additionally a radon report obtained for Integral Report No.10229/GNS/09 indicated that no protective measures are required at the site.

4.3 MINING

Based on the geological map, the site does not appear to be underlain at shallow depths by any coal seams of significant thickness. The nearest coal seam outcrop is thought to be the Cefn Glas coal seam which is conjectured to outcrop to the southeast of the site. The Cefn Glas coal seam is understood to dip at approximately 35° to the south-east away from the site. The generalised vertical section of the geological map indicates that there are no significant seams below the Cefn Glas seam for several hundreds of metres.

A Coal Authority Mining Report was obtained for Intégral Géotechnique Report No. 10229/GNS/09 for the northern site area (see Section 2.5) that was investigated in 2009 (located in Zone A18) and a copy is presented in Appendix C. The report states that the site is “not within the zone of likely physical influence on the surface from past underground workings”.

In addition, there are no known coal mine entries within, or within 20 metres of, the boundary of that site area, although there were a small number of historical shafts located to the southern side of the Taff Vale railway, approximately 80m south east of the site.

There are five BGS recorded mineral sites listed within 500m of the site, all for the mining of deep coal; operations in all are indicated to have ceased.

4.4 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK

The nearest surface water feature is the River Taff, which at its closest lies approximately 20m north of the site, flowing from northwest to southeast.

The Environment Agency groundwater vulnerability map and aquifer database classifies both the bedrock and the alluvium beneath the site as Secondary ‘A’ Aquifers, defined as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

4.4 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK (CONTINUED)

The made ground, alluvium and the underlying bedrock are likely to be in hydraulic continuity, with a groundwater body potentially present in the alluvium and bedrock. Depending on the nature of the alluvial deposits, there may be potential for vertical migration of groundwater through the made ground and superficial soils into the solid strata. If the alluvium is cohesive in nature beneath the made ground then perched water may be present and vertical migration of groundwater may be constrained. Groundwater flow is likely to be in a north-north-easterly or easterly direction towards the River Taff which flows in a south-easterly direction to discharge into Cardiff bay.

It is considered possible that the existing site drainage can act as a pathway for potential surface contaminants.

A river quality monitoring point on the River Taff approximately 20m northeast of the site scored a GQA Grade B (Good) in 2000. The Environment Agency website considers the current ecological quality of the Taff as 'moderate potential' and chemical quality as 'fail' under the Water Framework Directive River Basin Management Plan.

There are two licensed surface water abstractions within 500m of the site, these are both licensed to PB Gelatins UK Ltd for abstraction from the River Taff and are located 323m and 378m to the north east of the site. There are no licensed groundwater abstractions within 1km of the site.

Two active discharge consents are recorded within 500m of the site boundary, approximately 234m north and 277m north respectively, both for the discharge of stormwater into the River Taff by Dwr Cymru.

Tables 6 and 7 present a summary of the hydrological features and key hydrogeological nature of the site.

Table 6: Summary of Site Hydrology

Feature	Distance from site	Flow	Classification	Abstraction	Discharge
River Taff	20m north of the site	Towards the southeast	GQA Grade B	Yes	Cardiff Bay
Surface run-off	On site	To effluent plant	N/A	No	Foul sewer via effluent treatment plant
Site Effluent Drainage	On site	To effluent plant	N/A	No	Foul sewer via effluent treatment plant

4.4 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK (CONTINUED)

Table 7: Summary of Site Hydrogeology				
Geological Unit	Aquifer Classification	Aquifer Characteristics	Source Protection Zone	Groundwater Abstractions
Made ground	Not classified	Highly variable permeability and porosity. Perched water may be present with variable flow directions.	No	None
Alluvium	Secondary A Aquifer	Variable moderate permeability and porosity with intergranular flow possible. High clay content may restrict flow.	No	None within 1.5km
Upper Coal Measures (Brithdir Beds)	Secondary A Aquifer	Variable permeability sandstones, with thin mudstone/siltstone and thin coals	No	None within 1.5km

The superficial soils beneath the site have been classified as having high leaching potential. Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere and a worst case vulnerability is assumed until proven otherwise.

The Environment Agency database indicates the majority of the site to be 'at risk from flooding from rivers or seas without defences' (Zone 3) with a 1 in 100 chance of flooding from the River Taff every year. The south-western part of the site is within a Zone 2 flood zone, deemed at risk from extreme flooding with a 1 in 1000 chance of flooding from the River Taff every year.

4.5 ECOLOGY AND SENSITIVE LAND USES

There are no areas of designated environmentally or ecologically sensitive land use listed on the Envirocheck database within 2km of the site.

4.6 LANDFILL SITES

Two historical landfill sites are listed within 500m of the site boundary, the closest listed is Power Station Hill Landfill / Tip, 291m west of the site but for which the deposited waste is not listed and the other is Heol-Y-Bwnsy, 344m northeast of the site and which received inert, industrial and household waste (last input 1981).

4.6 LANDFILL SITES (CONTINUED)

Two currently active licensed waste management facilities are listed within 500m of the site, the first is operated by Egan Waste Services Ltd for material recycling treatment and is approximately 23m southwest. The second is operated by Cynon Valley Waste Disposal Company Ltd as a household waste amenity site and is approximately 448m to the southeast.

A local authority recorded landfill site, Leiners Tip is listed approximately 343m northeast of the site with types of waste including inert non-flammable, construction, lime sweepings, bone meal, dicalcium phosphate, dirty sacks and damaged containers. This appears to be the Heol-Y-Bwnsy historical landfill noted above and is also recorded as a 'Registered Landfill Site' as P Leiners & Sons (Wales), 444m to the northeast, with similar material deposition.

There are no 'Notification of Installations Handling Hazardous Substances (NIHHS)' or 'Planning Hazardous Substance Consents' sites within 500m of the site.

4.7 OTHER ENVIRONMENTAL ISSUES

The Envirocheck database lists a single active Integrated Pollution Prevention and Control (IPPC) license within 500m of the site boundary; this is situated immediately adjacent to the site and relates to the disposal of waste oils by Egan Waste Services Ltd.

Four active Local Authority Pollution Prevention and Controls (LAPPCs) are listed within 500m of the site boundary, details are as follows:

- Approximately 206m northwest, Treforest Service Station, a petrol filling station;
- Approximately 222m east, Melloy Ltd, aluminium and aluminium alloy processes;
- Approximately 241m north, Griffin Mill Garages, re-spraying of road vehicles;
- Approximately 361m southeast, Nationwide Crash Repair Centres Ltd, re-spraying of road vehicles.

There are 10 category 3 (minor) incidents to controlled waters listed within 500m of the site boundary. The closest is approximately 36m east involving an unknown pollutant. The most recent was in 1997 involving the direct discharge of cement/mortar into an unknown stream.

4.7 OTHER ENVIRONMENTAL ISSUES (CONTINUED)

There are a number of active Contemporary Trade Directory Entries in the vicinity of the site, including 36 with 250m of the site. These include but are not restricted to PB Gelatins on-site, Engineering Services, Pet Cemeteries and Crematoria, Concrete Canvas Manufacturers, Road Haulage Services, Dry Cleaners and Chemical Manufacturers, Egan Waste Disposal Services.

There is one petrol station within 500m, this is situated 206m to the north-west.

It is understood that there have been a number of pollution incidents relating to the effluent drainage system at the site. These are reported to relate to the degradation of the below ground drainage infrastructure in a location prior to the effluent plant, leading to an overflow into the Dwr Cymru foul sewer prior to the material undergoing effluent treatment. Following identification, inspections of the drainage were undertaken and rectification measures completed on the pipework.

4.8 POTENTIAL CONTAMINATION

Historical Activities on Site

The various activities in the vicinity of the site which may have resulted in historical ground or water resource contamination on or below the site are listed below in Tables 8 and 9. Reference to Department of the Environment Industry Profiles has been made and a summary of the potential contaminants can be found in the tables.

Table 8: Potential Contaminants - Historical Site Uses

Activity	Potential Contamination/Hazard	Distance from site
Metal alloy works	Metals and metalloids, non-metals/inorganics, semi-metals, PAHs, VOCs, SVOCs, hydrocarbons including fuels/oils, solvents, mineral/organic acids	On-site (Zone A18)
Heavy and light industrial uses including Gelatin manufacture	Metals, inorganics and non-metals, semi-metals, PAHs, fuels/oils, acids, alkalis	On-site

Existing Uses

The current site use is solely as a Gelatin production and manufacturing facility. The potential contaminants from this on-going usage are shown in Tables 1 to 4 in Section 2.

4.8 POTENTIAL CONTAMINATION (CONTINUED)

Adjacent Site Uses

As the site is located within an industrial estate, a number of active contemporary trade directory entries are shown within 250m of the site including a pet crematorium, concrete manufacturer, engineering services, road haulage services, plastic injection moulding, car dealer, chemical manufacturer, laboratory, builders merchant and waste disposal. A fuel station is indicated approximately 206m northwest of the site. Given their relative locations, it is unlikely that any of these will constitute a potential hazard to the ground and groundwater conditions beneath the site. The historical adjacent site uses which may have caused contamination on or beneath the site are listed in Table 9 below:

Table 9: Potential Contaminants – Historical Adjacent Site Uses

Activity	Potential Contamination/Hazard	Distance from site
Taff Vale Railway Line	Heavy metals, sulphates, asbestos, herbicides, ash, clinker, hydrocarbons, PAHs.	Adjacent to southern boundary
Maes-mawr Colliery	Coal wastes, ash, clinker, bulk rock materials	200m south
Power station	Coal waste materials, heavy fuel oil, PFA, clinker (FBA), various chemicals including acids	225m northwest
Heavy and light industrial uses (including fibre and board works, paint works, textile factory, cigarette paper factory, zip fastener factory, chemical distillery, dry cleaning works and tanks)	Metals and semi-metals, inorganics and non-metals, PAHs, hydrocarbons including fuels/oils, acids/alkalis, solvents, SVOCs/VOCs	Adjacent to the site boundaries

5.0 ASSESSMENT OF LAND POLLUTION POTENTIAL

5.1 IDENTIFICATION OF POTENTIALLY POLLUTING SUBSTANCES

A list of the major substances used, manufactured and stored within the installation (or waste by-products from the manufacturing process) is contained in Chapter 2. An assessment of their pollution potential has been made based upon their properties, toxicity, mobility and the volumes stored as shown in Tables 1 to 4. Materials of low mobility (e.g. liquids of high viscosity or solid materials of low water solubility) are unlikely to reach soil or groundwater if released. Materials of low persistence in soil and groundwater (e.g. due to high biodegradability or high volatility where air will be the significant medium rather than soil or water) are not of concern in considering land contamination issues. This approach has been used to screen out substances of low toxicity, mobility, persistence or in the environment. Those substances identified as having pollution potential are taken forward to the next part of the assessment.

Table 10: Assessment of Pollution Potential for Substances Associated with the Installation

Chemical / Material Type	Liquid / Solid	Volumes Stored	Toxicity / Fate / Mobility	Pollute land / water if released ?	Consider further?
Ossein (animal bone chippings)	Solid	-	Inert materials and solid, limited mobility. 100% of material ends up in product.	No	X
Lime solutions of varying concentrations	Liquid	c.7,500m^3 at any one time in lime pits (ASTs), one bulk tank of 147m^3 and in effluent system	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Phosphoric Acid (75%)	Liquid	c.1m^3 in various small containers internal to buildings and 37m^3 in two bulk external ASTs	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Hydrogen Peroxide (35%)	Liquid	c.15m^3 capacity in one bulk external AST and smaller IBCs and containers internal to buildings	Biodegradable but ecotoxic and corrosive. Soluble and mobile but potentially mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓

5.1 IDENTIFICATION OF POTENTIALLY POLLUTING SUBSTANCES (CONTINUED)

Chemical / Material Type	Liquid / Solid	Volumes Stored	Toxicity / Fate / Mobility	Pollute land / water if released ?	Consider further?
COFLOC	Liquid	c.2m^3 in two IBCs internal to building	Eco-Toxic, biodegradable (20 day) vegetable derived coagulant	Yes	✓
Sulphuric Acid (77%)	Liquid	c.24m^3 in one bulk external AST and one IBC internal to building	Corrosive an)d mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
TRUFLOC - AWE30 (anionic copolymer of acrylamide)	Liquid	c.2m^3 in two IBCs internal to building	Mobile in water environment, presumed ecotoxic	Yes	✓
Sedipur	Solid	c.1 Ton internal to building	Water soluble powder becoming mobile in water environment if dissolved	Yes	✓
TRUFLOC TAC40 (polyaluminium chloride hydroxide)	Liquid	c.18m^3 in one bulk and a single 25L container	Mobile in water environment and ecotoxic	Yes	✓
TRUFLOC TAF3400 (alcohol ethoxylate)	Liquid	Pallet of c.10No. 25L Drums (c.250L total)	Mobile in water environment and ecotoxic	Yes	✓
Relite Resin (solid gel acidic cation exchange resin)	Solid	c.7 tonnes in 25kg bags internal to building. c. 7 tonnes in 25kg bags in warehouse	Solid and insoluble	No	X
Aluminium sulphate (17% - solid)	Solid	c.1 tonnes in 25kg bags internal to building	Soluble in water and mobile in water environment if dissolved. Not classified as environmentally hazardous.	Yes	✓
Talosep	Liquid	2m^3 in internal AST	Presumed ecotoxic and mobile in water environment	Yes	✓

5.1 IDENTIFICATION OF POTENTIALLY POLLUTING SUBSTANCES (CONTINUED)

Chemical / Material Type	Liquid / Solid	Volumes Stored	Toxicity / Fate / Mobility	Pollute land / water if released ?	Consider further?
Mono propylene Glycol (used as closed loop coolant)	Liquid	3.9m^3 in internal AST	Water soluble and mobile. Biodegradable but may exert very high BOD in surface waters	Yes	✓
Caustic Soda	Liquid	c. 85m^3 in two bulk external ASTs and a number of small internal containers between 0.11m^3 to 0.63m^3 volume	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Lithium Chloride	Liquid	Various small containers between 0.15m^3 to 0.73m^3	Soluble in water and dissolved components will be ecotoxic but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Acetic Acid	Liquid	c.8.5m^3 in one external bulk AST and one internal IBC	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Oils / lubricants	Liquid	Small volumes kept in containers in maintenance room	Mobile especially below water table. Moderate degradability depending on carbon chain lengths	Yes	✓
Hydrochloric Acid (32%)	Liquid	c.35m^3 in one bulk external AST	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Fuel Oil	Liquid	18m^3 in two bulk external ASTs	Mobile especially below water table. Moderate degradability depending on carbon chain lengths	Yes	✓
Recovered Acids (<10%)	Liquid	One bulk AST with capacity of 58m^3	Mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Effluent Tank (high COD/BOD, pH up to 9/10)	Liquid	One bulk AST with capacity of 832m^3	Mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Effluent Sludge Tank (high BOD/ COD)	Liquid	One bulk AST with capacity of 117m^3	Mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓

5.1 IDENTIFICATION OF POTENTIALLY POLLUTING SUBSTANCES (CONTINUED)

Chemical / Material Type	Liquid / Solid	Volumes Stored	Toxicity / Fate / Mobility	Pollute land / water if released?	Consider further?
Site / Effluent Drainage System (high COD/BOD, pH up to 9/10)	Liquid	No storage	Mobile but pH effect mitigated by buffering capacity of soils and cation exchange capacity.	Yes	✓
General Waste (office / paper etc)	Solid	A number of small dedicated skips and bins	Solid materials with limited mobility. Contained within skips / bins kept on hardstanding situated around the site.	No	X

Those substances identified as having pollution potential are taken forward to the next part of the assessment.

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES

Control measures to prevent ground contamination are considered in terms of primary, secondary and tertiary containment measures in place. Containment measures are defined in the following categories:

- *Primary*: Drum, vessel, pipe, bag etc containing the substance;
- *Secondary*[1]: Bund, double wall vessel or pipe, vent pipe, catch pit etc designed to retain the substance in the event of a failure of primary containment; and
- *Tertiary*: Additional measures provided to contain spillages (e.g. an oil interceptor in a surface water drain, concrete hardstanding for road tankers off-loading to a bulk storage tank etc).

There is both bulk storage of chemicals and high volume throughput of polluting substances within the installation. As such, in accordance with the current guidance, an assessment is made as to whether there is little likelihood that pollution or leaks to land will occur during the life of the installation; or there is a possibility that there is potential for current or future pollution of land from the installation.

There is a site EMS in operation, with documented procedures existing which control operations that can have an adverse impact on the environment. There are work instructions within the EMS which cover environmental procedures in detail. The site has written training procedures and provides training relating to environmental aspects for all site staff.

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

The adequacy of the pollution prevention measures (physical infrastructure and those relating to testing, inspection and maintenance) is assessed for each relevant activity associated with each of the potentially polluting substances identified above.

The pollution preventative measures were inspected as part of the site reconnaissance with the results of the assessment shown in Table 11; this includes information (where applicable) on containment measures, records of past pollution incidents and the planned inspection and testing regime.

note: [1]Bunding adequacy is assessed as follows: being impermeable to stored materials; having no outlet or drain; pipework routed within bunded areas with no penetration of the bund; capable of holding 110% of tank contents; catch leaks from tanks and fittings; subject to regular inspection and pumping; fitted with high level alarms if not regularly inspected; fill points within the bund or contained, and; routine programmed bund inspection.

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Table 11 : Assessment of the Likelihood of Land Pollution

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Zone A18 – Internal to A18 New Tank Farm (and New Tank Farm Annex) Building						
Lime (1%) Pits	C2	Process delivery of lime to pits	No evidence / records of spills or leaks	Primary: Above ground pipe from Old Tank Farm Building Secondary: **None** Tertiary: **None**	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: Above ground concrete tanks/pits Secondary: Concrete hardstanding internal to building **but with door openings in walls** Tertiary: Drainage to effluent plant	Routine draining, inspection and maintenance of tanks is undertaken as part of the site maintenance system	**Possibility**
Phosphoric Acid (75%)	C3	Delivery of acid to tank	No evidence / records of spills or leaks	Primary: Above ground inlet pipe from bulk tank BC01 Secondary: **None** Tertiary: **None**	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Storage / use	No evidence / records of spills or leaks	Primary: Plastic tank Secondary: Spill Tertiary: Concrete hardstanding internal to building with drainage to effluent plant	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Hydrogen Peroxide (35%)	C4	Storage / use	No evidence / records of spills or leaks	Primary: Steel cased IBC Secondary: Plastic spill Tertiary: Concrete hardstanding internal to building with drainage to effluent plant	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood
Zone A18 – Internal to A18 Old Tank Farm Building						
Lime (1%)	C5	Process delivery of lime to pits	No evidence / records of spills or leaks	Primary: Above ground internal pipework from Lime Tank C6 Secondary: Concrete hardstanding internal to building but with openings in walls Tertiary: Drainage to effluent plant	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood
		Storage / Use	Lime residue on hardstanding	Primary: Above ground concrete tanks/pits Secondary: Concrete hardstanding internal to building but **with door openings in walls** Tertiary: Drainage to effluent plant	Routine draining, inspection and maintenance of tanks is undertaken as part of the site maintenance system	**Possibility**
Lime (uncertain >50%)	C6A	Delivery	See below	Primary: Delivery by tanker in dry solid powder form Secondary: Fill point external to building upon concrete hardstanding drainage Tertiary: **None**	Delivery is fully supervised	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
	C6	Storage/ Use	Lime residue on hardstanding around base of tank	Primary: Above ground concrete tank Secondary: Concrete hardstanding internal to brick walled building with drainage to effluent plant Tertiary: **None**	Routine, inspection and maintenance of tanks is undertaken as part of the site maintenance system	**Possibility**
Sodium hypochlorite (14/15%)	C7	Storage/ Use	No evidence / records of spills or leaks	Primary: Plastic container Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site maintenance system	Little Likelihood
COFLOC	C9	Storage/ Use	No evidence / records of spills or leaks	Primary: IBC's Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site maintenance system	Little Likelihood
Hydrogen Peroxide (35%)	C10	Storage/ Use	No evidence / records of spills or leaks	Primary: IBC Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site maintenance system	Little Likelihood
Sulphuric Acid (77%)	C17	Storage/ Use	No evidence / records of spills or leaks	Primary: IBC's Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
TRUFLOC - AWE30	C17	Storage / Use	No evidence / records of spills or leaks	Primary: IBC's Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Phosphoric Acid (75%)	C18	Storage/ Use	No evidence / records of spills or leaks	Primary: Small steel AST Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Zone A18 - External to Buildings						
TRUFLOC TAF3400	C13	Use	No evidence / records of spills or leaks	Primary: Small plastic container used as direct feed to foul drain system Secondary: Concrete hardstanding Tertiary: Drainage to effluent plant	-	Little Likelihood
Phosphoric Acid (75%)	C14	Delivery	No evidence / records of spills or leaks	Primary: Tanker and above ground pipeline through 'Old Farm' building Secondary: Fill pipe on concrete hardstanding with **no side containment** Tertiary: **None**	Delivery is fully supervised	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
	BC01	Storage / Use	No evidence / records of spills or leaks	Primary: HDPE tank and **below ground delivery pipe to 'Old Farm' building** Secondary: Integrated HDPE bund to tank but **no containment to below ground pipe** Tertiary: Concrete hardstanding with drainage to effluent plant immediately surrounding tank **but limited containment to sides and any spillage would be direct to surface water drains on adjacent road**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**
Sulphuric Acid (77%)	BC 11A	Delivery	No evidence / records of spills or leaks	Primary: Tanker and double walled above ground pipe through 'Old Farm' building Secondary: **Limited volume concrete spill tray** beneath tanker fill point with **below ground** drainage to effluent plant Tertiary: **None**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**
	BC11	Storage / Use	No evidence / records of spills or leaks	Primary: HDPE tank and above ground delivery pipe Secondary: Integrated HDPE bund to tank and concrete hardstanding below pipe Tertiary: Concrete hardstanding with drainage to effluent plant immediately surrounding tank **but limited containment to sides and any spillage would be direct to surface water drains on adjacent road**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Effluent Tank (high COD/BOD, high pH)	C15	Storage / Use	No evidence / records of spills or leaks	Primary: Steel AST with high level alarm Secondary: Steel bund with **below ground** outlet to effluent plant Tertiary: **None**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**
Effluent Sludge Tank (high BOD/ COD)	C16	Storage / Use	No evidence / records of spills or leaks	Primary: Steel AST Secondary: **None - very small concrete base** with no side walls Tertiary: **None**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**
Zone A21 – Internal to A21 Production Building						
Aluminium sulphate (17% - solid)	C19	Storage	Some spillage of solid materials on hardstanding	The solid bulk product is delivered and stored in individual 25kg plastic bags on 1 tonne pallets within a building with a concrete floor and drainage to the effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
		Use	Some spillage of solid materials on hardstanding	Primary: Fed into various process tanks Secondary: Process tanks internal to building with concrete hardstanding floor Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Sedipur	C19	Storage	Some spillage of solid materials on hardstanding	The solid bulk product is delivered and stored in individual plastic bags within a building with a concrete floor and drainage to the effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	**Ref**	**Relevant Activity**	**Records of Pollution**	**Containment Measures**	**Planned Inspection & Testing Regime**	Likelihood of Pollution
		Use	Some spillage of solid materials on hardstanding	Primary: Fed into various process tanks Secondary: Process tanks internal to building with concrete hardstanding floor Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Talosep	C25	Storage / Use	No evidence / records of spills or leaks	Primary: Variety of plastic and metal tanks and containers Secondary: Brick walled building with concrete hardstanding floor Tertiary: Drainage to effluent plant These chemicals are all used intrinsically within the production process and as such are utilised in various fixed locations within the A21 Production Building, often on top of process tanks. They are all located within the building, which has a complete internal concrete floor and which has comprehensive drainage to effluent plant.	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood
Mono propylene Glycol						
Phosphoric Acid						
Hydrogen Peroxide						
Caustic Soda						
Lithium Chloride						
Acetic Acid						
Oils / lubricants	C26	Storage / Use	Evidence of minor spills / leaks	Primary: Various small containers, low volume Secondary: In workshop area internal to building with concrete hardstanding floor Tertiary: Drainage to effluent plant	Routine, inspection during work activities	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Zone A21 – External to A21 Production Building						
Hydrochloric Acid (32%)	BC05	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is outside of bund but on hardstanding with some drainage to effluent plant Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Delivery is supervised	**Possibility**
		Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Integrated HDPE Bund Tertiary: Hardstanding with some drainage to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: Plastic pipe - above ground Secondary: Hardstanding below pipe Tertiary: **None – adjacent permeable gravel**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Recovered Acid (<10%)	BC06	Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Integrated HDPE Bund Tertiary: Hardstanding with some drainage to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
		Use	No evidence / records of spills or leaks	Primary: Plastic above and **below ground** inlet and outlet pipeline Secondary: **None - permeable gravel surface below delivery pipeline** Tertiary: **None**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Phosphoric Acid (75%)	BC07	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is outside of bund but on hardstanding with some drainage to effluent plant Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Delivery is supervised	**Possibility**
		Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Concrete bund **with visible cracking and bund penetrations** Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: metal above ground pipeline Secondary: **None - permeable gravel surface below delivery pipeline** Tertiary: **None**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Hydrogen Peroxide (35%)	BC08	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is outside of bund but on hardstanding with some drainage to effluent plant Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Delivery is supervised	**Possibility**
		Storage / Use	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Brick bund **with bund penetrations** Tertiary: Hardstanding has some degradation and slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Acetic Acid (80%)	BC10	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is outside of bund but on hardstanding with some drainage to effluent plant Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Delivery is supervised	**Possibility**
		Storage / Use	No evidence / records of spills or leaks	Primary: HDPE Tank with level alarm Secondary: Brick bund **with bund penetrations** Tertiary: Hardstanding has some degradation and slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Waterworks Zone – External Tanks						
TRUFLOC - TAC40 flocculent	BC02	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: **Fill point is outside of bund** Tertiary: **None**	Delivery is supervised	**Possibility**
		Storage / Use	No evidence / records of spills or leaks	Primary: HDPE Tank with level alarm Secondary: Brick bund **with bund penetrations and bund drainage point via pipe at base of bund wall (locked)** Tertiary: **None – adjacent permeable gravel surface**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Sodium hypochlorite (14/15%)	C20a	Storage / Use	No evidence / records of spills or leaks	Primary: IBC Secondary: **None** Tertiary: **None – adjacent permeable gravel surface**	-	**Possibility**
Sodium hypochlorite (14/15%)	C20b	Storage / Use	No evidence / records of spills or leaks	Primary: IBC Secondary: Spill Tray Tertiary: Internal building concrete floor with drainage to effluent plant	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood
Caustic Soda (47%)	BC03	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is inside a bunded area with drainage to effluent plant Tertiary: **None – adjacent permeable gravel**	Delivery is supervised	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
		Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Concrete bund Tertiary: **None – adjacent permeable gravel surface**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: HDPE above ground pipeline Secondary: **None - permeable gravel surface below pipeline** Tertiary: **None**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Caustic Soda (47%)	BC04	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is inside a bunded area with drainage to effluent plant Tertiary: **None – adjacent permeable gravel**	Delivery is supervised	**Possibility**
		Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Concrete bund Tertiary: **None – adjacent permeable gravel surface**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: HDPE above ground pipeline Secondary: **None - permeable gravel surface below delivery pipeline** Tertiary: **None**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Dalkia Zone						
Fuel Oil	F1	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: **Fill Points outside of bund** with very small metal drip tray Tertiary: None – permeable gravel surface	Delivery is supervised	**Possibility**
		Storage / Use	No evidence / records of spills or leaks	Primary: Bulk metal ASTs and metal above ground delivery pipeline Secondary: Brick bund surrounding ASTs – **permeable ground beneath pipe** Tertiary: **None – permeable gravel surface surrounding bunds**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Effluent Drainage System Site Wide (including Effluent Plant)						
Effluent	E1		A number of recorded leaks from the effluent drainage system have occurred	Primary: Below ground drainage pipes Secondary: **None** Tertiary: **None**	Inspection and repairs have been recently undertaken, but there is no regular inspection survey scheduled	**Possibility**

5.2 EFFECTIVENESS OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

The assessments in Table 11 above, concludes that there is a reasonable possibility of future land pollution occurring for the following activities:

Zone A18

- Bulk storage, process delivery and use of lime and lime solutions (C2, C5, C6);
- Delivery, process delivery (C3) and external storage of phosphoric acid (BC01 and BC01A);
- Delivery (C14) and external storage / use of sulphuric acid (BC11); and
- External bulk storage of Effluent (C15) and Effluent Sludge (C16).

Zone A21

- External delivery, bulk storage and use of hydrochloric acid (BC05);
- External delivery, bulk storage and use of recovered acid (BC06);
- External delivery, bulk storage and use of phosphoric acid (BC07);
- External delivery, bulk storage and use of hydrogen peroxide (BC08); and
- External delivery, bulk storage and use of acetic acid (BC10).

Waterworks Zone

- Delivery, external storage and use of TRUFLOC TAC40 flocculent (BC02);
- Ad-hoc external storage of sodium hypochlorite (C20a); and
- Deliver, external bulk storage and process delivery/use of caustic soda (BC03, BC04)

Dalkia Zone

- Delivery, external storage and use of fuel oil (F1);

Effluent Drainage System Site Wide

- Below ground drainage of liquid effluent from all areas of site to the effluent plant, effluent tanks, effluent treatment facilities and foul drainage (E1).

With the exception of the various large volume storage and use of lime solutions, all of the activities determined as having a ‘possibility’ of pollution, relate to activities external to production buildings.

The term ‘possibility of pollution’ is not intended as an assessment of the risk of pollution occurring and does not imply that pollution is likely to occur from the site operations. This assessment does not consider the probability of such an event occurring and is intended as a factual report of the existence and condition of the multiple elements of pollution prevention measures at the site.

6.0 DEVELOPMENT OF CONCEPTUAL SITE MODEL

The guiding principle of EPR with respect to land quality is to accept no further deterioration of land during the lifetime of the permit. The aim of the SCR is therefore to develop a conceptual model which identifies past and future potential sources of contamination and assesses the vulnerability of the site. Therefore the presence, nature and likelihood of adverse effects to other receptors are not primary considerations in the context of the protection of land under EPR.

6.1 CONCEPTUAL SITE MODEL ASSESSMENT

The information presented in Chapters 2 to 5 has been assessed and combined to form a conceptual site model (CSM). Key elements of the CSM are summarised in Table 11 below. The CSM describes the condition of the site and is the fundamental objective of the SCR. The CSM is a descriptive representation of the site establishing the contaminant sources, pathways and receptors, assessment of pollution potential and details of the pollution prevention measures. As stated in the H5 guidance, the land itself should be considered as a receptor in its own right for EPR purposes because of the requirement for no deterioration in land quality.

Table 12 : Summary of Conceptual Site Model

Aspect	Details
Geology	The geology of the site comprises the following sequence: ▪ Permeable made ground (up to 1.6m proven depth comprising granular silty, gravelly sands characterised by the presence of man-made materials including brick, ash, clinker, metal, concrete and pottery); ▪ Shallow granular superficial deposits and cohesive alluvium (up to 27m proven depth); ▪ Gravels and cobbles (up to 29m proven depth); and ▪ Bedrock comprising sandstones with mudstones/siltstones (Upper Coal Measures - Brithdir Beds)
Hydrogeology	The site is underlain by alluvial deposits (Secondary A Aquifer) overlying a Secondary A Aquifer in the bedrock (Upper Coal Measures). Perched water may be present in the made ground. No licensed groundwater abstractions exist within 1km and the site does not lie within 1km of a groundwater protection zone. Groundwater was encountered at both c.3mbgl and c.18mbgl and is anticipated to flow generally north/easterly to the River Taff.

6.1 CONCEPTUAL SITE MODEL ASSESSMENT (CONTINUED)

Aspect	Details
Surface Water Features	The closest surface water is the River Taff, which at its closest is approximately 20m from the northern boundary, though across main highway. It was classified as being of good quality in 2000.
Ecological Receptors	There are no sensitive habitats designated within 1km of the site (Envirocheck)
Summary of Receptors	▪ Land (spills and leaks to ground); ▪ Shallow Secondary A Aquifer (leaching from soils and percolation through permeable ground within drift and solid deposits); ▪ Deeper Secondary A Aquifer in bedrock; and ▪ The River Taff (direct site surface water drainage, shallow groundwater flow)
Activities identified with a Reasonable Possibility of Future Pollution occurring	**Zone A18** ▪ Bulk storage, process delivery and use of lime and lime solutions (C2, C5, C6); ▪ Delivery, process delivery (C3) and external storage of phosphoric acid (BC01); ▪ Delivery (C14) and external storage and use of sulphuric acid (BC11); and ▪ External bulk storage of Effluent (C15) and Effluent Sludge (C16). **Zone A21** ▪ External delivery, bulk storage and use of hydrochloric acid (BC05); ▪ External delivery, bulk storage and use of recovered acid (BC06); ▪ External delivery, bulk storage and use of phosphoric acid (BC07); ▪ External delivery, bulk storage and use of hydrogen peroxide (BC08); and ▪ External delivery, bulk storage and use of acetic acid (BC10). **Waterworks Zone** ▪ Delivery, external storage and use of TRUFLOC TAC40 flocculent (BC02); ▪ Ad-hoc external storage of sodium hypochlorite (C20a); and ▪ Delivery, external bulk storage and process delivery/use of caustic soda (BC03, BC04). **Dalkia Zone** ▪ Delivery, external storage and use of fuel oil (F1). **Effluent Drainage System - Site Wide** ▪ Below ground drainage of liquid effluent from all areas of site to the effluent plant, effluent tanks, effluent treatment facilities and foul drainage (E1).

6.1 CONCEPTUAL SITE MODEL ASSESSMENT (CONTINUED)

Aspect	Details
Land Pollution History	▪ The site has a long history of industrial usage, including gelatin manufacture since at least 1973 and an historical metal alloy works, with a potential for a wide range of contaminants to be present; ▪ There is made ground known to be present in at least one site area; and ▪ There are documented leaks of effluent from the below ground effluent drainage system.
Contamination identified in previous investigations	Previous site investigations in Zone A18 identified a number of contaminants within the made ground, including hydrocarbons, PAHs, metals and inorganics.

The Conceptual Site Model is presented schematically in Figure 4.

The following uncertainties and assumptions are implicit in the CSM described:

- Complete records of known pollution incidents do not exist for the lifetime of the site and gelatin production on the site. It is therefore possible that pollution incidents have occurred over the site's history that have not been documented; and,
- The composition of the ground underneath the site is extremely variable and has therefore been interpolated across the site from the limited available site investigation data.

7.0 ASSESSMENT OF BASELINE SITE CONDITIONS

The H5 Guidance document suggests that samples of soil or groundwater should be retrieved and levels of contamination measured where there is evidence that there is, or could be, existing contamination and:

- the environmental risk assessment has identified that the same contaminants are a particular hazard; or
- the environmental risk assessment has identified that the same contaminants are a hazard and the risk assessment has identified a possible pathway to the land or groundwater.

7.1 EVIDENCE OF EXISTING CONTAMINATION

The previous site investigations undertaken within Zone A18 concluded that the shallow made ground at the site was contaminated with a number of determinands. Although the investigation was not focused at those contaminants utilised within the gelatin production process, there were a number of determinands identified which are utilised within the process.

The desk study review of the site identified a number of historical 'factories' on-site as well as the 'gelatin works' which were first labelled in 1973, but which are likely to have been operational prior to that date. It is probable therefore that the chemicals currently used within the existing facility have been in use since at least 1973, and the likelihood therefore exists of unrecorded / unknown contamination of the ground beneath the installation.

7.2 PLANNED IMPROVEMENTS TO POLLUTION PREVENTION MEASURES

There are no immediately planned improvements to the site's pollution prevention infrastructure although the site management and maintenance system is constantly assessing any maintenance requirements.

Infrastructure improvements to those physical pollution prevention measures deemed a reasonable risk of future pollution in Section 5, will reduce the risk of future pollution.

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ENVIROCHECK REPORT

APPENDIX B

PHOTOGRAPHIC RECORD

APPENDIX C

COAL AUTHORITY MINING REPORT (10229/GNS/09)

FIGURES

PB Leiner

Environmental Permit Renewal

Site Condition Report

12588/PB/20/SCR

Intégral
Géotechnique

CLIENT: **PB Leiner**

PROJECT: **Environmental Permit**

TITLE: **Site Condition Report**

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Geotechnical Engineers:

Intégral Géotechnique (Wales) Limited
Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX

Tel: 029 2080 7991
Fax: 029 2086 2176

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1.0 INTRODUCTION

1.1 GENERAL

This Site Condition Report (SCR) has been prepared by Intégral Géotechnique (Wales) Limited for the Environmental Permit of the PB Leiner gelatin production facility in Treforest (The Installation).

The report is intended to satisfy the Natural Resources Wales (NRW) requirements for an SCR by:

- Identifying the environmental setting and land pollution history of the site;
- Identifying activities that will be conducted at the installation that may lead to land pollution; and
- Identifying and assessing the preventative measures that will be in place to protect the land.

To achieve the above, a desk study review of available regulatory information has been undertaken, including reviews of the previous SCR (prepared in 2013) an up to date Envirocheck report, an historical site investigation and also carrying out an up to date walkover reconnaissance (December 2019).

This information has been used to describe the ground conditions at the site, and in particular to identify baseline conditions, by identifying any polluting substances that may be present in or on the land. Potentially polluting substances that may be used or generated on site and pollution preventative measures are also identified and described.

1.2 SCOPE OF WORKS

This report has been prepared in accordance with the NRW Environmental Permit Regulations (EPR) H5 Guidance and the scope of work has comprised the following:

- The collection of data regarding site operations to be permitted under EPR, in particular to identify any risks of future releases to land;
- A review of the history of the site and the local area using historical Ordnance Survey (OS) maps and any information held on site;
- An assessment of the environmental sensitivity (geology, hydrogeology, hydrology and ecology) of the area through established sources such as the British Geological Survey (BGS) and collection of information from the public register via a search of the Landmark Database;

1.2 SCOPE OF WORKS (CONTINUED)

- A review of any previous site investigations completed to identify any information relevant to the ground conditions and any contamination present; and
- The completion of a site reconnaissance to identify any visual evidence of contamination, assess pollution prevention infrastructure and allow discussions with staff familiar with the history of the site.

Samples of photographs obtained during these site visits are included within Appendix B.

1.3 LIMITATIONS

"Contamination" is taken throughout the report to mean the "presence of one or more potentially harmful substances as a result of human activity". The use of the term in this way does not imply that harm is being or might be caused by the contamination. It should be noted that "contamination" can have different meanings under different regulatory regimes, including the Environmental Permitting Regulations, planning, building control and Part IIA of the Environmental Protection Act 1990. Naturally elevated concentrations of potentially harmful substances may also be present and the significance of any that have been identified is also evaluated in this report.

We have not undertaken a site investigation as part of this work and any discussion of ground conditions is based upon review of data provided to us and obtained by us from third parties. Our assessment is based upon third party information including the list of substances utilised in the installation; we are reliant upon the accuracy of this information and have not attempted to verify or confirm third party information.

The report (including all appendices to it and any subsequent addendums or correspondence) has been prepared for the sole benefit, use and information of Welsh Government and no third party is entitled or permitted to rely on it. This report may not be used, reproduced or circulated (in whole or part) for any purpose without the written consent of Intégral Géotechnique (Wales) Limited. Intégral Géotechnique (Wales) Limited shall not be liable to any third party who does not have such express written permission to rely on the report for any losses they may suffer.

2.0 THE SITE

2.1 SITE LOCATION AND DESCRIPTION

The site (The Installation) is located at the northern end of the Treforest Industrial Estate at a National Grid Reference of approximately 310260,186870 (see Figure 1).

The site consists of a number of land parcels within the northern part of the above industrial estate which, together cover a combined land area of approximately 3.83 hectares, see Figures 1 and 2.

The site is situated on relatively level ground at an approximate elevation of 46m AOD. At its closest point, the south-easterly flowing River Taff lies approximately 21m away from the site's northeast edge.

The type and condition of surface cover varies across the site, with the majority of internal building floors being of concrete construction. This was generally observed to be in fair condition, though there were areas where surface cracking was observed; the thickness and construction of the concrete flooring is not known. The type and condition of surface cover external to buildings was also highly variable, with numerous asphalt cement (tarmac) and concrete access roads, but also some areas of permeable gravel covered surfaces.

Active services are present and in use on site and site drainage may act as a preferential pathway for potential contaminants from leaks and spills.

Dense vegetation grows alongside the southern boundary of the site. This may include invasive plant species including Japanese Knotweed, though it is outside of the growing season and was not assessed further.

2.2 SURROUNDING LAND USE

The site is located within Treforest Industrial Estate and hence in an extensive area of generally light industrial and commercial developments.

- To the north and north west are electricity sub-stations and switching stations;
- To the north east are a number of car showrooms, with the River Taff further beyond;
- To the east are a number of light industrial and commercial units; and
- To the south and west is the Taff Vale railway line with a non-developed hillside beyond.

2.3 ACTIVITIES TO BE OPERATED WITHIN THE INSTALLATION

The site manufactures high purity gelatins for use within various industries, including food, photographic and pharmaceutical applications. The site is arranged as a number of relatively discrete land parcels and buildings, as shown on the site layout drawing in Figure 2. For further ease of reference, throughout this report the site will also be zoned and discussed according to these land parcels.

Description of Operations

The main bulk raw material input to the facility consists of small chippings/shavings of animal bones known as Ossein. These are delivered to Zone A18 area of site, where they are subjected to various chemical processing techniques within the 'Old Farm' and 'New Farm' buildings, mainly including the addition of lime and other caustic and acidic solutions, before being transported by truck to the A21 'Production and Blender Building' area of site. Further physical and chemical processes are undertaken in the A21 building complex in Zone A21, again including the utilisation of caustics and acids as the gelatin production is completed.

River abstraction water is used in the production process and the preparation of this process water is undertaken in the 'Waterworks' Zone, including the addition of water treatment chemicals, before this 'clean' process water is piped to the various areas of site for usage.

Zone A6 comprises an office block, including offices and a materials/quality testing laboratory on the ground floor and office space on the first floor. The warehouse in Zone A13 is used as a solid materials (finished gelatin) storage facility.

The various process areas of site are linked by below ground drainage pipes, all of which channel effluent via the 'Effluent Plant'. This is effectively a below and above ground concrete sump which gathers the various 'dirty' process waters and pumps them to the 'Balance Tank' which is situated in the A18 area of site. General filtering is completed in the balance tank, which discharges to the 'DAF' plant in the Old Farm building for treatment. In general, the dirty process waters are understood to consist of relatively neutral to slightly alkaline pH, but which exert high biological / chemical oxygen demand (BOD/COD). Following treatment, organic rich waters are pumped to the 'Sludge Tank' which is situated also in the A18 area of site.

The site management have confirmed that there are currently no variations planned to the operational layout of the site or the processing operations prior to EPR permitting.

2.3 ACTIVITIES TO BE OPERATED WITHIN THE INSTALLATION (CONTINUED)

It is understood that the site operates under an existing documented Environmental Management System (EMS).

The EMS includes regular infrastructure inspections and maintenance schedules and has established procedures for materials (including chemical) deliveries and bund draining / emptying. Infrastructure inspections are undertaken on a weekly basis and are officially recorded, and rectification/maintenance actions determined.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE)

The gelatin manufacturing process utilises a variety of chemicals. As described in Section 2.3, for ease of reference the site has been zoned as shown on Figure 2.

The methods and storage areas utilised for chemical storage vary greatly across the site, with hardstanding and site drainage being present in all locations internal to buildings. Minor spillages of lime were observed in a number of internal building locations, but no significant spillages of other chemicals were observed at the time of the visit.

All tanks assessed at the installation consisted of above ground storage tanks (ASTs) and no underground storage tanks (USTs) were identified. The tanks were observed as being in good condition and have been replaced in recent years with HDPE double-skinned, internally bunded, tanks with auto-dosing.

There are no hydrocarbon fuelled vehicles used on-site within the production process, with the exception of a truck which is used to transport Ossein from Zone A18 to Zone A21. This truck is refuelled at an off-site public filling station.

There are three electrical transformers known to be on site.

All the bulk chemical vessels have overflows fitted. Some have additional level switches, but all the vessels have either ultra-sonic or radar level sensors to measure the levels, which alarm at 10% below the overflow.

All the 'old farm and 'new farm' buildings are bunded within the site effluent drainage system.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Tables 1 to 4 list the location, volume and storage methods of the bulk chemical storage. These are listed relative to the various site zones and storage locations are shown on Figure 3.

Zones A6 and A13

The only chemicals utilised within Zone A6 are small volumes for use in laboratory testing procedures. These are all stored in small secure containers within the laboratory itself. The laboratory is contained within the ground floor of the office block and is well contained, with sealed concrete flooring, brick walls and no floor level surface drainage.

There are no significant volumes of liquid chemicals used or stored in Zone A13, which is utilised as a warehouse for the finished solid gelatin materials; the gelatin is stored in c.0.8 Ton sacks upon multilevel racking, with space for a maximum of 720 sacks (c.576 Tons). The floor is of unbroken concrete construction and a brick wall surrounds the building envelope completely, with the exception of entrances.

Any spillage of chemicals within these two zones is likely to be small scale and general cleaning and operational procedures will prevent any potential pollution of land or groundwater occurring. As a result these two site zones have not been considered further as sources of potential future pollution.

Zone A18

Zone A18 contains two buildings, the 'New Farm (and New Farm Annex)' building which consists of a metal portal framed shed with comprehensive internal concrete flooring and the 'Old Farm' building which also has comprehensive concrete flooring, though some internal areas were subject to surface cracking. Both of these buildings have a relatively comprehensive internal surface drainage system, which drains all process effluent and any spillages to the Effluent Plant via below ground drainage runs. There are only a small number of access points through the walls for vehicular and pedestrian entry, but there is limited containment for liquid spillages (i.e. raised steps/lips) at these access points.

External to the buildings, the remainder of Zone A18 consists of tarmac and concrete vehicular access areas and a number of large permeable non-hardstanding areas which were generally gravelled.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Table 1 : Area A18 - Storage and Usage of Bulk Raw Materials				
Chemical / Material Type	**No**	**Maximum Capacity**	**Storage Method**	**Location/description**
Ossein (bone)	R1	12 m^3	Concrete Pit	The Ossein is tipped into an external concrete pit, then washed and pumped into the plant with clean water.
New Farm (and New Farm Annex) Building				
Lime Solution (1%)	C2	96No. ASTs of c.69m^3	Above ground concrete tanks	Within building
Phosphoric Acid (75%)	C3	c.0.33m^3	Plastic tank with steel spill tray	Within building. Fill pipe is above ground from BC01.
Hydrogen Peroxide (35%)	C4	1m^3	IBC on spill tray	Within building
Old Farm Building				
Lime Solution (1%)	C5	10No. ASTs of c.55m^3	Above ground concrete tanks	Within building
Lime Solution (high concentration)	C6	c.147m^3	Above ground concrete tank/silo	Within building
Sodium hypochlorite (14/15%)	C7	c.1m^3	Plastic container IBC of hypo	Within building
COFLOC	C9	c.2No. x 1m^3	IBCs on plastic spill trays	Within building

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
Sulphuric Acid (77%)	C17	c.1m^3	IBC on spill tray	Within building
TRUFLOC TAF3400	C17	c.10 x 25L	Plastic drums on pallet	Within building
TRUFLOC - AWE30	C17	c.2No. x 1m^3	IBCs on plastic spill trays	Within building
Phosphoric Acid (75%)	C18	c.0.35m^3	Steel container in brick bund	Within building
External to Buildings				
TRUFLOC TAF3400	C13	25L	Small container with direct feed to sewer	On external hardstanding Drainage to road drainage
Phosphoric Acid (75%)	BC01	20.73m^3	HDPE self bunded AST	On external hardstanding with drainage to effluent plant
Sulphuric Acid (77%)	BC11	21.36m^3	HDPE self bunded AST	On external hardstanding with dual containment pipework and drainage to effluent plant. Pump housed in Chemiguard containment unit
Sulphuric Acid (77%)	C14	N/A	N/A	Fill point for sulphuric acid tank - has concrete drip drain beneath to effluent plant, but is located adjacent to area of gravel surfacing.
Effluent Tank (high COD/BOD, pH up to 9/10)	C15	832m^3	Steel AST with steel bund	Balance Tank – located on extensive gravelled area
Effluent Sludge Tank (high BOD/ COD)	C16	117m^3	Steel AST – no bund	Located on extensive gravelled area. Fill pipe is below ground. Loading point is un-bunded at ground level.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Zone A21

Zone A21 contains two buildings, the 'Production Building' and the 'Blender Building'. These buildings are where the remainder of the gelatin processing and production is undertaken. Internally the buildings are metal framed sheds, with comprehensive concrete flooring surfaces, which are unbroken except for a relatively comprehensive surface drainage system, which collect process effluent and surface spillages from within the building and direct them to the Effluent Plant via below ground drainage runs. There are extensive cracks in the surface screed layer of the A21 concrete floor slab, but the floor is constructed in two layers and there should be little damage to the underlying base layer. There are a small number of access points through the walls, but there is limited containment for liquid spillages (i.e. raised steps/lips) at the access points.

Externally, the buildings are surrounded by areas of both hardstanding and permeable gravelled surfaces.

There are a number of externally situated bulk storage tanks, BC05, BC06, BC07, BC08 and BC10 which are located to the rear of the Production Building, on an area of hardstanding which drains to the adjacent road surface drains.

Table 2 : Area A21 - Storage and Usage of Bulk Raw Materials

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
A21 Production Building				
Relite Resin (solid)	C19	c.14 Ton	In 25kg bags on pallets	Internal to building on concrete hardstanding
Sedipur	C19	Small quantities	Stored in bags	Internal to building on concrete hardstanding
Aluminium sulphate (17% - solid)	C19	1 tonne	In 25kg bags on pallets	Internal to building on concrete hardstanding

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
Monopropylene Glycol	C25	3.9m³	Stainless steel AST	
Phosphoric Acid	C25	0.11m³	Various steel and plastic containers	
Hydrogen Peroxide	C25	0.15m³ total		
Caustic Soda	C25	c.1.5m³ in small internal containers		
Lithium Chloride	C25	c.1m³ in two internal containers		
Acetic Acid	C25	1m³		
Oils / lubricants	C26	Small volumes	Various small containers	In maintenance shop within building
External to Buildings				
Hydrochloric Acid (32%)	BC05	35m³	HDPE AST with integral HDPE bund	Penetrations are in the concrete wall which used to be the civil bund. Any liquid from hardstanding enters the effluent drainage system
Recovered Acid (<10%)	BC06	58m³	HDPE AST with integral HDPE bund	On hardstanding with gravel surround. Surrounding hardstanding drains to road drains.
Phosphoric Acid (75%)	BC07	16m³	HDPE AST with integral HDPE bund	Penetrations are in the concrete wall which used to be the civil bund. Delivery point contained within a Chemiguard tanker discharge unit. Any liquid from hardstanding enters the effluent drainage system

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
Hydrogen Peroxide (35%)	BC08	13m³	HDPE AST with brick bund	Fill point outside bund on hardstanding Bund penetrations
Acetic Acid (80%)	BC10	7.5m³	Plastic AST with brick bund	Fill point outside bund on hardstanding Bund penetrations

Waterworks Zone

The 'Waterworks' Zone is located immediately adjacent to Zone A21 and consists of a number of external, open concrete tanks which contain water abstracted from the River Taff. Water treatment chemicals are added to the abstracted water in these tanks to produce water suitable for use in the production processes, in general the percentage by volume of treatment chemicals to water in these tanks is <c.0.1%. In addition there are a number of bulk chemical storage tanks in this zone, which feed into the Production Building via above ground pipelines.

The surface covering across the waterworks zone is generally permeable gravel, with limited areas of hardstanding.

Table 3 : Waterworks Area - Storage and Usage of Bulk Raw Materials

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
External to Building				
TRUFLOC TAC40 flocculent	BC02	18m³	HDPE AST with integral HDPE bund	On concrete slab with ACO drains on two sides, other sloping to drainage gulley, all connected to effluent drainage system. Delivery point within Chemiguard tanker discharge unit.
Sodium hypochlorite (14/15%)	C20	2 x 1m³	IBCs one in building, one external in weatherproof IBC storage unit	No spill tray on external IBC Internal IBC has spill tray and hardstanding with drainage to Effluent Plant Gravel surface adjacent to external IBC
Caustic Soda	BC03	73m³	Plastic AST within concrete bund	Fill point inside spill bund with drainage to effluent plant Above ground pipe to Production Building No tertiary hardstanding - gravel surface adjacent to bund

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
Caustic Soda	BC04	11m³	Plastic AST within concrete bund	Fill point inside spill bund with drainage to effluent plant Above ground pipe to Production Building No tertiary hardstanding - gravel surface adjacent to bund

Veolia Waste Services Area

Veolia Waste Services operate a gas fired energy and steam generation unit (boilers) adjacent and to the north of the Production Building (see Figure 2). In the event of a major gas supply interruption, Veolia Waste Services maintain a supply of 18,000 litres of fuel oil in tanks within this facility, for the sole use of PB Gelatins. The fuel oil supply is directly connected to the three boilers via above ground pipelines.

Table 4 : Veolia Waste Services Area - Storage and Usage of Bulk Raw Materials

Chemical / Material Type	No	Maximum Capacity	Storage Method	Location/description
External to Building				
Fuel Oil	F1	18m³	2 x 9,000L steel AST within concrete block bund	Fill point outside bund with very small solid metal drip tray beneath Above ground supply pipe to boilers No tertiary hardstanding - gravel surface adjacent to and surrounding bund

Effluent Treatment and Site Drainage

The production process utilises a large volume of water to process the Ossein at each stage of treatment. This creates a large volume of liquid effluent which at various stages contains pH changing acids and alkalis and also organic materials which cause elevated COD/BOD. However the volume of water used is very high and the pH of the effluent is generally neutral and although sometimes elevated, is not anticipated to rise above 10; however the BOD/COD of the effluent is understood to be very high.

2.4 MATERIALS STORAGE AND USE (BY SITE ZONE) (CONTINUED)

All process effluent is directed to the effluent plant via a series of underground drainage runs. These are all directed through a central location, the 'pumping station' in the Effluent Plant (see Figure 2), which collects the effluent in a concrete sump before pumping it to the 'Balance Tank' in Zone A18. It is stored in the Balance Tank before which Ossein solids greater than 0.7mm are removed by screening, before being directed to the DAF unit for treatment via a series of coagulants and flocculants to remove further particulate matter. Organic constituents are separated as much as possible and stored in the 'Sludge Tank' in Zone A18, prior to removal off-site by a contractor for re-use as fertiliser, whilst the remaining treated waters are discharged to foul sewer.

The routing of the drains is understood and regular inspections are undertaken. All surface water run-off, including hardstanding feeds into the Effluent Drainage System.

During major roadworks at the Tonteg Road/river bridge junction around 2013, there was a significant increase in road traffic through the estate, which adversely impacted and damaged manholes and drains at the junction of Gwaelod-y-Garth Road and Taffs Mead Road, near to the effluent plant. The resulting damage caused leaks into the adjacent surface water sewers. Following camera surveys the damaged drains were subsequently repaired and more recently the effluent plant itself has been completely renewed.

Waste Management

Detailed information on waste handling and storage from the production process will be provided within the main application.

The only wastes reported from the production process are approximately 300 Tons per week of effluent sludge which is removed by an external contractor for recycling/re-use as a fertiliser, on average 1600m^3/day of liquid effluent which is disposed of to foul sewer and 60 Tons per month of bone chips which are removed by an external contractor for recycling/re-use within rendering.

General wastes including office wastes such as paper, cardboard etc are stored in a collection of plastic and metal bins and skips at various locations around the facility, prior to collection by a third party contractor for recycling and / or disposal as appropriate. These are all solid wastes, with no other liquid wastes produced from the production process.

2.5 AVAILABLE SITE INVESTIGATION DATA

There have been previous site investigations undertaken at the site and although these were undertaken mainly to assess geotechnical ground conditions and were not contamination focused, they did enable an assessment of the ground as discussed in the following sections:

Site investigation undertaken by Intégral Géotechnique (Wales) Limited – Site Investigation Report 10299/GNS/09 - Proposed Extension to New Tank Farm Annex (Zone A18)

This site investigation assessed ground conditions for an extension of the eastern section of the New Tank Farm Annex building. It comprised three machine excavated and one hand dug trial pits in addition to two deeper cable percussive boreholes.

Made ground was noted in all exploratory locations comprising relatively homogenous hardcore like materials onto heterogeneous made ground deposits characterised by the presence of man-made materials including brick, ash, clinker, metal, concrete and pottery. The presence of cobbles and boulders was noted in the heterogeneous made ground. The greatest thickness of made ground extended to 1.6m depth.

A slight hydrocarbon odour was noted in the western side of one trial pit at between 0.9 and 1.1m depth. A buried concrete obstruction was also encountered in one of the pits, at 1.3m depth.

The made ground was immediately underlain by granular superficial deposits comprising sands, gravels and cobbles, below which at depths in excess of 4.0m soft alluvial clay was encountered. The alluvial clay extended to a proven depth of 18.5m and was underlain by medium dense gravels and cobbles which were proved in one of the boreholes down to 23m depth.

Groundwater was encountered as a minor seepage at 3.4m depth in one trial pit, with no other significant occurrences of groundwater strikes being recorded in the trial pits.

Groundwater was encountered in BH1 at 3.2m depth and rose to 2.9m after twenty minutes. During the drilling works the groundwater fell to 10.6m on completion of the hole. Groundwater within BH2 was recorded at 18.5m depth and rapidly rose to 10.7m depth after twenty minutes, suggesting that the deep groundwater within the gravels at depth was/is under some artesian pressure. The groundwater stayed consistently around 10.0m depth during the drilling works, and on completion of the hole was measured at 9.4m depth.

2.5 AVAILABLE SITE INVESTIGATION DATA (CONTINUED)

Soil sampling and laboratory analysis identified a number of contaminants including metals, semi-metals, PAHs and hydrocarbon compounds in the made ground materials, although these were not considered to be at concentrations likely to migrate to affect controlled waters.

Site investigation undertaken by Intégral Géotechnique (Wales) Limited – Site Investigation Report 10762/GNS/11 - Proposed Effluent Tanks (Zone A18)

This site investigation assessed ground conditions for the construction of two new effluent tanks within the Zone A18 area of the installation (these are the existing 'Balance' and 'Sludge' tanks adjacent to the A18 'Old Farm' building). The investigation comprised two machine excavated trial trenches and two deep shell and auger boreholes.

Made ground was encountered at each exploratory point and comprised heterogeneous deposits characterised by the presence of man-made materials including brick, ash, clinker, metal, concrete and pottery. The presence of cobbles and boulders was noted in the heterogeneous made ground. The greatest thickness of made ground extended to 1.6m depth.

Numerous obstructions were noted in the made ground and included 0.3m to 0.5m thick concrete slabs and 1.0m wide former brickwork drainage channels. Numerous cobbles and boulders were also noted.

The made ground was immediately underlain by a thin mantle of superficial clay which was in turn underlain by superficial deposits comprising sands, gravels and cobbles, below which at depths in excess of 4.5m variable but predominantly cohesive alluvial soils were recorded. These variable but predominantly cohesive alluvial soils extended to a proven depth of between 19.7m and 27.0m below ground level and were underlain by medium dense sands, gravels and cobbles which were proven down to 29m depth.

Minor water seepages were recorded at the base of the made ground within the trial trenches. Groundwater was also noted in BH1 at 3.4m depth and BH2 at 3.6m, which subsequently rose to 2.9m and 3.0m respectively after twenty minutes.

Soil sampling and laboratory analysis identified a number of contaminants including metals, semi-metals and PAHs in the made ground materials, although these were not considered to be at concentrations likely to migrate to affect controlled waters.

3.0 SITE HISTORY

The recent history of the site has been traced with the aid of an Envirocheck Report, a copy of which is included in Appendix A. The Envirocheck Report includes the following scaled historical maps:

Map Scale	Dates
1:2,500	1875-1877, 1900, 1919-1920, 1936, 1960-1962,
1:1,1250	1958-1959, 1973-1976, 1978, 1988-1991, 1989-1992, 1993,
1:10,560	1885, 1901, 1921, 1947, 1953
1:10,000	1965, 1970-1976, 1981-1984, 1993, 2006

The 1875-1877 map shows the majority of the site to comprise part of a network of open fields. A road is shown to cross the northeast part of the site (Zone A18 area), trending approximately north-south, and a footpath is shown to cross the central part of the site trending approximately northwest-southeast. Part of the southwest part of the site is shown to comprise rough pasture and part of deciduous forestry. A number of small streams are also shown in the southern part of the site, flowing towards a larger watercourse which is shown immediately southwest of the site, flowing approximately southeast. The River Taff is shown approximately 20m north of the site at the closest, flowing towards the southeast. A railway line on an embankment/terrace is indicated immediately southwest of the watercourse, running approximately northwest-southeast. A 'Trial Shaft' is shown, approximately 80m southeast of the site. Maes-mawr colliery is situated 200m to the south, on the opposite side of the railway line.

The 1900 map shows no significant changes on site. The trial shaft to the south east of the site is now labelled as 'Old Air Shaft / Old Shaft'.

The 1919-1920 map shows no significant changes on site. There is a 'Generating Station (South Wales Electrical Power Distribution Co.)' shown 225m to the northwest and Maes-mawr colliery is now labelled as disused.

The 1936 map shows electricity pylons crossing the site heading towards a substation approximately 100m north of the site. By 1943/1947 a number of large buildings had been developed across all site areas and a number of large buildings had been developed to the southeast. The generating station had expanded in size and included a number of additional railway lines and materials stockpiles.

3.0 SITE HISTORY (CONTINUED)

By 1953 a number of further buildings had been constructed across the site and the existing buildings had increased in size to cover the majority of the various site areas. There were also several large buildings shown adjacent to and running along the whole of the northern boundary.

The 1958-1959 map labels nearly all of the on-site and the adjacent off-site buildings to the north and southeast as 'Factory'. These factory buildings occupy the whole site with the exception of the far south and south-western areas; these are shown as 'works' with a number of tanks and rough ground respectively, with a drain and two streams flowing off site towards the northwest through the rough ground. The railway line to the southwest is shown to have expanded in size and there are a number of spur lines shown running from the centre of the site to the main line. The Generating Station to the north is now labelled as 'Works' and a number of additional rail lines and electricity transmission lines connect to it.

The 1973-1976 map shows the northernmost building in Zone A18 to be a metal alloy works, whilst the rest of the site forms part of a Gelatine Works. A number of additional tanks have been constructed within the southern site area, encompassing the previous rough ground where there are three large diameter tanks shown. The spur railway lines from the factory are no longer shown. The route of the electricity pylons has been changed slightly so that they no longer cross the site. The adjacent factory units are indicated to be occupied by a fibre and board works, paint works, textile factory, cigarette paper factory, zip fastener factory, chemical distillery and dry cleaning works. A second electricity sub-station is indicated approximately 50m west of the site.

The 1988-1991 historical plans show little change to the layout of the site or the surrounding area. There are a number of rectangular tanks shown within the far north-western area of Zone A21. There are also three large tanks shown immediately adjacent to the eastern boundary.

By 1989-1992, the metal alloy works building is no longer present in the north of the site (Zone A18). A pumping station is shown just within the far eastern site boundary and the three large tanks which were situated adjacent to its location are no longer shown. No other significant changes are shown to the site or surrounding area.

In more recent years the main significant changes to the site and surrounding area have been the reconfiguration of Zone A18, including the construction of a new building in the north and new effluent tanks, and also a new effluent plant to the south.

4.0 SITE ENVIRONMENTAL SETTING

4.1 PHYSICAL SETTING

The site is located on the floor of a wide flat bottomed valley carrying the River Taff, the channel of which is located some 20m to the northeast of the site at its closest. In the vicinity of the site the River Taff has comprehensive flood defences. The site is situated at an approximate elevation of 46m AOD.

4.2 GEOLOGY

The 1:50,000 scale geological map of the area (British Geological Survey [BGS] Sheet 249) indicates the site to be underlain by the Brithdir Beds from the Carboniferous Upper Coal Measures comprising grey sandstones, with thin mudstone/siltstone and seatearth interbeds and mainly thin coal seams. Two normal faults are conjectured to cross the site or very near to the site, both trending approximately northwest-southeast. The Maesmawr Fault is to the southwest with the downthrown side on the northeast and the Daren Ddu Fault is to the northeast with the downthrown side on the southwest. The conjectured outcrop of the Cefn Glas coal seam is shown to cross the site between the two faults, trending approximately east-west, with the conjectured outcrops of the Daren Ddu, No.3 Llantwit and No. 2 Llantwit coal seams to the south of the site. The dip of the bedrock is shown to be to the south east.

The solid strata is indicated to be overlain by superficial deposits of alluvium, which according to the BGS is likely to comprise soft to firm consolidated, compressible silty clay, but which can contain layers of silt, sand, peat and basal gravel.

A variable thickness of made ground is anticipated above the superficial deposits across the site due to the historical industrial usage.

A summary of the anticipated geological succession is given below in Table 1.

Table 5 : Summary of Anticipated Site Geology

Geological unit	Horizon	Description
Recent	Made ground	Various materials
Quaternary	Alluvium	Sands and gravels with varying matrix
Carboniferous	Brithdir Member of the Upper Coal Measures	Sandstones, with mudstone/siltstone and seatearth interbeds and mainly thin coal seams.

4.2 GEOLOGY (CONTINUED)

The Envirocheck report indicates that the site has a moderate potential for compressible and landslide ground stability hazards.

The site is not indicated to be in a Radon affected area, with less than 1% of homes above the action level (Envirocheck report). Additionally, a radon report obtained for Integral Report No.10229/GNS/09 indicated that no protective measures are required at the site.

4.3 MINING

Based on the geological map, the site does not appear to be underlain at shallow depths by any coal seams of significant thickness. The nearest coal seam outcrop is thought to be the Cefn Glas coal seam which is conjectured to outcrop to the southeast of the site. The Cefn Glas coal seam is understood to dip at approximately 35° to the south-east away from the site. The generalised vertical section of the geological map indicates that there are no significant seams below the Cefn Glas seam for several hundreds of metres.

A Coal Authority Mining Report was obtained for Intégral Géotechnique Report No. 10229/GNS/09 for the northern site area (see Section 2.5) that was investigated in 2009 (located in Zone A18) and a copy is presented in Appendix C. The report states that the site is "not within the zone of likely physical influence on the surface from past underground workings".

In addition, there are no known coal mine entries within, or within 20 metres of, the boundary of that site area, although there were a small number of historical shafts located to the southern side of the Taff Vale railway, approximately 80m south east of the site.

There are five BGS recorded mineral sites listed within 500m of the site, all for the mining of deep coal; operations in all are indicated to have ceased.

4.4 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK

The nearest surface water feature is the River Taff, which at its closest lies approximately 21m northeast of the site, flowing from northwest to southeast.

The Environment Agency groundwater vulnerability map and aquifer database classifies both the bedrock and the alluvium beneath the site as Secondary 'A' Aquifers, defined as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

4.4 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK (CONTINUED)

The made ground, alluvium and the underlying bedrock are likely to be in hydraulic continuity, with a groundwater body potentially present in the alluvium and bedrock. Depending on the nature of the alluvial deposits, there may be potential for vertical migration of groundwater through the made ground and superficial soils into the solid strata. If the alluvium is cohesive in nature beneath the made ground then perched water may be present and vertical migration of groundwater may be constrained. Groundwater flow is likely to be in a north-north-easterly or easterly direction towards the River Taff which flows in a south-easterly direction to discharge into Cardiff bay.

It is considered possible that the existing site drainage could act as a pathway for potential surface contaminants. Two historical water courses (see 1875 to 1950's O.S maps) were culverted prior to the development of the south-west part of the site.

A river quality monitoring point on the River Taff approximately 20m northeast of the site scored a GQA Grade B (Good) in 2000. The Environment Agency website considers the current ecological quality of the Taff as 'moderate potential' and chemical quality as 'fail' under the Water Framework Directive River Basin Management Plan.

There are two licensed surface water abstractions within 500m of the site, these are both licensed to PB Leiner for abstraction from the River Taff and are located approximately 318m and 373m to the northwest of the site. There are no licensed groundwater abstractions within 1km of the site.

An active discharge consent is recorded within 500m of the site, approximately 278m to the north, for stormwater discharge into the River Taff by Dwr Cymru.

Tables 6 and 7 present a summary of the hydrological features and key hydrogeological nature of the site.

Table 6: Summary of Site Hydrology

Feature	Distance from site	Flow	Classification	Abstraction	Discharge
River Taff	21m north of the site	Towards the southeast	GQA Grade B	Yes	Cardiff Bay
Surface run-off	On site	To effluent plant	N/A	No	Foul sewer via effluent treatment plant
Site Effluent Drainage	On site	To effluent plant	N/A	No	Foul sewer via effluent treatment plant

4.4 HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK (CONTINUED)

Table 7: Summary of Site Hydrogeology

Geological Unit	Aquifer Classification	Aquifer Characteristics	Source Protection Zone	Groundwater Abstractions
Made ground	Not classified	Highly variable permeability and porosity. Perched water may be present with variable flow directions.	No	None
Alluvium	Secondary A Aquifer	Variable moderate permeability and porosity with intergranular flow possible. High clay content may restrict flow.	No	None within 1.5km
Upper Coal Measures (Brithdir Beds)	Secondary A Aquifer	Variable permeability sandstones, with thin mudstone/siltstone and thin coals	No	None within 1.5km

The superficial soils beneath the site have been classified as having high leaching potential. Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere and a worst case vulnerability is assumed until proven otherwise.

The EA/NRW database indicates the majority of the site is 'at risk from flooding from rivers or seas without defences' (Zone 3) with a 1 in 100 chance of flooding from the River Taff every year. The south-western part of the site is within a Zone 2 flood zone, deemed at risk from extreme flooding with a 1 in 1000 chance of flooding from the River Taff every year. The database also shows that there are localised risks (ranging from low to high) of surface water flooding affecting many parts of the site.

4.5 ECOLOGY AND SENSITIVE LAND USES

There are no areas of designated environmentally or ecologically sensitive land use listed on the Envirocheck database within 2km of the site.

4.6 LANDFILL SITES

Two historical landfill sites are listed within 500m of the site boundary, the closest listed is Power Station Hill Landfill / Tip, 278m west of the site but for which the deposited waste is not listed and the other is Heol-Y-Bwnsy, 344m northeast of the site and which received inert, industrial and household waste (last input 1981).

4.6 LANDFILL SITES (CONTINUED)

Two currently active licensed waste management facilities are listed within 500m of the site, the first is operated by Egan Waste Services Ltd for material recycling treatment and is approximately 18m to the southwest. The second is operated by Cynon Valley Waste Disposal Company Ltd as a household waste amenity site and is approximately 449m to the southeast.

A local authority recorded landfill site, Leiners Tip is listed approximately 342m northeast of the site with types of waste including inert non-flammable, construction, lime sweepings, bone meal, dicalcium phosphate, dirty sacks and damaged containers. This appears to be the Heol-Y-Bwnsy historical landfill noted above and is also recorded as a 'Registered Landfill Site' as P Leiners & Sons (Wales), 444m to the northeast, with similar material deposition.

There are no 'Notification of Installations Handling Hazardous Substances (NIHHS)' or 'Planning Hazardous Substance Consents' sites within 500m of the site.

4.7 OTHER ENVIRONMENTAL ISSUES

The Envirocheck database lists three active Integrated Pollution Prevention and Control (IPPC) licences within 500m of the site boundary as follows:

- Within the PB Leiner site:
- Approximately 31m south, disposal of waste oils, Egan Waste Services Ltd.

Four active Local Authority Pollution Prevention and Controls (LAPPCs) are listed within 500m of the site boundary, details are as follows:

- Approximately 206m northwest, Treforest Service Station, a petrol filling station;
- Approximately 222m east, Melloy Ltd, aluminium and aluminium alloy processes;
- Approximately 241m north, Griffin Mill Garages, re-spraying of road vehicles;
- Approximately 361m southeast, Nationwide Crash Repair Centres Ltd, re-spraying of road vehicles.

There are 10 category 3 (minor) incidents to controlled waters listed within 500m of the site boundary. The closest is approximately 36m east involving an unknown pollutant. The most recent was in 1997 involving the direct discharge of cement/mortar into an unknown stream.

4.7 OTHER ENVIRONMENTAL ISSUES (CONTINUED)

There are a number of active Contemporary Trade Directory Entries in the vicinity of the site, including 47 with 250m of the site. These include but are not restricted to PB Gelatins on-site, Engineering Services, Pet Cemeteries and Crematoria, Concrete Canvas Manufacturers, Road Haulage Services, Dry Cleaners and Chemical Manufacturers, Egan Waste Disposal Services.

There is one petrol station within 500m, this is situated 201m to the northwest.

It is understood that there have been a number of pollution incidents relating to the effluent drainage system at the site. These are reported to relate to the degradation of the below ground drainage infrastructure near the effluent plant, due to temporary high traffic flows through the estate. Following identification, inspections of the drainage were undertaken and rectification measures completed on the pipework. The effluent plant itself has also been completely renewed more recently.

4.8 POTENTIAL CONTAMINATION

Historical Activities on Site

The various activities in the vicinity of the site which may have resulted in historical ground or water resource contamination on or below the site are listed below in Tables 8 and 9. Reference to Department of the Environment Industry Profiles has been made and a summary of the potential contaminants can be found in the tables.

Table 8: Potential Contaminants - Historical Site Uses

Activity	Potential Contamination/Hazard	Distance from site
Metal alloy works	Metals and metalloids, non-metals/inorganics, semi-metals, PAHs, VOCs, SVOCs, hydrocarbons including fuels/oils, solvents, mineral/organic acids	On-site (Zone A18)
Heavy and light industrial uses including Gelatin manufacture	Metals, inorganics and non-metals, semi-metals, PAHs, fuels/oils, acids, alkalis	On-site

Existing Uses

The current site use is solely as a Gelatin production and manufacturing facility. The potential contaminants from this on-going usage are shown in Tables 1 to 4 in Section 2.

4.8 POTENTIAL CONTAMINATION (CONTINUED)

Adjacent Site Uses

As the site is located within an industrial estate, a number of active contemporary trade directory entries are shown within 250m of the site including a pet crematorium, concrete manufacturer, engineering services, road haulage services, plastic injection moulding, car dealer, chemical manufacturer, laboratory, builders merchant and waste disposal. A fuel station is indicated approximately 206m northwest of the site. Given their relative locations, it is unlikely that any of these will constitute a potential hazard to the ground and groundwater conditions beneath the site. The historical adjacent site uses which may have caused contamination on or beneath the site are listed in Table 9 below:

Table 9: Potential Contaminants – Historical Adjacent Site Uses

Activity	Potential Contamination/Hazard	Distance from site
Taff Vale Railway Line	Heavy metals, sulphates, asbestos, herbicides, ash, clinker, hydrocarbons, PAHs.	Adjacent to southern boundary
Maes-mawr Colliery	Coal wastes, ash, clinker, bulk rock materials	200m south
Power station	Coal waste materials, heavy fuel oil, PFA, clinker (FBA), various chemicals including acids	225m northwest
Heavy and light industrial uses (including fibre and board works, paint works, textile factory, cigarette paper factory, zip fastener factory, chemical distillery, dry cleaning works and tanks)	Metals and semi-metals, inorganics and non-metals, PAHs, hydrocarbons including fuels/oils, acids/alkalis, solvents, SVOCs/VOCs	Adjacent to the site boundaries

5.0 ASSESSMENT OF LAND POLLUTION POTENTIAL

5.1 IDENTIFICATION OF POTENTIALLY POLLUTING SUBSTANCES

A list of the major substances used, manufactured and stored within the installation (or waste by-products from the manufacturing process) is contained in Chapter 2. An assessment of their pollution potential has been made based upon their properties, toxicity, mobility and the volumes stored as shown in Tables 1 to 4. Materials of low mobility (e.g. liquids of high viscosity or solid materials of low water solubility) are unlikely to reach soil or groundwater if released. Materials of low persistence in soil and groundwater (e.g. due to high biodegradability or high volatility where air will be the significant medium rather than soil or water) are not of concern in considering land contamination issues. This approach has been used to screen out substances of low toxicity, mobility, persistence or in the environment. Those substances identified as having pollution potential are taken forward to the next part of the assessment.

Table 10: Assessment of Pollution Potential for Substances Associated with the Installation

Chemical / Material Type	Liquid / Solid	Volumes Stored	Toxicity / Fate / Mobility	Pollute land / water if released ?	Consider further?
Ossein (animal bone chippings)	Solid	-	Inert materials and solid, limited mobility. 100% of material ends up in product.	No	X
Lime solutions of varying concentrations	Liquid	c.7,500m^3 at any one time in lime pits (ASTs), one bulk tank of 147m^3 and in effluent system	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Phosphoric Acid (75%)	Liquid	c.1m^3 in various small containers internal to buildings and 37m^3 in two bulk external ASTs	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Hydrogen Peroxide (35%)	Liquid	c.15m^3 capacity in one bulk external AST and smaller IBCs and containers internal to buildings	Biodegradable but ecotoxic and corrosive. Soluble and mobile but potentially mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓

5.1 IDENTIFICATION OF POTENTIALLY POLLUTING SUBSTANCES (CONTINUED)

Chemical / Material Type	Liquid / Solid	Volumes Stored	Toxicity / Fate / Mobility	Pollute land / water if released ?	Consider further?
COFLOC	Liquid	c.2m³ in two IBCs internal to building	Eco-Toxic, biodegradable (20 day) vegetable derived coagulant	Yes	✓
Sulphuric Acid (77%)	Liquid	c.24m³ in one bulk external AST and one IBC internal to building	Corrosive an)d mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
TRUFLOC - AWE30 (anionic copolymer of acrylamide)	Liquid	Two now empty IBCs c.2m³ on a bund internal to building, to be removed. Previously used temporarily while new storage vessel installed.	Mobile in water environment, presumed ecotoxic	Yes	X
Sedipur	Solid	c.1 Ton internal to building	Water soluble powder becoming mobile in water environment if dissolved	Yes	✓
TRUFLOC TAC40 (polyaluminium chloride hydroxide)	Liquid	c.18m³ in one bulk and a single 25L container	Mobile in water environment and ecotoxic	Yes	✓
TRUFLOC TAF3400 (alcohol ethoxylate)	Liquid	Pallet of c.10No. 25L Drums (c.250L total)	Mobile in water environment and ecotoxic	Yes	✓
Relite Resin (solid gel acidic cation exchange resin)	Solid	c.7 tonnes in 25kg bags internal to building. c. 7 tonnes in 25kg bags in warehouse	Solid and insoluble	No	X
Aluminium sulphate (17% - solid)	Solid	c.1 tonnes in 25kg bags internal to building	Soluble in water and mobile in water environment if dissolved. Not classified as environmentally hazardous.	Yes	✓
Talosep	Liquid	2m³ in internal AST	Presumed ecotoxic and mobile in water environment	Yes	✓

5.1 IDENTIFICATION OF POTENTIALLY POLLUTING SUBSTANCES (CONTINUED)

Chemical / Material Type	Liquid / Solid	Volumes Stored	Toxicity / Fate / Mobility	Pollute land / water if released ?	Consider further?
Mono propylene Glycol (used as closed loop coolant)	Liquid	3.9m^3 in internal AST	Water soluble and mobile. Biodegradable but may exert very high BOD in surface waters	Yes	✓
Caustic Soda	Liquid	c. 85m^3 in two bulk external ASTs and a number of small internal containers between 0.11m^3 to 0.63m^3 volume	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Lithium Chloride	Liquid	Various small containers between 0.15m^3 to 0.73m^3	Soluble in water and dissolved components will be ecotoxic but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Acetic Acid	Liquid	c.8.5m^3 in one external bulk AST and one internal IBC	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Oils / lubricants	Liquid	Small volumes kept in containers in maintenance room	Mobile especially below water table. Moderate degradability depending on carbon chain lengths	Yes	✓
Hydrochloric Acid (32%)	Liquid	c.35m^3 in one bulk external AST	Corrosive and mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Fuel Oil	Liquid	18m^3 in two bulk external ASTs	Mobile especially below water table. Moderate degradability depending on carbon chain lengths	Yes	✓
Recovered Acids (<10%)	Liquid	One bulk AST with capacity of 58m^3	Mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Effluent Tank (high COD/BOD, pH up to 9/10)	Liquid	One bulk AST with capacity of 832m^3	Mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓
Effluent Sludge Tank (high BOD/ COD)	Liquid	One bulk AST with capacity of 117m^3	Mobile but mitigated by buffering capacity of soils and cation exchange capacity	Yes	✓

5.1 IDENTIFICATION OF POTENTIALLY POLLUTING SUBSTANCES (CONTINUED)

Chemical / Material Type	Liquid / Solid	Volumes Stored	Toxicity / Fate / Mobility	Pollute land / water if released?	Consider further?
Site / Effluent Drainage System (high COD/BOD, pH up to 9/10)	Liquid	No storage	Mobile but pH effect mitigated by buffering capacity of soils and cation exchange capacity.	Yes	✓
General Waste (office / paper etc)	Solid	A number of small dedicated skips and bins	Solid materials with limited mobility. Contained within skips / bins kept on hardstanding situated around the site.	No	X

Those substances identified as having pollution potential are taken forward to the next part of the assessment.

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES

Control measures to prevent ground contamination are considered in terms of primary, secondary and tertiary containment measures in place. Containment measures are defined in the following categories:

- *Primary*: Drum, vessel, pipe, bag etc containing the substance;
- *Secondary*[1]: Bund, double wall vessel or pipe, vent pipe, catch pit etc designed to retain the substance in the event of a failure of primary containment; and
- *Tertiary*: Additional measures provided to contain spillages (e.g. an oil interceptor in a surface water drain, concrete hardstanding for road tankers off-loading to a bulk storage tank etc).

There is both bulk storage of chemicals and high volume throughput of polluting substances within the installation. As such, in accordance with the current guidance, an assessment is made as to whether there is little likelihood that pollution or leaks to land will occur during the life of the installation; or there is a possibility that there is potential for current or future pollution of land from the installation.

There is a site EMS in operation, with documented procedures existing which control operations that can have an adverse impact on the environment. There are work instructions within the EMS which cover environmental procedures in detail. The site has written training procedures and provides training relating to environmental aspects for all site staff.

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

The adequacy of the pollution prevention measures (physical infrastructure and those relating to testing, inspection and maintenance) is assessed for each relevant activity associated with each of the potentially polluting substances identified above.

The pollution preventative measures were inspected as part of the site reconnaissance with the results of the assessment shown in Table 11; this includes information (where applicable) on containment measures, records of past pollution incidents and the planned inspection and testing regime.

note: [1]Bunding adequacy is assessed as follows: being impermeable to stored materials; having no outlet or drain; pipework routed within bunded areas with no penetration of the bund; capable of holding 110% of tank contents; catch leaks from tanks and fittings; subject to regular inspection and pumping; fitted with high level alarms if not regularly inspected; fill points within the bund or contained, and; routine programmed bund inspection.

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Table 11 : Assessment of the Likelihood of Land Pollution

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Zone A18 – Internal to A18 New Tank Farm (and New Tank Farm Annex) Building						
Lime (1%) Pits	C2	Process delivery of lime to pits	No evidence / records of spills or leaks	Primary: Above ground pipe from Old Tank Farm Building Secondary: **None** Tertiary: **None**	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: Above ground concrete tanks/pits Secondary: Concrete hardstanding internal to building **but with door openings in walls** Tertiary: Drainage to effluent plant	Routine draining, inspection and maintenance of tanks is undertaken as part of the site maintenance system	**Possibility**
Phosphoric Acid (75%)	C3	Delivery of acid to tank	No evidence / records of spills or leaks	Primary: Above ground inlet pipe from bulk tank BC01 Secondary: **None** Tertiary: **None**	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Storage / use	No evidence / records of spills or leaks	Primary: Plastic tank Secondary: Spill Tertiary: Concrete hardstanding internal to building with drainage to effluent plant	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Hydrogen Peroxide (35%)	C4	Storage / use	No evidence / records of spills or leaks	Primary: Steel cased IBC Secondary: Plastic spill Tertiary: Concrete hardstanding internal to building with drainage to effluent plant	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood
Zone A18 – Internal to A18 Old Tank Farm Building						
Lime (1%)	C5	Process delivery of lime to pits	No evidence / records of spills or leaks	Primary: Above ground internal pipework from Lime Tank C6 Secondary: Concrete hardstanding internal to building but with openings in walls Tertiary: Drainage to effluent plant	Routine inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood
		Storage / Use	Lime residue on hardstanding	Primary: Above ground concrete tanks/pits Secondary: Concrete hardstanding internal to building but **with door openings in walls** Tertiary: Drainage to effluent plant	Routine draining, inspection and maintenance of tanks is undertaken as part of the site maintenance system	**Possibility**
Lime (uncertain >50%)	C6A	Delivery	See below	Primary: Delivery by tanker in dry solid powder form Secondary: Fill point external to building upon concrete hardstanding drainage Tertiary: **None**	Delivery is fully supervised	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
	C6	Storage/ Use	Lime residue on hardstanding around base of tank	Primary: Above ground concrete tank Secondary: Concrete hardstanding internal to brick walled building with drainage to effluent plant Tertiary: **None**	Routine, inspection and maintenance of tanks is undertaken as part of the site maintenance system	**Possibility**
Sodium hypochlorite (14/15%)	C7	Storage/ Use	No evidence / records of spills or leaks	Primary: Plastic container Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site maintenance system	Little Likelihood
COFLOC	C9	Storage/ Use	No evidence / records of spills or leaks	Primary: IBC's Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site maintenance system	Little Likelihood
Hydrogen Peroxide (35%)	C10	Storage/ Use	No evidence / records of spills or leaks	Primary: IBC Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site maintenance system	Little Likelihood
Sulphuric Acid (77%)	C17	Storage/ Use	No evidence / records of spills or leaks	Primary: IBC's Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
TRUFLOC - AWE30	C17	Storage / Use	No evidence / records of spills or leaks	Primary: IBC's Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Phosphoric Acid (75%)	C18	Storage/ Use	No evidence / records of spills or leaks	Primary: Small steel AST Secondary: Concrete hardstanding internal to brick walled building Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Zone A18 - External to Buildings						
TRUFLOC TAF3400	C13	Use	No evidence / records of spills or leaks	Primary: Small plastic container used as direct feed to foul drain system Secondary: Concrete hardstanding Tertiary: Drainage to effluent plant	-	Little Likelihood
Phosphoric Acid (75%)	C14	Delivery	No evidence / records of spills or leaks	Primary: Tanker into Chemiguard tanker discharge unit. Pump located within Chemiguard unit. Secondary: Stainless steel pipework from discharge unit to storage vessel. Concrete block wall around vessel coated with Chemiguard chemical resistant coating Tertiary: **None**	Delivery fully supervised	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Phosphoric Acid	BC01	Storage / Use	No evidence / records of spills or leaks	Primary: HDPE tank with auto-dosing and **above ground** stainless steel **delivery pipe to 'Old Farm' building** Secondary: Integrated HDPE bund to tank , stainless steel above **ground delivery pipe** Tertiary: Concrete hardstanding with surrounding concrete block wall coated with Chemguard chemical resistant coating, with drainage to effluent plant immediately surrounding tank	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Sulphuric Acid (77%)	BC 11A	Delivery	No evidence / records of spills or leaks	Primary: Tanker and double walled above ground pipe through 'Old Farm' building Secondary: **Limited volume concrete spill tray** beneath tanker fill point with **below ground** drainage to effluent plant Tertiary: **None**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**
	BC11	Storage / Use	No evidence / records of spills or leaks	Primary: HDPE with auto-dosing and above ground delivery pipe Secondary: Integrated HDPE bund to tank and concrete hardstanding below pipe Tertiary: Concrete hardstanding with drainage to effluent plant immediately surrounding tank **but limited containment to sides and any spillage would be direct to surface water drains on adjacent road**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**

	BC12	Storage / Use	No evidence / records of spills or leaks	Primary: HDPE internally bunded tank with auto-dosing and above ground delivery pipe Secondary: Integrated HDPE bund to tank and concrete hardstanding below pipe Tertiary: Concrete hardstanding with drainage to effluent plant immediately surrounding tank **but limited containment to sides and any spillage would be direct to surface water drains on adjacent road**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Effluent Tank (high COD/BOD, high pH)	C15	Storage / Use	No evidence / records of spills or leaks	Primary: Covered steel AST with high level alarm Secondary: Steel bund with **below ground** outlet to effluent plant Tertiary: **None**	Routine, inspection is undertaken as part of the site EMS and maintenance system	**Possibility**
Effluent Sludge Tank (high BOD/ COD)	C16	Storage / Use	No evidence / records of spills or leaks	Primary: 80m3 HDPE tank Secondary: **concrete bund** Tertiary: **None**	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Zone A21 – Internal to A21 Production Building						
Aluminium sulphate (17% - solid)	C19	Storage	Some spillage of solid materials on hardstanding	The solid bulk product is delivered and stored in individual 25kg plastic bags on 1 tonne pallets within a building with a concrete floor and drainage to the effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
		Use	Some spillage of solid materials on hardstanding	Primary: Fed into various process tanks Secondary: Process tanks internal to building with concrete hardstanding floor Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Sedipur	C19	Storage	Some spillage of solid materials on hardstanding	The solid bulk product is delivered and stored in individual plastic bags within a building with a concrete floor and drainage to the effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
		Use	Some spillage of solid materials on hardstanding	Primary: Fed into various process tanks Secondary: Process tanks internal to building with concrete hardstanding floor Tertiary: Drainage to effluent plant	Routine, inspection is undertaken as part of the site EMS and maintenance system	Little Likelihood
Talosep Mono propylene Glycol Phosphoric Acid Hydrogen Peroxide Caustic Soda Lithium Chloride Acetic Acid	C25	Storage / Use	No evidence / records of spills or leaks	Primary: Variety of plastic and metal tanks and containers Secondary: Brick walled building with concrete hardstanding floor Tertiary: Drainage to effluent plant These chemicals are all used intrinsically within the production process and as such are utilised in various fixed locations within the A21 Production Building, often on top of process tanks. They are all located within the building, which has a complete internal concrete floor and which has comprehensive drainage to effluent plant.	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood
Oils / lubricants	C26	Storage / Use	Evidence of minor spills / leaks	Primary: Various small containers, low volume Secondary: In workshop area internal to building with concrete hardstanding floor Tertiary: Drainage to effluent plant	Routine, inspection during work activities	Little Likelihood

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Zone A21 – External to A21 Production Building						
Hydrochloric Acid (32%)	BC05	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is outside of bund but on hardstanding with some drainage to effluent plant Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Delivery is supervised	**Possibility**
		Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Integrated HDPE Bund Tertiary: Hardstanding with some drainage to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: Plastic pipe - above ground Secondary: Hardstanding below pipe Tertiary: **None – adjacent permeable gravel**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Recovered Acid (<10%)	BC06	Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Integrated HDPE Bund Tertiary: Hardstanding with some drainage to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
		Use	No evidence / records of spills or leaks	Primary: Plastic above and **below ground** inlet and outlet pipeline Secondary: **None - permeable gravel surface below delivery pipeline** Tertiary: **None**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Phosphoric Acid (75%)	BC07	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is outside of bund but on hardstanding with some drainage to effluent plant Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Delivery is supervised	**Possibility**
		Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Integrated HDPE Bund Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: metal above ground pipeline Secondary: **None - permeable gravel surface below delivery pipeline** Tertiary: **None**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Hydrogen Peroxide (35%)	BC08	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is outside of bund but on hardstanding with some drainage to effluent plant Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Delivery is supervised	**Possibility**
		Storage / Use	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Integrated HDPE Bund Tertiary: Hardstanding has some degradation and slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Acetic Acid (80%)	BC10	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is outside of bund but on hardstanding with some drainage to effluent plant Tertiary: Hardstanding slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Delivery is supervised	**Possibility**
		Storage / Use	No evidence / records of spills or leaks	Primary: HDPE Tank with level alarm Secondary: Integrated HDPE Bund Tertiary: Hardstanding has some degradation and slopes to drains which drain to effluent plant **but hardstanding slopes to external road and into surface drains – also some adjacent permeable gravel surfacing**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Waterworks Zone – External Tanks						
TRUFLOC - TAC40 flocculent	BC02	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: **Fill point is outside of bund** Tertiary: **None**	Delivery is supervised	**Possibility**
		Storage / Use	No evidence / records of spills or leaks	Primary: HDPE Tank with level alarm Secondary: Integrated HDPE Bund Tertiary: **None – adjacent permeable gravel surface**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Sodium hypochlorite (14/15%)	C20a	Storage / Use	No evidence / records of spills or leaks	Primary: IBC Secondary: **None** Tertiary: **None – adjacent permeable gravel surface**	-	**Possibility**
Sodium hypochlorite (14/15%)	C20b	Storage / Use	No evidence / records of spills or leaks	Primary: IBC Secondary: Spill Tray Tertiary: Internal building concrete floor with drainage to effluent plant	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	Little Likelihood
Caustic Soda (47%)	BC03	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is inside a bunded area with drainage to effluent plant Tertiary: **None – adjacent permeable gravel**	Delivery is supervised	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
		Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Integrated HDPE Bund Tertiary: **None – adjacent permeable gravel surface**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: HDPE above ground pipeline Secondary: **None - permeable gravel surface below pipeline** Tertiary: **None**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Caustic Soda (47%)	BC04	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: Fill point is inside a bunded area with drainage to effluent plant Tertiary: **None – adjacent permeable gravel**	Delivery is supervised	**Possibility**
		Storage	No evidence / records of spills or leaks	Primary: HDPE Tank Secondary: Concrete bund Tertiary: **None – adjacent permeable gravel surface**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
		Use	No evidence / records of spills or leaks	Primary: HDPE above ground pipeline Secondary: **None - permeable gravel surface below delivery pipeline** Tertiary: **None**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**

5.2 ASSESSMENT OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

Potentially Polluting Substance	Ref	Relevant Activity	Records of Pollution	Containment Measures	Planned Inspection & Testing Regime	Likelihood of Pollution
Veolia Waste Services Area						
Fuel Oil	F1	Delivery	No evidence / records of spills or leaks	Primary: Tanker Secondary: **Fill Points outside of bund** with very small metal drip tray Tertiary: None – permeable gravel surface	Delivery is supervised	**Possibility**
		Storage / Use	No evidence / records of spills or leaks	Primary: Bulk metal ASTs and metal above ground delivery pipeline Secondary: Brick bund surrounding ASTs – **permeable ground beneath pipe** Tertiary: **None – permeable gravel surface surrounding bunds**	Routine, inspection and maintenance is undertaken as part of the site EMS and maintenance system	**Possibility**
Effluent Drainage System Site Wide (including Effluent Plant)						
Effluent	E1		Leaks from the effluent drainage system in 2013 due to drain damage caused by temporary very high traffic levels. Damaged sections repaired and effluent plant renewed.	Primary: Below ground drainage pipes Secondary: **None** Tertiary: **None**	Inspection and repairs have been recently undertaken. Regular inspection undertaken.	**Possibility**

5.2 EFFECTIVENESS OF POLLUTION PREVENTATIVE MEASURES (CONTINUED)

The assessments in Table 11 above, concludes that there is a reasonable possibility of future land pollution occurring for the following activities:

Zone A18

- Bulk storage, process delivery and use of lime and lime solutions (C2, C5, C6); and
- External bulk storage of Effluent (C15).

Zone A21

- External delivery, bulk storage and use of hydrochloric acid (BC05);
- External delivery, bulk storage and use of recovered acid (BC06);
- External delivery, bulk storage and use of phosphoric acid (BC07);
- External delivery, bulk storage and use of hydrogen peroxide (BC08); and
- External delivery, bulk storage and use of acetic acid (BC10).

Waterworks Zone

- Delivery, external storage and use of TRUFLOC TAC40 flocculent (BC02);
- Ad-hoc external storage of sodium hypochlorite (C20a); and
- Deliver, external bulk storage and process delivery/use of caustic soda (BC03, BC04)

Veolia Zone

- Occasional delivery (approximately once every 4 years), external storage in steel vessels within civil bunds, and use of fuel oil (F1);

Effluent Drainage System Site Wide

- Below ground drainage of liquid effluent from all areas of site to the effluent plant, effluent tanks, effluent treatment facilities and foul drainage (E1).

With the exception of the various large volume storage and use of lime solutions, all of the activities determined as having a 'possibility' of pollution, relate to activities external to production buildings.

The term 'possibility of pollution' is not intended as an assessment of the risk of pollution occurring and does not imply that pollution is likely to occur from the site operations. This assessment does not consider the probability of such an event occurring and is intended as a factual report of the existence and condition of the multiple elements of pollution prevention measures at the site.

6.0 DEVELOPMENT OF CONCEPTUAL SITE MODEL

The guiding principle of EPR with respect to land quality is to accept no further deterioration of land during the lifetime of the permit. The aim of the SCR is therefore to develop a conceptual model which identifies past and future potential sources of contamination and assesses the vulnerability of the site. Therefore the presence, nature and likelihood of adverse effects to other receptors are not primary considerations in the context of the protection of land under EPR.

6.1 CONCEPTUAL SITE MODEL ASSESSMENT

The information presented in Chapters 2 to 5 has been assessed and combined to form a conceptual site model (CSM). Key elements of the CSM are summarised in Table 11 below. The CSM describes the condition of the site and is the fundamental objective of the SCR. The CSM is a descriptive representation of the site establishing the contaminant sources, pathways and receptors, assessment of pollution potential and details of the pollution prevention measures. As stated in the H5 guidance, the land itself should be considered as a receptor in its own right for EPR purposes because of the requirement for no deterioration in land quality.

Table 12 : Summary of Conceptual Site Model

Aspect	Details
Geology	The geology of the site comprises the following sequence: ▪ Permeable made ground (up to 1.6m proven depth comprising granular silty, gravelly sands characterised by the presence of man-made materials including brick, ash, clinker, metal, concrete and pottery); ▪ Shallow granular superficial deposits and cohesive alluvium (up to 27m proven depth); ▪ Gravels and cobbles (up to 29m proven depth); and ▪ Bedrock comprising sandstones with mudstones/siltstones (Upper Coal Measures - Brithdir Beds)
Hydrogeology	The site is underlain by alluvial deposits (Secondary A Aquifer) overlying a Secondary A Aquifer in the bedrock (Upper Coal Measures). Perched water may be present in the made ground. No licensed groundwater abstractions exist within 1km and the site does not lie within 1km of a groundwater protection zone. Groundwater was encountered at both c.3mbgl and c.18mbgl and is anticipated to flow generally north/easterly to the River Taff.

6.1 CONCEPTUAL SITE MODEL ASSESSMENT (CONTINUED)

Aspect	Details
Surface Water Features	The closest surface water is the River Taff, which at its closest is approximately 20m from the northern boundary, though across main highway. It was classified as being of good quality in 2000.
Ecological Receptors	There are no sensitive habitats designated within 1km of the site (Envirocheck)
Summary of Receptors	▪ Land (spills and leaks to ground); ▪ Shallow Secondary A Aquifer (leaching from soils and percolation through permeable ground within drift and solid deposits); ▪ Deeper Secondary A Aquifer in bedrock; and ▪ The River Taff (direct site surface water drainage, shallow groundwater flow)
Activities identified with a Reasonable Possibility of Future Pollution occurring	**Zone A18** ▪ Bulk storage, process delivery and use of lime and lime solutions (C2, C5, C6); ▪ Delivery, process delivery (C3) and external storage of phosphoric acid (BC01); ▪ Delivery (C14) and external storage and use of sulphuric acid (BC11); and ▪ External bulk storage of Effluent (C15) and Effluent Sludge (C16). **Zone A21** ▪ External delivery, bulk storage and use of hydrochloric acid (BC05); ▪ External delivery, bulk storage and use of recovered acid (BC06); ▪ External delivery, bulk storage and use of phosphoric acid (BC07); ▪ External delivery, bulk storage and use of hydrogen peroxide (BC08); and ▪ External delivery, bulk storage and use of acetic acid (BC10). **Waterworks Zone** ▪ Delivery, external storage and use of TRUFLOC TAC40 flocculent (BC02); ▪ Ad-hoc external storage of sodium hypochlorite (C20a); and ▪ Delivery, external bulk storage and process delivery/use of caustic soda (BC03, BC04). **Veolia Zone** ▪ Delivery, external storage and use of fuel oil (F1). **Effluent Drainage System - Site Wide** ▪ Below ground drainage of liquid effluent from all areas of site to the effluent plant, effluent tanks, effluent treatment facilities and foul drainage (E1).

6.1 CONCEPTUAL SITE MODEL ASSESSMENT (CONTINUED)

Aspect	Details
Land Pollution History	▪ The site has a long history of industrial usage, including gelatin manufacture since at least 1973 and an historical metal alloy works, with a potential for a wide range of contaminants to be present; ▪ There is made ground known to be present in at least one site area; and ▪ There are documented leaks of effluent from the below ground effluent drainage system.
Contamination identified in previous investigations	Previous site investigations in Zone A18 identified a number of contaminants within the made ground, including hydrocarbons, PAHs, metals and inorganics.

The Conceptual Site Model is presented schematically in Figure 4.

The following uncertainties and assumptions are implicit in the CSM described:

- Complete records of known pollution incidents do not exist for the lifetime of the site and gelatin production on the site. It is therefore possible that pollution incidents have occurred over the site's history that have not been documented; and,
- The composition of the ground underneath the site is extremely variable and has therefore been interpolated across the site from the limited available site investigation data.

7.0 ASSESSMENT OF BASELINE SITE CONDITIONS

The H5 Guidance document suggests that samples of soil or groundwater should be retrieved and levels of contamination measured where there is evidence that there is, or could be, existing contamination and:

- the environmental risk assessment has identified that the same contaminants are a particular hazard; or
- the environmental risk assessment has identified that the same contaminants are a hazard and the risk assessment has identified a possible pathway to the land or groundwater.

7.1 EVIDENCE OF EXISTING CONTAMINATION

The previous site investigations undertaken within Zone A18 concluded that the shallow made ground at the site was contaminated with a number of determinands. Although the investigation was not focused at those contaminants utilised within the gelatin production process, there were a number of determinands identified which are utilised within the process.

The desk study review of the site identified a number of historical 'factories' on-site as well as the 'gelatin works' which were first labelled in 1973, but which are likely to have been operational prior to that date. It is probable therefore that the chemicals currently used within the existing facility have been in use since at least 1973, and the likelihood therefore exists of unrecorded / unknown contamination of the ground beneath the installation.

7.2 PLANNED IMPROVEMENTS TO POLLUTION PREVENTION MEASURES

Numerous improvements have clearly been made to the site pollution prevention measures since our last survey. External tanks are now routinely of HDPE construction with internal bunds and auto-dosing using Chemiguard tanker discharge units. In addition, although there are no immediately planned improvements to the site's pollution prevention infrastructure, the site management and maintenance systems are constantly assessing and implementing any maintenance/ updating/replacement requirements.

Any infrastructure improvements to those physical pollution prevention measures deemed a reasonable risk of future pollution in Section 5, will help to further reduce the risk of future pollution.

APPENDIX A

ENVIROCHECK REPORT

Intégral
Géotechnique

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
228391279_1_1

Customer Reference:
11121/LP

National Grid Reference:
310260, 186860

Slice:
A

Site Area (Ha):
4.09

Search Buffer (m):
1000

Site Details:

P B Gelatins
Severn Road
Treforest Industrial Estate
PONTYPRIDD
CF37 5SQ

Client Details:

MR H Pritchard
Integral Geotechnique
Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX

Intégral
Géotechnique

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Introduction

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

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Report Version v53.0

Intégral Géotechnique

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3		7	10	6
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 9		2		
Integrated Pollution Prevention And Control	pg 9	1	7		3
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 12		5	4	6
Local Authority Pollution Prevention and Control Enforcements	pg 14			1	
Nearest Surface Water Feature	pg 14		Yes		
Pollution Incidents to Controlled Waters	pg 14		5	5	21
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 19		1		1
River Quality Biology Sampling Points	pg 20				1
River Quality Chemistry Sampling Points	pg 21			1	
Substantiated Pollution Incident Register	pg 21				3
Water Abstractions	pg 22			3	6 (*2)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 24	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 25	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 25	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 25	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 25	Yes		n/a	n/a
Areas Benefiting from Flood Defences	pg 25	Yes	Yes	n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences	pg 25		Yes	n/a	n/a
OS Water Network Lines	pg 26		29	35	175

Intégral Géotechnique

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 53			2	3
Integrated Pollution Control Registered Waste Sites	pg 54				1
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 54		2	1	1
Local Authority Landfill Coverage	pg 54	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 55			1	
Potentially Infilled Land (Non-Water)	pg 55		3	4	6
Potentially Infilled Land (Water)	pg 55	2	1	14	37
Registered Landfill Sites	pg 58			1	
Registered Waste Transfer Sites	pg 59				1
Registered Waste Treatment or Disposal Sites	pg 59				1
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 60				1
Planning Hazardous Substance Consents	pg 60				1
Planning Hazardous Substance Enforcements					

Intégral Géotechnique

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 61	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 61	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 62		2	3	7
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 64	Yes	n/a	n/a	n/a
Mining Instability	pg 64	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 64	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 65	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 65	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 65	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 66	Yes	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 67	5	47	49	79
Fuel Station Entries	pg 83		1		2
Points of Interest - Commercial Services	pg 83		10	11	19
Points of Interest - Education and Health	pg 87	1			
Points of Interest - Manufacturing and Production	pg 87	27	13	4	21
Points of Interest - Public Infrastructure	pg 93		13	7	12
Points of Interest - Recreational and Environmental	pg 95				8
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Underground Electrical Cables					

Intégral Géotechnique

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 97	1	3	2	15
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Agency & Hydrological

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	A10SE (SW)	0	1	310200 186750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (SW)	0	1	310250 186850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SE (W)	0	1	310100 186800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (N)	0	1	310258 186950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SE (S)	0	1	310200 186700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (NW)	0	1	310258 186863
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SE (W)	4	1	310000 186850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NE (W)	35	1	310000 186863
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SW (W)	104	1	309900 186850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (NE)	119	1	310550 187100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (NE)	126	1	310450 187150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (S)	141	1	310300 186600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SW (W)	154	1	309850 186800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (S)	181	1	310350 186600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (E)	193	1	310600 186750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SW (NE)	200	1	310550 187200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (S)	211	1	310350 186550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NE (E)	222	1	310700 186863
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (NE)	223	1	310700 187050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NE (NE)	226	1	310650 187150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NE (S)	237	1	310200 186450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (SE)	251	1	310400 186550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (SE)	259	1	310450 186550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (NE)	260	1	310650 187200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (E)	263	1	310750 187000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (NE)	268	1	310600 187250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SW (SE)	270	1	310500 186550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NE (NW)	280	1	309950 187150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (S)	281	1	310400 186500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SW (N)	281	1	310350 187300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (E)	287	1	310750 186850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NE (S)	289	1	310150 186400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (E)	312	1	310800 186900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (SE)	318	1	310500 186500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (NE)	331	1	310700 187250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (SE)	335	1	310550 186500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A15SE (NE)	336	1	310750 187200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (NE)	338	1	310650 187300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SW (N)	342	1	310300 187350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (SE)	347	1	310650 186550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (E)	362	1	310850 186900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NE (S)	364	1	310050 186350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (E)	368	1	310850 186863
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (SE)	381	1	310550 186450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	401	1	310600 186450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (E)	415	1	310800 186650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (NE)	420	1	310850 187200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (E)	429	1	310900 187100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NE (SW)	431	1	310000 186300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (S)	437	1	310258 186250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (NE)	438	1	310800 187300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SE)	446	1	310600 186400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (NW)	448	1	309800 187250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (NE)	450	1	310600 187450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NW (E)	462	1	310950 186950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	469	1	310650 186400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (NE)	478	1	310750 187400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (SE)	481	1	310850 186600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (NE)	485	1	310550 187500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NE (SW)	498	1	309950 186250
1	**Discharge Consents** Operator: Leiner P & Son (Wales) Ltd Property Type: Undefined Or Other Location: Treforest Estate - Leiner Gela Authority: Natural Resources Wales Catchment Area: River Taff Reference: Af4019801 Permit Version: 2 Effective Date: 25th May 1990 Issued Date: 25th May 1990 Revocation Date: 25th May 1995 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: River Taff **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A11SW (E)	3	2	310400 186829

Agency & Hydrological

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Leiner P & Son (Wales) Ltd Property Type: Undefined Or Other Location: Treforest Estate - Leiner Gela Authority: Natural Resources Wales Catchment Area: River Taff Reference: Af4019801 Permit Version: 1 Effective Date: 21st January 1985 Issued Date: 21st January 1985 Revocation Date: 24th May 1990 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: River Taff **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A11SW (E)	3	2	310400 186829
2	**Discharge Consents** Operator: National Grid Plc Property Type: Production & Distribution Of Electricity Location: Upper Boat 275kv Substation, Tonteg Road, ., Pontypridd, Rhondda Cynon Taff, Cf37 5ua Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: An0335701 Permit Version: 1 Effective Date: 3rd July 2003 Issued Date: 3rd July 2003 Revocation Date: 13th April 2011 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Into Land Receiving Water: To Land **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A10NE (W)	21	2	310046 186887
3	**Discharge Consents** Operator: National Grid Plc Property Type: Production & Distribution Of Electricity Location: Upper Boat 275kv Substation, Tonteg Road, ., Pontypridd, Rhondda Cynon Taff, Cf37 5ua Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: An0335702 Permit Version: 1 Effective Date: 3rd July 2003 Issued Date: 3rd July 2003 Revocation Date: 13th April 2011 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Into Land Receiving Water: To Land **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A10NE (NW)	84	2	310043 186977
4	**Discharge Consents** Operator: Mowat Group Plc Property Type: Undefined Or Other Location: Upper Boat Ind Estate Cardiff Road, Cardiff Road Pontypridd Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0218001 Permit Version: 1 Effective Date: 28th September 1990 Issued Date: 28th September 1990 Revocation Date: 31st March 1995 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Taff **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A11NW (NE)	88	2	310500 187100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Upper Boat Ps Authority: Natural Resources Wales Catchment Area: TAFF - CONF RHONDDA R TO CASTLE STREET Reference: Ae2025212 Permit Version: 1 Effective Date: 15th Aprll 1964 Issued Date: 15th April 1964 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Taff **Status:** **Surrendered** Positional Accuracy: Located by supplier to within 100m	A15SW (N)	234	2	310300 187200
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: Upper Boat Ps Authority: Natural Resources Wales Catchment Area: TAFF - CONF RHONDDA R TO CASTLE STREET Reference: AE2025212 Permit Version: 1 Effective Date: 15th April 1964 Issued Date: 15th April 1964 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Taff **Status:** **Surrendered** Positional Accuracy: Located by supplier to within 100m	A15SW (N)	234	2	310300 187200
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Tonteg Emergency Storm O/F, Treforest Industrial Estate, Pontypridd, Rhondda Cynon Taff Authority: Natural Resources Wales Catchment Area: TAFF - CONF RHONDDA R TO CASTLE STREET Reference: An0008001 Permit Version: 2 Effective Date: 17th March 2001 Issued Date: 16th March 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Taff River **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	278	2	310280 187240
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Tonteg Emergency Storm O/F, Treforest Industrial Estate, Pontypridd, Rhondda Cynon Taff Authority: Natural Resources Wales Catchment Area: TAFF - CONF RHONDDA R TO CASTLE STREET Reference: An0008001 Permit Version: 2 Effective Date: 17th March 2001 Issued Date: 16th March 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Taff River **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	278	2	310280 187240

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Tonteg Emergency Storm O/F, Treforest Industrial Estate, Pontypridd, Rhondda Cynon Taff Authority: Natural Resources Wales Catchment Area: TAFF - CONF RHONDDA R TO CASTLE STREET Reference: An0008001 Permit Version: 2 Effective Date: 17th March 2001 Issued Date: 16th March 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Taff River **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	278	2	310280 187240
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Tonteg Emergency Storm O/F, Treforest Industrial Estate, Pontypridd, Rhondda Cynon Taff Authority: Natural Resources Wales Catchment Area: TAFF - CONF RHONDDA R TO CASTLE STREET Reference: An0008001 Permit Version: 2 Effective Date: 17th March 2001 Issued Date: 16th March 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Taff River **Status:** **Effective** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	278	2	310280 187240
5	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Tonteg Emergency Storm O/F, Treforest Industrial Estate, Pontypridd, Rhondda Cynon Taff Authority: Natural Resources Wales Catchment Area: River Taff Reference: AN0008001 Permit Version: 1 Effective Date: 1st October 1986 Issued Date: 23rd May 1986 Revocation Date: 16th March 2001 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Taff River **Status:** **New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A15SW (N)	278	2	310280 187240
6	**Discharge Consents** Operator: City Grove Developments Ltd Property Type: Undefined Or Other Location: Treforest Upper Boat Roundabout Mid, Upper Boat Roundabout Midway Par, Midway Park Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0019601 Permit Version: 1 Effective Date: 10th December 1986 Issued Date: 10th December 1986 Revocation Date: 9th February 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Un-Named **Status:** **Consent expired** Positional Accuracy: Located by supplier to within 100m	A15SE (NE)	297	2	310700 187200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Water Supply Grid Location: Treforest Ind Est Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Am0011901 Permit Version: 1 Effective Date: 2nd October 1989 Issued Date: 2nd October 1989 Revocation Date: 14th March 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Soakaway **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A10SW (W)	304	2	309700 186800
8	**Discharge Consents** Operator: Treforest Textile Printers Property Type: Undefined Or Other Location: Treforest Ind Estate Pontypridd Authority: Natural Resources Wales Catchment Area: River Taff Reference: Ae2019201 Permit Version: 1 Effective Date: 25th November 1963 Issued Date: 25th November 1963 Revocation Date: 23rd September 1992 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Taff River **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	344	2	310590 186510
9	**Discharge Consents** Operator: Vretton K Property Type: Domestic Property (Single) Location: Upper Boat 53 Williams Place Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0057901 Permit Version: 1 Effective Date: 15th January 1988 Issued Date: 15th January 1988 Revocation Date: 18th February 1993 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Soakaway **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14SE (N)	398	2	310200 187330
10	**Discharge Consents** Operator: Cosslett Contractors Ltd - In Administration Property Type: Civil Engineering Location: Pontypridd Bridge Road Cosslett Authority: Natural Resources Wales Catchment Area: River Taff Reference: An0072801 Permit Version: 1 Effective Date: 20th July 1988 Issued Date: 20th July 1988 Revocation Date: 23rd March 1994 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Taff **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	456	2	310700 186450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Discharge Consents** Operator: Welsh Development Agency Property Type: Undefined Or Other Location: Treforest Est N O/Fall Authority: Natural Resources Wales Catchment Area: River Taff Reference: Af3028301 Permit Version: 1 Effective Date: 3rd February 1972 Issued Date: 3rd February 1972 Revocation Date: 17th January 1994 Discharge Type: Miscellaneous Discharges - Surface Water Discharge Environment: Not Supplied Receiving Water: Taff **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	581	2	310700 186300
12	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Church Village - Society Garag Authority: Natural Resources Wales Catchment Area: River Ely Reference: AN0090401 Permit Version: 1 Effective Date: 20th October 1989 Issued Date: 20th October 1989 Revocation Date: 28th March 2002 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Nant Arlan **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A6SW (SW)	703	2	309800 186100
13	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: The Coppice Ps Tonteg Authority: Natural Resources Wales Catchment Area: TAFF - CONF RHONDDA R TO CASTLE STREET Reference: Ag0004701 Permit Version: 3 Effective Date: 29th July 1991 Issued Date: 29th July 1991 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Nant Dowlais Tributary **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A9SW (W)	904	2	309100 186800
13	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Staions Location: The Coppice Ps Tonteg Authority: Natural Resources Wales Catchment Area: TAFF - CONF RHONDDA R TO CASTLE STREET Reference: Ag0004701 Permit Version: 3 Effective Date: 29th July 1991 Issued Date: 29th July 1991 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Nant Dowlais Tributary **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A9SW (W)	904	2	309100 186800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: The Coppice Ps Tonteg Authority: Natural Resources Wales Catchment Area: River Ely Reference: Ag0004701 Permit Version: 2 Effective Date: 23rd December 1980 Issued Date: 23rd December 1980 Revocation Date: 28th July 1991 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Nant Dowlais Tributary **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A9SW (W)	904	2	309100 186800
13	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: The Coppice Ps Tonteg Authority: Natural Resources Wales Catchment Area: River Ely Reference: AG0004701 Permit Version: 1 Effective Date: 21st December 1980 Issued Date: 21st December 1980 Revocation Date: 22nd December 1980 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Nant Dowlais Tributary **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A9SW (W)	904	2	309100 186800
14	**Integrated Pollution Controls** Name: Solvay Automotive Ltd Location: Tonteg Road, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5UA Authority: Environment Agency, Welsh Region Permit Reference: AV5128 Dated: 19th August 1996 Process Type: IPC new application Description: 4.4 A (B) processes involving Halogens within the Chemical Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned within the geographical locality	A10NE (NW)	228	3	309931 187072
14	**Integrated Pollution Controls** Name: Solvay Automotive Ltd Location: Tonteg Road, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5UA Authority: Environment Agency, Welsh Region Permit Reference: BD5801 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.4 A (B) processes involving Halogens within the Chemical Industry **Status: Authorisation revoked** Positional Accuracy: Manually positioned within the geographical locality	A10NE (NW)	231	3	309931 187077
15	**Integrated Pollution Prevention And Control** Name: Pb Gelatins Epr/Dp3030zc Location: Unit A6 Severn Road, Treforest Industrial Estate, Pontypridd, Rhondda Cynon Taf, CF37 5SQ Authority: Natural Resources Wales Permit Reference: DP3030ZC Original Permit Ref: Dp3030zc Effective Date: 12th April 2018 **Status: Effective** Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Automatically positioned to the address Activity Code: 5.4 PART A (1) A) (II) Activity Description: Not Supplied Primary Activity: N Activity Code: 6.8 PART A (1) C) Activity Description: Not Supplied Primary Activity: Y	A10SE (W)	0	2	310125 186818

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Integrated Pollution Prevention And Control** Name: Western Board Limited Location: Treforest Paper Mill, Western Board Mill, A15 Factory, Treforest Industrial Estate, Pontypridd, Rhondda Cynon Taf, CF37 5TA Authority: Natural Resources Wales Permit Reference: QP3632MM Original Permit Ref: Bj6984ie Effective Date: 22nd January 2007 **Status: Surrender Effective** Application Type: Surrender App. Sub Type: Whole Positional Accuracy: Manually positioned to the address or location Activity Code: 6.1 A(1) (B) Activity Description: Paper, Pulp And Board; Producing Paper/Board Greater Than 20T/D Primary Activity: Y	A10SE (SW)	18	2	310195 186768
16	**Integrated Pollution Prevention And Control** Name: Western Board Ltd Location: Western Board Mill, A15 Factory, Pontypridd, Mid Glamorgan, CF37 5TA Authority: Environment Agency, Welsh Region Permit Reference: Bt2025 Original Permit Ref: Bj6984 Effective Date: 9th October 2002 **Status: Superseded By Variation** Application Type: PPC MINOR VARIATION App. Sub Type: Not Supplied Positional Accuracy: Manually positioned to the address or location Activity Code: 6.1 A(1) (B) Activity Description: Paper, Pulp And Board; Producing Paper/Board Greater Than 20T/D Primary Activity: Not Supplied	A10SE (SW)	18	3	310195 186768
16	**Integrated Pollution Prevention And Control** Name: Western Board Limited Location: Treforest Paper Mill, Western Board Mill, A15 Factory, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TA Authority: Natural Resources Wales Permit Reference: Bx2833ix Original Permit Ref: Bj6984ie Effective Date: 8th April 2004 **Status: Superseded By Variation** Application Type: Transfer App. Sub Type: Whole without Fit and Proper Person Positional Accuracy: Automatically positioned to the address Activity Code: 6.1 A(1) (B) Activity Description: Paper, Pulp And Board; Producing Paper/Board Greater Than 20T/D Primary Activity: Y	A10SE (SW)	19	2	310196 186769
16	**Integrated Pollution Prevention And Control** Name: Western Board Limited Location: Treforest Paper Mill, Western Board Mill, A15 Factory, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TA Authority: Natural Resources Wales Permit Reference: Bt2025lt Original Permit Ref: Bj6984ie Effective Date: 9th October 2002 **Status: Superseded By Variation** Application Type: Variation App. Sub Type: Minor Positional Accuracy: Automatically positioned to the address Activity Code: 6.1 A(1) (B) Activity Description: Paper, Pulp And Board; Producing Paper/Board Greater Than 20T/D Primary Activity: Y	A10SE (SW)	19	2	310196 186769
16	**Integrated Pollution Prevention And Control** Name: Western Board Limited Location: Treforest Paper Mill, Western Board Mill, A15 Factory, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TA Authority: Natural Resources Wales Permit Reference: Bj6984ie Original Permit Ref: Bj6984ie Effective Date: 5th February 2002 **Status: Superseded By Variation** Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 6.1 A(1) (B) Activity Description: Paper, Pulp And Board; Producing Paper/Board Greater Than 20T/D Primary Activity: Y	A10SE (SW)	19	2	310196 186769

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Integrated Pollution Prevention And Control** Name: Egan Waste Services Limited Location: The Recycling Centre Unit Ea/Epr/Kp3636hb/V002, Unit A15,Egan Waste Services Recycling Centre, Treforest Industrial Estate,,, Pontypridd, CF37 5TA Authority: Natural Resources Wales Permit Reference: FP3731ZX Original Permit Ref: Kp3636hb Effective Date: 25th March 2013 **Status:** **Effective** Application Type: Variation App. Sub Type: Minor Positional Accuracy: Automatically positioned to the address Activity Code: 5.3 A(1) a) (x) Activity Description: DISPOSAL OR RECOVERY OF HAZARDOUS WASTE WITH A CAPACITY EXCEEDING 10 TONNES PER DAY INVOLVING OIL RE-REFINING OR OTHER REUSES OF OIL Primary Activity: Y	A10SE (S)	31	2	310239 186763
16	**Integrated Pollution Prevention And Control** Name: The Recycling Centre Epr/Kp3636hb Location: Egan Waste Services Recycling Centre Unit A15 Treforest Industrial Estate, Pontypridd, CF37 5TA Authority: Natural Resources Wales Permit Reference: KP3636HB Original Permit Ref: Fp3731zx Effective Date: 25th March 2013 **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) (X) Activity Description: Not Supplied Primary Activity: Y	A10SE (S)	32	2	310238 186762
17	**Integrated Pollution Prevention And Control** Name: Western Board Ltd Location: Western Board Mill, A15 Factory, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5TA Authority: Environment Agency, Welsh Region Permit Reference: Bj6984 Original Permit Ref: Bj6984 Effective Date: 5th February 2002 **Status:** **Superseded By Variation** Application Type: PPC APPLICATION App. Sub Type: Not Supplied Positional Accuracy: Manually positioned to the address or location Activity Code: 6.1 A(1) (B) Activity Description: Paper, Pulp And Board; Producing Paper/Board Greater Than 20T/D Primary Activity: Not Supplied	A7NE (SE)	629	3	310840 186342
17	**Integrated Pollution Prevention And Control** Name: Treforest Textile Printers Epr/Bs2330im Location: Treforest Textiles Ltd, Factory E6, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5ST Authority: Natural Resources Wales Permit Reference: Bs2330im Original Permit Ref: Bs2330im Effective Date: 28th November 2003 **Status:** **Effective** Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Automatically positioned to the address Activity Code: 6.4 A(1) (B) Activity Description: Not Supplied Primary Activity: Y	A7NE (SE)	653	2	310850 186319
18	**Integrated Pollution Prevention And Control** Name: Harp International Limited Location: H A R P International Ltd, Gelli-Hirion Industrial Estate, Pontypridd, Rhondda Cynon Taff, CF37 5SX Authority: Natural Resources Wales Permit Reference: NP3099FS Original Permit Ref: Not Supplied Effective Date: 23rd March 2017 **Status:** **Effective** Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Automatically positioned to the address Activity Code: 5.6 PART A (1) A) Activity Description: Not Supplied Primary Activity: Y	A15NW (N)	750	2	310472 187774

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Local Authority Pollution Prevention and Controls** Name: Concrete Canvas Ltd Location: Unit 3 And 1, Block A22, Treforest Industrial Estate, Pontypridd, Cf37 5sp Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: PPC 112 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A10NE (W)	32	4	310136 186907
20	**Local Authority Pollution Prevention and Controls** Name: Pearl Technical Coatings Ltd Location: Severn Road, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5SR Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: Epa 042 Dated: 3rd May 1995 Process Type: Local Authority Air Pollution Control Description: PG6/10 Coating manufacturing **Status: Authorisation has varied** Positional Accuracy: Manually positioned to the road within the address or location	A11NW (N)	79	4	310272 186954
21	**Local Authority Pollution Prevention and Controls** Name: Treforest Service Station Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5UA Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: PPC 66 Dated: 13th January 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	201	4	310077 187105
22	**Local Authority Pollution Prevention and Controls** Name: Melloy Ltd Location: Units 16-18 Treforest Industrial Estate, Pontypridd, CF37 5YR Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: PPC 44 Dated: 9th September 2005 Process Type: Local Authority Pollution Prevention and Control Description: PG2/6 Aluminium and aluminium alloy processes **Status: Authorisation certificate surrendered by operator** Positional Accuracy: Located by supplier to within 100m	A11NE (E)	222	4	310700 186900
23	**Local Authority Pollution Prevention and Controls** Name: Griffin Mill Garages Location: Heol Y Bwnsy, Upper Boat, PONTYPRIDD, Mid Glamorgan, CF37 5YE Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: PPC 37 Dated: 15th October 1993 Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A15SW (N)	241	4	310373 187251
24	**Local Authority Pollution Prevention and Controls** Name: Nationwide Crash Repair Centre Location: Units 5-6, Riverside Industrial Park, Treforest, PONTYPRIDD, Mid Glamorgan, CF37 5TG Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: EPA 035 Dated: 16th November 1993 Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorisation has varied** Positional Accuracy: Manually positioned to the address or location	A7NE (SE)	359	4	310603 186500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**Local Authority Pollution Prevention and Controls** Name: Nationwide Crash Repair Centres Ltd Location: Unit 5-6 Riverside Industrial Park, Bridge Road, TREFOREST, CF37 5TJ Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: PPC 38 Dated: 17th March 2005 Process Type: Local Authority Pollution Prevention and Control Description: PG6/34 Respraying of road vehicles **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A7NE (SE)	361	4	310597 186494
25	**Local Authority Pollution Prevention and Controls** Name: Remploy Furniture Location: Main Avenue, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5UR Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: Ppc 29 Dated: 29th March 1993 Process Type: Local Authority Pollution Prevention and Control Description: PG6/2 Manufacture of timber and wood-based products **Status: Authorisation certificate surrendered by operator** Positional Accuracy: Located by supplier to within 10m	A11SE (SE)	437	4	310800 186600
26	**Local Authority Pollution Prevention and Controls** Name: Timpson Ltd Location: Unit 15 Riverside, Treforest Industrial Estate, Pontypridd, Cf37 5tg Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: PPC 111 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A7NE (SE)	473	4	310670 186408
27	**Local Authority Pollution Prevention and Controls** Name: Shell Taff Vale Location: Cardiff Road, Hawthorn, PONTYPRIDD, Mid Glamorgan, CF37 Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: EPA PS11 Dated: 4th December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the road within the address or location	A14SE (N)	560	4	310033 187462
28	**Local Authority Pollution Prevention and Controls** Name: Continental Can Company Ltd Location: Brecon Gate, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5UR Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: EPA 045 Dated: 20th March 1995 Process Type: Local Authority Air Pollution Control Description: PG6/7 Printing and coating of metal packaging **Status: Authorisation revoked** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SE)	560	4	310877 186490
29	**Local Authority Pollution Prevention and Controls** Name: Tesco Stores Ltd Location: Gelli Hirion Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5SN Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: PPC 58 Dated: 22nd September 1998 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A15NW (N)	666	4	310323 187677

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	**Local Authority Pollution Prevention and Controls** Name: Tonteg Service Station Location: Main Road, Tonteg, PONTYPRIDD, Mid Glamorgan, CF38 1PW Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: EPA PS18 Dated: 8th December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A9SE (W)	686	4	309365 186547
31	**Local Authority Pollution Prevention and Controls** Name: South Wales Transformers Location: Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5UR Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: Epa 037 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/35 Metal and other thermal spraying processes **Status: Authorisation revoked** Positional Accuracy: Manually positioned within the geographical locality	A8NW (SE)	692	4	310991 186422
32	**Local Authority Pollution Prevention and Controls** Name: Allied Signal Ltd Location: Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5YP Authority: Rhondda Cynon Taff County Borough Council, Public Health and Protection Division Permit Reference: EPA 004 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/2 Manufacture of heavy clay goods and refractory goods **Status: Authorisation revoked** Positional Accuracy: Manually positioned within the geographical locality	A8NW (SE)	832	4	311014 186229
33	**Local Authority Pollution Prevention and Control Enforcements** Location: Unit C10, Treforest Industrial Estate, Treforest, Pontypridd, Cf37 5ud Type: Air Pollution Control Enforcement Notice Reference: 071833 Date Issued: 11th July 2011 Enforcement Date: 10th October 2012 Details: Condition 2 Revoked Positional Accuracy: Manually positioned to the address or location	A11NE (E)	308	4	310796 186972
	Nearest Surface Water Feature	A11NW (NE)	21	-	310437 187068
34	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Road Bridge, Tonteg Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 1st October 1994 Incident Reference: 21406 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	A11NW (E)	36	3	310520 186950
35	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: UPPER BOAT Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 3rd August 1996 Incident Reference: 29584 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	A11NW (NE)	48	3	310500 187050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	**Pollution Incidents to Controlled Waters** Property Type: Warehouses Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Organic Note: Accidental Spillage/Leakage Incident Date: 13th December 1995 Incident Reference: 26878 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A11SW (S)	85	3	310300 186700
37	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Below Upper, Boat Roadbridge Authority: Environment Agency, Welsh Region Pollutant: Farm Land Run-Off Note: Not Supplied Incident Date: 23rd November 1994 Incident Reference: 21977 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	A11NE (E)	129	3	310600 186900
37	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Upper Boat Pub Lhb Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 21st October 1994 Incident Reference: 21485 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	A11NE (E)	131	3	310600 186895
38	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Between Bedwas Road, And Lansbury Park Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 18th October 1991 Incident Reference: 878 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	A11NE (NE)	333	3	310800 187100
39	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Treforest Industrial Estate, TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Cement/Mortar Note: Poor Management Incident Date: 2nd April 1997 Incident Reference: 32024 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	495	3	310705 186405
39	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Behind Dragon Plastics, Upper Boat Authority: Environment Agency, Welsh Region Pollutant: Cement/Mortar Note: Poor Management Incident Date: 2nd April 1997 Incident Reference: 32024 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	499	3	310705 186400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Surface Water Outfall Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Chlorinated Water Note: Not Supplied Incident Date: 15th August 1995 Incident Reference: 25666 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	A7NE (SE)	526	3	310750 186400
40	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Other Location: 150 Metres Stretch, TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Mechanical Failure Incident Date: 17th August 1991 Incident Reference: 1231 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	496	3	310700 186400
40	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Tip Leachate Note: Not Supplied Incident Date: 6th February 1995 Incident Reference: 22425 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	A7NE (SE)	500	3	310700 186395
40	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Mechanical/Electrical Failure Incident Date: 20th April 1997 Incident Reference: 32486 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	503	3	310705 186395
40	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Surface Water Outfall Location: Treforest Industrial Estate Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 6th July 1995 Incident Reference: 24773 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	A7NE (SE)	538	3	310700 186350
40	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Filter Backwash Location: Europower Hydraulics Authority: Environment Agency, Welsh Region Pollutant: Coal Solids Note: Inadequate Design/Capacity Incident Date: 6th May 1992 Incident Reference: 3896 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	542	3	310700 186345

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	**Pollution Incidents to Controlled Waters** Property Type: Land Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 25th March 1992 Incident Reference: 3469 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	545	3	310705 186345
40	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Treforest Industrial Estate, TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Vehicle Washings And De Waxing Note: Not Supplied Incident Date: 29th April 1992 Incident Reference: 3871 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	A7NE (SE)	566	3	310750 186350
40	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Weir Engineering Services Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Not Supplied Incident Date: 22nd April 1991 Incident Reference: 274 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	581	3	310700 186300
41	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Footbridge Between , Taffs Well & , Gwaelod Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Organic Note: Inadequate Design; River Taff Incident Date: 26th November 1998 Incident Reference: 37222 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	585	3	310700 186295
42	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Upper Clydach Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Paints / Dyes Note: Not Supplied Incident Date: 16th July 1996 Incident Reference: 29614 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	A7NE (SE)	607	3	310750 186300
42	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Treforest Industrial Estate, TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Paints / Dyes Note: Not Supplied Incident Date: 16th July 1996 Incident Reference: 29614 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	A7NE (SE)	611	3	310750 186295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Treforest Industrial Estate, TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Vehicles Note: Not Supplied Incident Date: 16th July 1996 Incident Reference: 29614 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	A7NE (SE)	614	3	310755 186295
42	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Surface Water Outfall Location: TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 6th March 1996 Incident Reference: 27539 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	A7NE (SE)	636	3	310800 186300
42	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: North Outfall, TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 6th March 1996 Incident Reference: 27539 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	A7NE (SE)	640	3	310800 186295
42	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Other Location: Footbridge, Over The River, TAFFS WELL Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 4th August 1995 Incident Reference: 26204 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	643	3	310770 186270
42	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Other Location: Taffs Well Park Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 4th August 1995 Incident Reference: 26204 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	646	3	310775 186270
42	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Other Location: Treforest Industrial Estate, PONTYPRIDD Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Not Supplied Incident Date: 4th August 1995 Incident Reference: 26204 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	A7NE (SE)	647	3	310770 186265

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Other Location: Treforest Industrial Estate, TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 4th August 1995 Incident Reference: 26204 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	650	3	310775 186265
43	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Accessed, Via Gate Opposite, Action Garage Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Not Supplied Incident Date: 21st April 1995 Incident Reference: 23683 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	A13SE (NW)	705	3	309500 187300
44	**Pollution Incidents to Controlled Waters** Property Type: Warehouses Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Vandalism Incident Date: 10th July 1995 Incident Reference: 24767 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NW (NW)	720	3	309900 187600
45	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Adjacent, Hawthorne, Leisure Centre Authority: Environment Agency, Welsh Region Pollutant: Foam/Soap Suds Note: Not Supplied Incident Date: 5th August 1995 Incident Reference: 25303 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	A13SE (NW)	845	3	309400 187400
46	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Treforest Industrial Estate, TREFOREST Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 21st August 1996 Incident Reference: 29723 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (SE)	992	3	311200 186200
	River Quality Name: Taff GQA Grade: River Quality B Reach: Conf.Tonteg Bk.-Conf.Nant Y Fforest Estimated Distance (km): 4 Flow Rate: Flow less than 20 cumecs Flow Type: River Year: 2000	A11NW (NE)	16	3	310479 187028

Agency & Hydrological

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Taff GQA Grade: River Quality B Reach: Conf.Nantyfforest Goch-Tonteg Bk. Estimated Distance (km): 5.6 Flow Rate: Flow less than 20 cumecs Flow Type: River Year: 2000	A7NE (SE)	640	3	310787 186286
47	**River Quality Biology Sampling Points** Name: Taff Reach: Confluence Nantyfforest Goch To To Nteg Brook Estimated Distance: 5.60 Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 1995 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2000 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2002 GQA Grade: River Quality Biology GQA Grade Not Supplied Year: 2003 GQA Grade: River Quality Biology GQA Grade Not Supplied Year: 2004 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2005 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2006 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2007 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2008 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2009 GQA Grade: River Quality Biology GQA Grade C - Fairly Good	A7NE (SE)	670	3	310700 186200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	**River Quality Chemistry Sampling Points** Name: Taff Reach: Confluence Tonteg Brook To Confluence Nant Y Fforest Estimated Distance: 4.00 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A11SE (E)	318	3	310728 186745
49	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 16th January 2013 Incident Reference: 1078708 Water Impact: Category 2 - Significant Incident Air Impact: Category 3 - Minor Incident Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: General Biodegradable : Animal / Vegetable Oils Pollutant: General Biodegradable Materials And Wastes: Other Animal Matter Pollutant: Inorganic Chemicals : Acids Pollutant: Inorganic Chemicals : Alkalis	A7NE (SE)	502	2	310713 186402
49	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 7th December 2008 Incident Reference: 639290 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Sewage Materials: Grey Water	A7NE (SE)	511	2	310717 186394

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
49	**Substantiated Pollution Incident Register** Authority: Natural Resources Wales Incident Date: 23rd July 2008 Incident Reference: 606828 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Oils - Unknown	A7NE (SE)	533	2	310723 186371
50	**Water Abstractions** Operator: P B Gelatins Uk Ltd Licence Number: 21/57/25/0063 Permit Version: 101 Location: River Taff At Treforest Ind Estate Authority: Natural Resources Wales Abstraction: Food And Drink: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: P B Gelatins At Treforest Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 30th June 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (NW)	318	2	309910 187170
50	**Water Abstractions** Operator: P B Gelatins Uk Ltd Licence Number: 21/57/25/0063 Permit Version: Not Supplied Location: River Taff Abstraction At Treforest Industrial Estate. Authority: Natural Resources Wales Abstraction: Food And Drink: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (NW)	318	2	309910 187170
51	**Water Abstractions** Operator: P B Gelatins Uk Ltd Licence Number: 21/57/25/0063 Permit Version: 100 Location: River Taff At Treforest Ind Estate Authority: Environment Agency, Welsh Region Abstraction: Food And Drink: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: R.Taff Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th June 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14SW (NW)	373	3	309888 187221
52	**Water Abstractions** Operator: Huruk (Central) Limited Licence Number: 21/57/25/0072 Permit Version: 103 Location: River Taff Authority: Environment Agency, Welsh Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Former Stewart Singlam Site - Trefforest Ind Est Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st October 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	565	3	310720 186330

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	**Water Abstractions** Operator: Pmg Developments Plc Licence Number: 21/57/25/0072 Permit Version: 102 Location: River Taff Authority: Environment Agency, Welsh Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Former Stewart Singlam Site - Trefforest Ind Est Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 7th February 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	565	3	310720 186330
52	**Water Abstractions** Operator: Norfleet Properties (Holdings) Ltd Licence Number: 21/57/25/0072 Permit Version: 101 Location: River Taff Authority: Environment Agency, Welsh Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Former Stewart Singlam Site - Trefforest Ind Est Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	565	3	310720 186330
52	**Water Abstractions** Operator: Stewart Singlam Fabrics Ltd Licence Number: 21/57/25/0072 Permit Version: 100 Location: River Taff Authority: Environment Agency, Welsh Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Taff Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 2nd September 1993 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	565	3	310720 186330
53	**Water Abstractions** Operator: Treforest Textile Printers Limited Licence Number: 21/57/25/0070 Permit Version: 100 Location: River Taff At Treforest Authority: Natural Resources Wales Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: River Taff Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 30th June 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7NE (SE)	665	2	310780 186250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	**Water Abstractions** Operator: Treforest Textile Printers Limited Licence Number: 21/57/25/0070 Permit Version: Not Supplied Location: Abstraction From The River Taff At Treforest Authority: Natural Resources Wales Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	665	2	310780 186250
	Water Abstractions Operator: Barratt (South Wales) Limited Licence Number: 21/57/31/0053 Permit Version: Not Supplied Location: Not Supplied Authority: Natural Resources Wales Abstraction: Impounding Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1SW (SW)	1698	2	309200 185300
	Water Abstractions Operator: Messrs T Roberts & Son Licence Number: 21/57/25/0060 Permit Version: 100 Location: Borehole At Penygroes Farm Authority: Environment Agency, Welsh Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 24th May 1985 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(E)	1897	3	312310 187510
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: High	A10SE (SW)	0	2	310052 186772

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: High	A11NW (NW)	0	2	310258 186863
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: Medium	A11NW (N)	0	2	310258 187000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NW (NW)	0	2	310258 186863
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A10SE (SW)	0	2	310052 186772
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NW (NW)	0	2	310258 186863
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A11NW (NW)	0	2	310258 186863
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models and Fluvial Events Boundary Accuracy: As Supplied	A11NW (NE)	52	2	310484 187072
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A10NE (NW)	184	2	310028 187091
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A11NW (NW)	0	2	310258 186863
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A11NW (NE)	0	2	310468 187001
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A11NW (NE)	46	2	310423 187061
	Flood Water Storage Areas None				
	Flood Defences Type: Flood Defences Reference: Not Supplied	A11NW (NE)	14	2	310425 187072
	Flood Defences Type: Flood Defences Reference: Not Supplied	A11NW (NE)	31	2	310519 186975

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Defences Type: Flood Defences Reference: Not Supplied	A11NW (NE)	56	2	310420 187076
	Flood Defences Type: Flood Defences Reference: Not Supplied	A11NW (NE)	65	2	310475 187100
	Flood Defences Type: Flood Defences Reference: Not Supplied	A11NW (NE)	72	2	310554 187013
	Flood Defences Type: Flood Defences Reference: Not Supplied	A11NW (NE)	84	2	310473 187107
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 267.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NW (NE)	33	5	310505 187021
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 587.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10NE (NW)	44	5	310159 187008
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 397.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NW (E)	66	5	310554 186982
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 28.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NW (E)	66	5	310554 186982
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 63.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SE (S)	89	5	310233 186607
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SE (S)	106	5	310214 186583
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 137.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (S)	110	5	310284 186622

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (W)	112	5	309896 186829
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SE (S)	114	5	310214 186575
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SE (S)	116	5	310214 186574
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (S)	139	5	310266 186570
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (S)	146	5	310271 186566
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 95.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (S)	146	5	310271 186566
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 113.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NW (N)	162	5	310375 187166
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 297.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6NE (S)	170	5	310188 186516
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 839.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (W)	175	5	309829 186786

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 68.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (W)	175	5	309829 186786
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 280.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6NE (S)	183	5	310237 186511
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (W)	205	5	309815 186720
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (W)	209	5	309819 186701
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (SE)	212	5	310385 186594
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (SW)	214	5	309825 186681
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 410.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (SE)	223	5	310400 186584
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (SE)	223	5	310400 186584
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (SE)	226	5	310397 186581

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (SW)	227	5	309826 186657
80	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 14.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (S)	228	5	310361 186536
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NE (E)	231	5	310714 187028
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SW (S)	243	5	310374 186529
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 698.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (SW)	256	5	309814 186626
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10SW (SW)	256	5	309814 186626
85	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 3.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NW (S)	260	5	310374 186504
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SW (N)	273	5	310297 187248
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SW (N)	273	5	310279 187237

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 109.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NE (E)	288	5	310768 187050
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 729.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SE (N)	313	5	310125 187242
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 161.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	321	5	310627 187296
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 301.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Lonydd Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SE (N)	329	5	310241 187273
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 77.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	341	5	310759 187197
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 85.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NE (NE)	349	5	310779 187182
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 92.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	357	5	310741 187245
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NE (NE)	383	5	310844 187126
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 347.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	385	5	310771 186658

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97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	385	5	310771 186658
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 227.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SW (N)	386	5	310426 187409
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	410	5	310805 186679
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 56.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	427	5	310840 186716
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 138.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	430	5	310868 186763
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	430	5	310868 186763
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	431	5	310870 186765
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 212.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	433	5	310874 186768
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 0.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	433	5	310873 186767

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106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11SE (E)	433	5	310874 186768
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 294.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NE (E)	435	5	310911 187083
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 159.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A11NE (E)	435	5	310911 187083
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	443	5	310819 187285
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 247.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	443	5	310818 187286
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 102.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6NW (SW)	450	5	309728 186442
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10NW (W)	451	5	309657 187087
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	453	5	310825 187295
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	453	5	310825 187295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6NW (SW)	459	5	309668 186485
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	495	5	310967 186846
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	500	5	310712 186404
118	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 21.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12NW (E)	509	5	310987 186864
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 457.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6NW (SW)	519	5	309753 186344
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 89.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12NW (E)	530	5	311008 186864
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	549	5	310240 187535
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 215.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	549	5	310258 187537
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	554	5	310240 187535

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 35.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	557	5	310681 186315
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 174.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SE (N)	557	5	310073 187478
126	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	557	5	310789 187470
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	559	5	310791 187471
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 162.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	559	5	310783 187477
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	561	5	310709 186329
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A16SW (NE)	567	5	311012 187200
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A10NW (NW)	569	5	309575 187174
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 187.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Lonydd Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14SE (N)	573	5	310071 187477

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133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 95.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	573	5	310544 187592
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 100.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A16SW (NE)	580	5	311021 187213
135	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	583	5	310740 186323
136	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 140.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	600	5	310828 187493
137	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	600	5	310828 187493
138	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	603	5	310494 187626
139	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	603	5	310494 187626
140	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (NE)	610	5	310581 187638
141	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (NE)	610	5	310674 187594

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142	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	615	5	310447 187639
143	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	616	5	310734 186279
144	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	616	5	311087 186825
145	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	620	5	310750 186284
146	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12NW (E)	620	5	311100 186876
147	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 142.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (NW)	622	5	309531 187204
148	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (NW)	622	5	309531 187204
149	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12NW (E)	623	5	311105 186882
150	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12NW (E)	623	5	311105 186882

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
151	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	626	5	310465 187650
152	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	626	5	310547 187648
153	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 242.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (NE)	626	5	310581 187638
154	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	629	5	310460 187654
155	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 59.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	630	5	310459 187655
156	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	630	5	310459 187655
157	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 66.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12NW (E)	632	5	311113 186878
158	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 67.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	636	5	310711 186243
159	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	638	5	310520 187659

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160	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 96.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	638	5	310520 187659
161	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 135.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15SE (NE)	647	5	310900 187496
162	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	657	5	310481 187681
163	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	658	5	310481 187682
164	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	658	5	310481 187682
165	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	659	5	311121 186785
166	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (NW)	665	5	309478 187214
167	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 229.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (NW)	668	5	309546 187299
168	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 331.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A16SW (NE)	673	5	310970 187462

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169	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 405.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SW (S)	673	5	310399 186047
170	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 60.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A16SW (NE)	675	5	311105 187258
171	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 146.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	676	5	310422 187699
172	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	682	5	311156 186828
173	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	683	5	311157 186828
174	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 177.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12SW (E)	683	5	311157 186828
175	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 224.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	683	5	309798 186124
176	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	690	5	311165 186835
177	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	691	5	311166 186835

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
178	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	696	5	309956 186031
179	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 233.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	696	5	309956 186031
180	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	702	5	310725 186177
181	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 109.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	702	5	310725 186177
182	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (N)	708	5	310591 187720
183	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	710	5	310690 186152
184	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	710	5	309962 186015
185	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	716	5	309962 186008
186	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	718	5	310685 186141

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
187	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	718	5	310685 186141
188	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	718	5	310685 186141
189	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 97.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Lonydd Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (NW)	718	5	309943 187608
190	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 248.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (NW)	718	5	309943 187608
191	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 77.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	719	5	309963 186004
192	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 136.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A6SE (S)	719	5	309968 186003
193	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	722	5	310782 186184
194	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (N)	722	5	310594 187733
195	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (N)	722	5	310597 187732

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
196	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	725	5	310812 186199
197	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 209.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (N)	725	5	310594 187735
198	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (N)	725	5	310614 187732
199	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 464.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A16SW (NE)	725	5	311136 187309
200	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A15NE (NE)	733	5	310913 187597
201	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 380.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (NE)	735	5	310912 187600
202	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	740	5	310777 186161
203	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7NE (SE)	742	5	310821 186185
204	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	752	5	311227 186828

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
205	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SW (E)	752	5	311227 186828
206	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	767	5	310535 187787
207	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	770	5	310538 187790
208	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 94.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	775	5	310803 186135
209	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 489.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	776	5	310546 187795
210	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A16NW (NE)	778	5	311006 187575
211	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	790	5	309970 185927
212	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	795	5	309970 185922
213	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	800	5	309970 185917

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
214	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 326.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (NW)	805	5	309907 187689
215	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Lonydd Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (NW)	805	5	309907 187689
216	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 117.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (E)	807	5	311278 186806
217	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 218.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SW (S)	808	5	310398 185906
218	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	820	5	310229 185868
219	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NW (N)	821	5	310434 187845
220	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 145.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	822	5	310213 185864
221	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SE (S)	822	5	310218 185865
222	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (NE)	823	5	310760 187788

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
223	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 93.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (NE)	823	5	310760 187788
224	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 448.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SE (SE)	825	5	310867 186116
225	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	828	5	310121 187782
226	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	830	5	310127 187787
227	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Lonydd Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (N)	831	5	309908 187716
228	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (N)	831	5	309908 187716
229	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	836	5	309911 187722
230	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 192.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (E)	839	5	311290 186720
231	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Nant Lonydd Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (N)	840	5	309903 187724

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
232	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A12SE (E)	841	5	311289 186710
233	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (E)	841	5	311288 186709
234	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SW (S)	842	5	310418 185876
235	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A7SW (S)	846	5	310420 185872
236	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	848	5	310171 187824
237	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 496.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A2NE (S)	856	5	310071 185839
238	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	863	5	309923 187752
239	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 35.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	865	5	309924 187754
240	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	869	5	310217 187860

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241	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	873	5	310444 187897
242	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	874	5	310444 187898
243	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	879	5	309953 187773
244	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 85.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Lonydd Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (N)	882	5	309908 187768
245	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SE (NE)	891	5	310735 187871
246	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (NE)	897	5	310842 187833
247	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 164.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A13SE (NW)	897	5	309363 187437
248	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 158.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Taf Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A13SE (NW)	897	5	309363 187437
249	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	897	5	309719 185921

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250	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 95.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	899	5	310469 187923
251	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 175.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NE (N)	899	5	309955 187793
252	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 28.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	901	5	309718 185919
253	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (E)	904	5	311384 186846
254	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 101.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (E)	918	5	311351 186655
255	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (E)	918	5	311350 186654
256	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (E)	918	5	311351 186655
257	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 106.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12SE (E)	918	5	311352 186656
258	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	925	5	310284 187934

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
259	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 59.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	929	5	309702 185895
260	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	929	5	309702 185895
261	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 69.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A15NE (NE)	930	5	310880 187851
262	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	934	5	309682 185901
263	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	937	5	309670 185905
264	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	945	5	309640 185913
265	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 185.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	946	5	310095 187900
266	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 159.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	946	5	310095 187900
267	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	947	5	309634 185915

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
268	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	948	5	310550 187968
269	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	948	5	310550 187968
270	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 271.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SW (W)	950	5	309054 186798
271	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 147.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A9SW (W)	950	5	309054 186798
272	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A6SW (SW)	950	5	309622 185919
273	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 158.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Corrwg Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (N)	956	5	309860 187834
274	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Lonydd Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (N)	956	5	309860 187834
275	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	957	5	310294 187968
276	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 119.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	959	5	310306 187974

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
277	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 256.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A12NE (E)	960	5	311441 186856
278	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 213.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	961	5	310425 187985
279	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	961	5	310306 187974
280	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A14NW (NW)	968	5	309798 187829
281	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 2	A19SW (N)	973	5	310514 187996
282	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SE (NE)	983	5	310813 187940
283	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A14NW (NW)	992	5	309769 187844
284	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A20SW (NE)	993	5	310932 187895
285	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A20SW (NE)	993	5	310932 187895

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
286	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 89.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A16NW (NE)	994	5	311183 187705
287	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 109.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A16NW (NE)	994	5	311183 187705
288	**OS Water Network Lines** Watercourse Form: Marsh Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	997	5	310244 187999
289	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 102.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	997	5	310244 187999
290	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 137.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A19SW (N)	998	5	310400 188020
291	**OS Water Network Lines** Watercourse Form: Marsh Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	998	5	310223 187996
292	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cynon, Ely and Rhondda Primacy: 1	A18SE (N)	998	5	310226 187996

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
293	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Tonteg, Rhondda Cynon Name: Power Station Hill Landfill / Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD34534 First Input Date: 31st December 1970 Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A10NW (W)	278	2	309730 186888
294	**Historical Landfill Sites** Licence Holder: P Leiner and Sons (Wales Limited) Treeforest Industrial Estate Location: Treforest Name: Heol-Y-Bwnsy Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD15154 First Input Date: 31st December 1979 Last Input Date: 31st December 1981 Specified Waste Type: Deposited Waste included Inert, Industrial and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6940/0028 BGS Ref: Not Supplied Other Ref: Not Supplied	A15SE (NE)	344	2	310763 187195
295	**Historical Landfill Sites** Licence Holder: Not Supplied Location: The Willowford, Rhondda Cynon Name: The Willowford Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD34524 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A7NE (SE)	518	2	310636 186328
296	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Tonteg Recreation Grounds, Rhondda Cynon Name: Tonteg Ash Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD34533 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A5NE (SW)	799	2	309382 186297
297	**Historical Landfill Sites** Licence Holder: S Langman and Sons Location: Groeswen, Taffs Well Name: West Winds Farm Operator Location: Westwinds, Groeswen, Taffs Well, Cardiff Boundary Accuracy: As Supplied Provider Reference: EAHLD14960 First Input Date: 31st December 1955 Last Input Date: 31st December 1992 Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6940/0071 BGS Ref: Not Supplied Other Ref: 6940/0020	A16SE (E)	998	2	311424 187328

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
298	**Integrated Pollution Control Registered Waste Sites** Name: Hrp Refrigerants Ltd Location: Gelli-Hirion Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5SX Authority: Environment Agency, Welsh Region Permit Reference: AT6972 Dated: 6th October 1995 Process Type: IPC new application Description: 5.2 A (A) Recovery processes within the Waste Disposal Industry **Status: Application received by HMIP but is not yet authorised** Positional Accuracy: Manually positioned within the geographical locality	A19SW (N)	873	3	310338 187889
299	**Licensed Waste Management Facilities (Locations)** Licence Number: 103242 Location: Unit A15, Treforest Industrial Estate, Pontypridd, CF37 5TA Operator Name: Egan Waste Services Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Material Recycling Treatment Facilities **Licence Status: Modified** Issued: 10th August 2011 Last Modified: 25th March 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10SE (S)	18	2	310215 186754
300	**Licensed Waste Management Facilities (Locations)** Licence Number: WP3895FR Location: Rade (uk) Ltd, Treforest Industrial Est, Pontypridd, R C T, Rhondda Cynon Taff, CF37 5TT Operator Name: Rade (U K) Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied **Licence Status: Expired** Issued: 20th July 2005 Last Modified: Not Supplied Expires: 19th October 2011 Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11SW (SE)	127	2	310429 186680
301	**Licensed Waste Management Facilities (Locations)** Licence Number: ZP3495EZ Location: Treforest Civic Amenity Site, Treforest Civic Amenity Site, Treforest Industrial Est, Pontypridd, R C T, Rhondda Cynon Taff, CF37 5YR Operator Name: Cynon Valley Waste Disposal Co Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied **Licence Status: Effective** Issued: 11th December 2007 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 (SE)	449	2	310753 186511
302	**Licensed Waste Management Facilities (Locations)** Licence Number: 30051 Location: Harp International Ltd, Gellihirion Ind Est, Pontypridd, CF37 5SX Operator Name: Harp International Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Material Recycling Treatment Facilities **Licence Status: Modified** Issued: 22nd October 1991 Last Modified: 14th January 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15NW (N)	659	2	310467 187683
	Local Authority Landfill Coverage Name: Rhondda Cynon Taff County Borough Council - Has supplied landfill data		0	6	310258 186863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
303	**Local Authority Recorded Landfill Sites** Location: Leiners Tip, Heol-Y-Bwnsy, Upper Boat, Treforest Reference: 188 Authority: Rhondda Cynon Taff County Borough Council **Last Reported Status:** **Unknown** Types of Waste: Inert Non-Flammable, Construction, Lime Sweepings, Bone Meal, Dicalcium Phosphate, Dirty Sacks, Damaged Containers Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Good	A11NE (NE)	342	6	310764 187191
304	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A11SW (S)	75	-	310253 186646
305	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A11SW (S)	132	-	310265 186576
306	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A6NE (S)	245	-	310157 186444
307	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A6NE (S)	312	-	310213 186375
308	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7NW (S)	397	-	310382 186340
309	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7NW (SE)	438	-	310578 186400
310	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7NE (SE)	490	-	310670 186387
311	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SW (E)	532	-	310991 186793
312	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14NW (NW)	677	-	309864 187544
313	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SE (SE)	725	-	310613 186098
314	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SE (SE)	819	-	310750 186059
315	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SE (E)	940	-	311361 186617
316	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SE (E)	952	-	311434 186843
317	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A10SE (SW)	0	-	310125 186756

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
318	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A10SE (W)	0	-	310109 186831
319	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A11SW (SE)	142	-	310344 186660
320	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SW (NE)	254	-	310517 187276
321	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A10NW (NW)	287	-	309837 187086
322	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SE (NE)	289	-	310639 187247
323	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SW (NE)	310	-	310549 187319
324	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A10SW (W)	314	-	309691 186776
325	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SE (NE)	317	-	310722 187205
326	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14SE (NW)	339	-	310000 187236
327	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A10SW (W)	359	-	309651 186731
328	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A10NW (NW)	360	-	309768 187082
329	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (E)	386	-	310870 187038
330	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (E)	394	-	310882 187004
331	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A11SE (E)	414	-	310808 186674
332	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A11SE (E)	448	-	310889 186767
333	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A11SE (E)	459	-	310902 186768
334	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A12SW (E)	506	-	310977 186837
335	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	510	-	310383 187547
336	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A7NE (SE)	519	-	310825 186488
337	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NE (N)	532	-	310226 187541
338	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A15SE (NE)	534	-	310705 187496

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
339	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	538	-	310380 187557
340	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	555	-	310316 187562
341	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A14SE (N)	556	-	310108 187460
342	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	573	-	310485 187596
343	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A7NE (SE)	650	-	310856 186329
344	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	678	-	310413 187702
345	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A13SE (NW)	728	-	309492 187327
346	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A14NE (NW)	786	-	309913 187671
347	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NE (N)	795	-	310141 187762
348	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NE (N)	810	-	310136 187769
349	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A5NE (SW)	822	-	309292 186387
350	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12SE (E)	822	-	311264 186698
351	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A15NW (N)	829	-	310453 187853
352	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A8NW (E)	860	-	311214 186486
353	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A5NW (W)	861	-	309202 186486
354	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A14NE (N)	866	-	309966 187762
355	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (N)	878	-	310238 187875
356	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A19SW (N)	901	-	310275 187907
357	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12SE (E)	903	-	311326 186631
358	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A9SW (W)	930	-	309099 186583
359	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A9SW (W)	933	-	309091 186607

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
360	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A9NW (W)	935	-	309071 186860
361	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A5NE (SW)	942	-	309253 186228
362	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A5NW (SW)	943	-	309169 186361
363	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A5NW (SW)	945	-	309154 186384
364	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A5SE (SW)	961	-	309281 186164
365	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NW (NW)	970	-	309790 187828
366	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A8NE (SE)	975	-	311286 186367
367	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A13NE (NW)	976	-	309482 187671
368	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A5NW (W)	980	-	309088 186451
369	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A9NW (W)	991	-	309021 186917
370	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (N)	996	-	310065 187941
371	**Registered Landfill Sites** Licence Holder: P Leiner & Sons (Wales) Licence Reference: 77/3 Site Location: Adj. Heol-Y-Bwnsy, Groeswen, Upper Boat, Pontypridd, Mid Glamorgan Licence Easting: 310900 Licence Northing: 187150 Operator Location: Treforest Industrial Estate, Treforest, Mid Glamorgan Authority: Environment Agency Wales, South East Area Site Category: Landfill Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Site Closed Dated: 1st August 1977 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Bones Construction And Demolition Wastes Dicalcium Phosphates Dirty Sacks & Damaged Containers Lime Sweepings Non-Haz, Inert, Non Flammable Waste	A11NE (NE)	445	3	310900 187150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
372	**Registered Waste Transfer Sites** Licence Holder: Hrp Refrigerants Ltd Licence Reference: 3/91/24 Site Location: Gellihirion Industrial Estate, Upper Boat, Midway Park, PONTYPRIDD, Mid Glamorgan, CF37 5SX Operator Location: Rougham Industrial Estate, Rougham, Bury St Edmunds, Suffolk Authority: Environment Agency Wales, South East Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supérsededSuperseded Dated: 22nd October 1991 Preceded By Licence: Not Given Superseded By Licence: 3/91/24 Positional Accuracy: Manually positioned within the geographical locality Boundary Quality: Not Supplied Authorised Waste: Max.Storage Various Chloroflurocarbon Refrigerants	A15NW (N)	811	3	310300 187820
373	**Registered Waste Treatment or Disposal Sites** Licence Holder: Harp International Ltd Licence Reference: 3/91/24 Site Location: Gellihirion Industrial Estate, Upper Boat, Midway Park, PONTYPRIDD, Mid Glamorgan, CF37 5SX Operator Location: Gellihirlon Industrial Estate, Upper Boat, Midway Park, PONTYPRIDD, Mid Glamorgan, CF37 5SX Authority: Environment Agency Wales, South East Area Site Category: Recycling / Reclamation Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 6th September 2000 Preceded By Licence: 3/91/24 Superseded By Licence: Not Given Positional Accuracy: Manually positioned within the geographical locality Boundary Quality: Not Supplied Authorised Waste: Degradable Commercial Waste - And Degradable Industrial Waste - Comprising Only Halocarbon Refigerants Maximum Storage In Licence Maximum Waste Permitted By Licence Prohibited Waste: Degradable Household Waste (As In Post'98 E.A.Lics & Equivalent To 22.09.01) Inert Materials (As In Post'98 E.A.Lics And Equivalent To 21.00.00) Metal Waste/Scrap Metal (As In Post'98 E.A.Lics And Equivalent To 23.00.00) Other Waste / Waste Not Otherwise Specified Powders Sludge Wastes Solid Waste Special Waste (As In Epa 1990:S62 Of 1996 Regs)	A15NW (N)	811	3	310300 187820

Hazardous Substances

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
374	**Notification of Installations Handling Hazardous Substances (NIHHS)** Name: Hrp Refrigerants Ltd Location: Gellihirion Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SX **Status: Not Active** Positional Accuracy: Manually positioned within the geographical locality	A15NW (N)	819	7	310311 187831
375	**Planning Hazardous Substance Consents** Name: H R P Refrigerants Ltd Location: Gellihirion Industrial Estate, Treforest, Pontypridd, Mid Glamorgan, Cf37 5sx Authority: Rhondda Cynon Taff County Borough Council, Planning Department Application Ref: 97/2021/24 Hazardous Substance: Combination of Dangerous Substances Maximum Quantity: 50 Application date: 15th January 1997 **Decision: Deemed Consent GrantedGranted** Positional Accuracy: Located by supplier to within 10m	A15NW (N)	749	8	310484 187773

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: South Wales Upper Coal Measures Formation	A11NW (NW)	0	1	310258 186863
	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	A11NW (NW)	0	1	310258 186863
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SE (SW)	0	1	310141 186693
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NW (NE)	98	1	310411 187134
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SW (W)	180	1	309827 186829
	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: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7NW (S)	265	1	310346 186472
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12NW (E)	471	1	310959 186987

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A6SW (SW)	633	1	309829 186164
	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: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A15NE (NE)	803	1	310895 187696
	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: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A19SW (N)	994	1	310313 188008
376	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160433 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A11SW (S)	194	1	310305 186531
377	**BGS Recorded Mineral Sites** Site Name: Oldmill Cottage Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160431 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A10SW (SW)	223	1	309907 186596
378	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160432 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A6NE (S)	266	1	310183 186421

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
379	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160434 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NW (S)	328	1	310300 186378
380	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160435 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	434	1	310587 186408
381	**BGS Recorded Mineral Sites** Site Name: Three Horse Shoes Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160430 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A9SE (W)	554	1	309452 186747
382	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160436 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	593	1	310699 186286
383	**BGS Recorded Mineral Sites** Site Name: Coed Y Fardre Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160429 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A9NE (W)	673	1	309420 187132
384	**BGS Recorded Mineral Sites** Site Name: White Hawthorn Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160428 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NW (NW)	681	1	309870 187550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
385	**BGS Recorded Mineral Sites** Site Name: Coed Maes-Bach Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160452 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SE (SE)	726	1	310636 186114
386	**BGS Recorded Mineral Sites** Site Name: Ty'N-Y-Wern Clay Pit Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160437 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12SE (E)	942	1	311364 186621
387	**BGS Recorded Mineral Sites** Site Name: Tai'R Level Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160427 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NE (E)	994	1	311475 187096
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A11NW (NW)	0	9	310258 186863
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A11NW (NW)	0	-	310258 186863
	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	A11NW (NW)	0	1	310258 186863
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	4	1	310000 186806
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	8	1	310000 186863
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	98	1	310411 187134

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	4	1	310000 186806
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	8	1	310000 186863
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	98	1	310411 187134
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	4	1	310000 186863
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310169 186706
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310166 186743
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	4	1	310000 186863
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	24	1	310000 186773
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	73	1	310457 187110
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	129	1	309919 186908
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	146	1	310631 186938
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	234	1	310342 186470
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	4	1	310000 186806
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	8	1	310000 186863

Geological

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	98	1	310411 187134
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	174	1	309953 186620
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	4	1	310000 186863
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	98	1	310411 187134
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	174	1	309953 186620
	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	A11NW (NW)	0	1	310258 186863
	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	A11NW (NW)	0	1	310258 186863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
388	**Contemporary Trade Directory Entries** Name: Fencing & Decking R C T Location: Unit A5,Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SQ Classification: Fencing Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A10NE (W)	0	-	310196 186868
388	**Contemporary Trade Directory Entries** Name: P B Gelatins Uk Location: Unit A6, Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SQ Classification: Food Colouring, Flavouring & Additive Manufacturers & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (W)	0	-	310193 186866
388	**Contemporary Trade Directory Entries** Name: B W M Location: Unit A4,Severn Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5SQ Classification: Window Frame Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10NE (W)	0	-	310209 186866
388	**Contemporary Trade Directory Entries** Name: B W M Ltd Location: Unit A5,Severn Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5SQ Classification: Window Frame Manufacturers' Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A10NE (W)	0	-	310218 186879
389	**Contemporary Trade Directory Entries** Name: The Pet Memorial Gift Shop Location: Unit A4, Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SP Classification: Pet Cemeteries & Crematoria **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SE (W)	0	-	310122 186822
390	**Contemporary Trade Directory Entries** Name: Cardiff Engineering & Fabrications Location: Unit A12, Severn Road, Treforest Industrial Estate, Pontypridd, CF37 5SL Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A11NW (SW)	11	-	310251 186860
390	**Contemporary Trade Directory Entries** Name: Weir Engineering Location: Unit A12, Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SL Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NW (SW)	12	-	310252 186860
390	**Contemporary Trade Directory Entries** Name: Weir Engineering Services Location: Unit A12, Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SL Classification: Engineering Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NW (SW)	12	-	310252 186860
390	**Contemporary Trade Directory Entries** Name: Anchor Systems Location: Unit 27B, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A11NW (NE)	34	-	310277 186872
390	**Contemporary Trade Directory Entries** Name: Rizla (Uk) Ltd Location: Unit A1, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SP Classification: Tobacco Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A11NW (NE)	35	-	310267 186878
391	**Contemporary Trade Directory Entries** Name: Egan Waste Services Location: Unit A15, Treforest Industrial Estate, Pontypridd, CF37 5TA Classification: Recycling Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SE (S)	32	-	310238 186762

Industrial Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
392	**Contemporary Trade Directory Entries** Name: Concrete Canvas Location: Unit G2, A5, Severn Road, Pontypridd, CF37 5SP Classification: Concrete Products **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (W)	35	-	310142 186906
393	**Contemporary Trade Directory Entries** Name: Forest Park & Garden Location: Coed Court, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SW Classification: Lawnmowers & Garden Machinery - Sales & Service **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A10SE (S)	36	-	310222 186671
394	**Contemporary Trade Directory Entries** Name: Meg Wales Location: Unit A5, Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SP Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	42	-	310225 186942
394	**Contemporary Trade Directory Entries** Name: B W M Conservatories Ltd Location: Unit A5, Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SP Classification: Window Frames - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	42	-	310225 186942
395	**Contemporary Trade Directory Entries** Name: Agrisense-Bcs Location: Unit 13,Taffs Mead Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5SU Classification: Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A11SW (SE)	49	-	310450 186772
395	**Contemporary Trade Directory Entries** Name: Paramount Doors Systems Location: Paramount House, Taffs Mead Road, Treforest Industrial Estate, Pontypridd, CF37 5TN Classification: Door Manufacturers - Industrial **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SW (E)	67	-	310478 186782
396	**Contemporary Trade Directory Entries** Name: Cameo Sofa Co Ltd Location: Unit A11, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5YH Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NW (NE)	64	-	310369 187017
397	**Contemporary Trade Directory Entries** Name: Gwalia Healthcare Location: Unit B4, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Plastics - Injection Moulding **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	75	-	310389 186736
397	**Contemporary Trade Directory Entries** Name: Gwalia Healthcare Location: Unit B4, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Plastics - Injection Moulding **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	75	-	310389 186736
398	**Contemporary Trade Directory Entries** Name: Sleeping Giants Location: Severn Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5SQ Classification: Bed & Mattress Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A11NW (N)	78	-	310275 186951
398	**Contemporary Trade Directory Entries** Name: Pearl Technical Coatings Ltd Location: Severn Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5SQ Classification: Coating Specialists **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A11NW (N)	81	-	310276 186954

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
398	**Contemporary Trade Directory Entries** Name: Griffin Mill Location: Unit 7 Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YH Classification: Car Dealers **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A11NW (N)	88	-	310281 186959
399	**Contemporary Trade Directory Entries** Name: Apparelmaster (Uk) Ltd Location: Unit A14, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SY Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (S)	80	-	310292 186696
400	**Contemporary Trade Directory Entries** Name: Celtic Food Laboratories Location: Rizzla House, Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SP Classification: Laboratories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (N)	103	-	310234 187005
401	**Contemporary Trade Directory Entries** Name: Agrisense Industrial Monitoring Ltd Location: Unit 1-4, Taffs Mead Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SU Classification: Chemical Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	113	-	310517 186756
401	**Contemporary Trade Directory Entries** Name: Keyline Builders Merchants Location: Taffsmead Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	125	-	310490 186706
401	**Contemporary Trade Directory Entries** Name: Warburtons Ltd Location: Unit B7, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	128	-	310480 186696
401	**Contemporary Trade Directory Entries** Name: Agrisense Location: Unit 1-4, Taff Mead Road, Treforest Industrial Estate, Pontypridd, CF37 5SU Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	129	-	310529 186745
401	**Contemporary Trade Directory Entries** Name: Agrisense Bcs Ltd Location: Unit 1/3, Taffs Mead Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SU Classification: Pest & Vermin Control **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A11SW (SE)	133	-	310520 186725
401	**Contemporary Trade Directory Entries** Name: Agrisense Bcs Ltd Location: Unit 1,3,Taffs Mead Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5SU Classification: Pest & Vermin Control Products **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	142	-	310540 186738
401	**Contemporary Trade Directory Entries** Name: I R G Location: Unit B8, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	151	-	310503 186683
401	**Contemporary Trade Directory Entries** Name: Britvic Soft Drinks Ltd Location: Unit B8, Treforest Industrial Estate, Pontypridd, CF37 5TF Classification: Soft Drinks - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	151	-	310503 186683

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
402	**Contemporary Trade Directory Entries** Name: Hutchings Location: The Vauxhall Centre, Severn Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SP Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A11NW (N)	138	-	310330 187087
403	**Contemporary Trade Directory Entries** Name: Sws Vans & Trucks Ltd Location: Unit B17, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	166	-	310373 186646
404	**Contemporary Trade Directory Entries** Name: Invacare Ltd Location: Unit B22, Taffs Fall Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TT Classification: Medical Equipment Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (E)	170	-	310598 186820
405	**Contemporary Trade Directory Entries** Name: Kellaway Motor Co Location: Upper Boat Trading Est, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A15SW (NE)	173	-	310468 187197
405	**Contemporary Trade Directory Entries** Name: Quality Cars Location: Upper Boat Trading Est, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A15SW (NE)	178	-	310464 187202
406	**Contemporary Trade Directory Entries** Name: Professional Network Distribution Location: Unit B13, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	184	-	310458 186627
407	**Contemporary Trade Directory Entries** Name: Esso Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	186	-	310082 187090
407	**Contemporary Trade Directory Entries** Name: Bp Petrol Station Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	186	-	310082 187090
407	**Contemporary Trade Directory Entries** Name: Treforest Service Station Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	201	-	310077 187105
407	**Contemporary Trade Directory Entries** Name: Euro Motor Works Ltd Location: Unit 21a, Tonteg Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	238	-	310101 187141
408	**Contemporary Trade Directory Entries** Name: Screwfix Location: Unit C1-C2, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UD Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A11NE (E)	187	-	310675 186989

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
409	**Contemporary Trade Directory Entries** Name: Rade (Uk) Ltd Location: Unit B13,Taffs Fall Road, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Computer Recycling & Disposal **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A11SW (SE)	193	-	310580 186706
409	**Contemporary Trade Directory Entries** Name: R S J International Freight Services Location: 2 Taffs Fall Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TT Classification: Freight Forwarders **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A11SE (SE)	232	-	310602 186668
410	**Contemporary Trade Directory Entries** Name: Ultraglaze U P V C Windows Ltd Location: Unit 9-10,Upper Boat Trading Estate, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A15SW (NE)	231	-	310451 187255
410	**Contemporary Trade Directory Entries** Name: Crusade Designs Ltd Location: Unit 1, Upper Boat Trading Estate, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Drain & Sewer Clearance - Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (NE)	235	-	310436 187259
411	**Contemporary Trade Directory Entries** Name: Socket Store Location: Unit 23b Fairway Court,Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Lighting Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A11NW (N)	239	-	310267 187171
412	**Contemporary Trade Directory Entries** Name: A B I R D Power Solutions Location: Unit B1,Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Generators - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	239	-	309956 187105
413	**Contemporary Trade Directory Entries** Name: David Spear Commercial Vehicles Location: Heol Groeswen, Upper Boat, Pontypridd, Mid Glamorgan, CF37 5YY Classification: Commercial Vehicle Dealers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A11NE (NE)	246	-	310722 187058
413	**Contemporary Trade Directory Entries** Name: Maesycoed Motors Location: Maesycoed Motors, Heol Groeswen, Pontypridd, CF37 5YY Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (NE)	263	-	310735 187073
414	**Contemporary Trade Directory Entries** Name: Esso Location: Tonteg Road, Taff Business Centre Vale, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A10NE (N)	247	-	310159 187149
414	**Contemporary Trade Directory Entries** Name: Auto Select South Wales Location: 18 Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Car Dealers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A10NE (N)	262	-	310157 187164
414	**Contemporary Trade Directory Entries** Name: Smartbuy Location: Unit 10, Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (N)	265	-	310159 187168

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
414	**Contemporary Trade Directory Entries** Name: Esso Garage Location: Taff Business Centre,Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (N)	298	-	310156 187200
414	**Contemporary Trade Directory Entries** Name: Abird Location: Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Generators - Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (N)	298	-	310156 187200
414	**Contemporary Trade Directory Entries** Name: Md Car Sales Location: Taff Business Centre,Tonteg Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (N)	298	-	310156 187200
414	**Contemporary Trade Directory Entries** Name: Atlas Polymers Ltd Location: Unit 14b, Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Polythene & Plastic Sheeting Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (N)	304	-	310160 187208
415	**Contemporary Trade Directory Entries** Name: D C R Inspection Systems Ltd Location: Unit 4, Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Engineering Materials **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	251	-	310103 187154
415	**Contemporary Trade Directory Entries** Name: Windsor Motor Co Location: Taff Business Centre,Tonteg Rd,Treforest Indust Est, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A10NE (NW)	251	-	310102 187154
416	**Contemporary Trade Directory Entries** Name: A S S W Car & Commercial Location: Unit 3c Upper Boat Trading Estate, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A15SW (NE)	259	-	310440 187283
416	**Contemporary Trade Directory Entries** Name: A S S W Car & Commercial Location: Unit 3c Upper Boat Trading Estate, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A15SW (NE)	259	-	310440 187283
416	**Contemporary Trade Directory Entries** Name: Albion Workplace Solutions Location: Unit G, Upper Boat Trading Estate, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Storage & Shelving Systems Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (N)	286	-	310434 187309
416	**Contemporary Trade Directory Entries** Name: Advanced Fire Protection Location: Unit E, Upper Boat Trading Estate, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (N)	292	-	310399 187311
416	**Contemporary Trade Directory Entries** Name: Brecongate Projects Location: Unit 3d, Upper Boat Trading Estate, Pontypridd, Mid Glamorgan, CF37 5BP Classification: Mechanical Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A15SW (N)	292	-	310399 187311

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
417	**Contemporary Trade Directory Entries** Name: Complete Core Business Solutions Location: Unit B2, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TF Classification: Packaging & Wrapping Equipment & Supplies **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	261	-	310541 186577
418	**Contemporary Trade Directory Entries** Name: Tedtech Location: Unit B32, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YB Classification: Engineers - General **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SE)	276	-	310487 186540
419	**Contemporary Trade Directory Entries** Name: Deritend Location: Unit C5, 3, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UD Classification: Electrical Engineers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (E)	277	-	310760 186914
420	**Contemporary Trade Directory Entries** Name: Control Gear Group Ltd Location: Unit C11, Heol Groeswen, Upper Boat, Pontypridd, Mid Glamorgan, CF37 5YF Classification: Engineers - General **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (E)	284	-	310771 186998
420	**Contemporary Trade Directory Entries** Name: Control Gear Group Location: Unit C11, Heol Groeswen, Upper Boat, Pontypridd, CF37 5YF Classification: Engineers - General **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A11NE (E)	284	-	310771 187006
420	**Contemporary Trade Directory Entries** Name: Power Gear Location: Unit C11, Heol Groeswen, Upper Boat, Pontypridd, CF37 5YF Classification: Pneumatic Systems & Equipment **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A11NE (E)	284	-	310771 187006
420	**Contemporary Trade Directory Entries** Name: Rose & Co (Cardiff) Ltd Location: Unit C11, Heol Groeswen, Upper Boat, Pontypridd, Mid Glamorgan, CF37 5YF Classification: Pumps - Sales, Servicing & Repairs **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (E)	284	-	310771 186998
420	**Contemporary Trade Directory Entries** Name: Melloy Ltd Location: Unit C10, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UD Classification: Die-Casting Equipment & Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (E)	307	-	310796 186972
420	**Contemporary Trade Directory Entries** Name: Interhaul Palet Services Location: Unit C10, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UD Classification: Road Haulage Services **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A11NE (E)	307	-	310796 186972
420	**Contemporary Trade Directory Entries** Name: Melloy Castings Ltd Location: Unit C10, Main Avenue, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5UD Classification: Die-Casting Equipment & Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (E)	307	-	310796 186972
421	**Contemporary Trade Directory Entries** Name: Betta Pie Co Ltd Location: Units C6 1-2 Treforest Indust Est, Pontypridd, Mid Glamorgan, CF37 5UD Classification: Food Products - Manufacturers **Status:** **Inactive** Positional Accuracy: Manually positioned to the address or location	A11NE (E)	289	-	310758 186864

Industrial Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
421	**Contemporary Trade Directory Entries** Name: Pirtek Ltd Location: Aaron House, Unit C7b, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UD Classification: Hydraulic Equipment & Accessories - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (E)	335	-	310794 186831
422	**Contemporary Trade Directory Entries** Name: Linear Plastics Ltd Location: Unit Ub2 Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Plastic Products - Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A10NW (NW)	297	-	309866 187105
423	**Contemporary Trade Directory Entries** Name: Eastlake Group Location: Unit 15,Tonteg Business Centre,Tonteg Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UA Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (N)	313	-	310219 187230
424	**Contemporary Trade Directory Entries** Name: Global Tint Location: Unit B20, Taffs Fall Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5TT Classification: Window Tinting **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (SE)	315	-	310694 186659
424	**Contemporary Trade Directory Entries** Name: Rsj International Wales Location: 2 Bridge Road, Pontypridd, Mid Glamorgan, CF37 5TT Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A11SE (SE)	315	-	310694 186659
424	**Contemporary Trade Directory Entries** Name: One Stop Autos Location: Unit B20, Taffs Fall Road, Treforest Industrial Estate, Pontypridd, CF37 5TT Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A11SE (SE)	315	-	310693 186657
425	**Contemporary Trade Directory Entries** Name: C & G Motors Location: Unit B27, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YB Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SE)	316	-	310528 186511
425	**Contemporary Trade Directory Entries** Name: A B Technical Solutions Ltd Location: Unit 3, Riverside Industrial Park, Treforest, Pontypridd, Mid Glamorgan, CF37 5TG Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SE)	339	-	310559 186499
425	**Contemporary Trade Directory Entries** Name: Euro Hydraulics Mobile Ltd Location: Unit 4, Riverside Industrial Park, Treforest, Pontypridd, CF37 5TG Classification: Hydraulic Equipment & Accessories - Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SE)	341	-	310549 186493
425	**Contemporary Trade Directory Entries** Name: Nationwide Crash Repair Centres Ltd Location: Unit 5-7, Riverside Industrial Park, Treforest, Pontypridd, CF37 5TG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SE)	358	-	310584 186491
426	**Contemporary Trade Directory Entries** Name: M S F Gas Centre Ltd Location: Pont Pentre Caravan Park, Upper Boat, Pontypridd, Mid Glamorgan, CF37 5YT Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (NE)	364	-	310536 187379

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
427	**Contemporary Trade Directory Entries** Name: W H Way & Son Location: Springfield House, Tonteg, Pontypridd, Mid Glamorgan, CF38 1SS Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A10NW (W)	370	-	309650 186908
428	**Contemporary Trade Directory Entries** Name: Amgen Cymru Location: Unit B23, Ty Glantaf, Taffs Fall Road, Treforest Industrial Estate, Pontypridd, CF37 5TT Classification: Recycling Services **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A11SE (SE)	380	-	310668 186522
429	**Contemporary Trade Directory Entries** Name: South Wales Plastics Location: Unit B23,Riverside Ind Pk, Treforest, Pontypridd, Mid Glamorgan, CF37 5TG Classification: Recycling Centres **Status:** **Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SE)	388	-	310618 186476
429	**Contemporary Trade Directory Entries** Name: Advanced Mobility Location: 27b Riverside Ind Est, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5YB Classification: Disability Equipment - Manufacturers & Suppliers **Status:** **Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SE)	396	-	310630 186474
429	**Contemporary Trade Directory Entries** Name: Sure Freight (South Wales) Ltd Location: Unit B21, Taffs Fall Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YQ Classification: Road Haulage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SE)	418	-	310610 186436
429	**Contemporary Trade Directory Entries** Name: Dragon Pallets (Southwales) Ltd Location: Unit 11, Riverside Industrial Park, Treforest, Pontypridd, Mid Glamorgan, CF37 5TG Classification: Road Haulage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SE)	427	-	310652 186451
429	**Contemporary Trade Directory Entries** Name: C T S Finishing Location: Unit 11, Riverside Industrial Park, Treforest, Pontypridd, Mid Glamorgan, CF37 5TG Classification: Print Finishers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SE)	427	-	310652 186451
430	**Contemporary Trade Directory Entries** Name: Bosch Rexroth Ltd Location: Unit C8, 1-2, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UD Classification: Hydraulic Equipment & Accessories - Sales & Service **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (E)	388	-	310832 186783
430	**Contemporary Trade Directory Entries** Name: Alexus Ltd Location: Unit C8, 1-2, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UD Classification: Lingerie & Hosiery Manufacturers & Wholesalers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (E)	388	-	310832 186783
431	**Contemporary Trade Directory Entries** Name: Griffin Mill Garages Ltd Location: Upper Boat, Pontypridd, CF37 5YE Classification: Car Customisation & Conversion Specialists **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A11NE (NE)	420	-	310871 187155
431	**Contemporary Trade Directory Entries** Name: Griffin Mill Garages Ltd Location: Upper Boat, Pontypridd, Mid Glamorgan, CF37 5YE Classification: Car Dealers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (NE)	424	-	310876 187156

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
431	**Contemporary Trade Directory Entries** Name: Griffin Mill Garages Location: Upper Boat, Pontypridd, Mid Glamorgan, CF37 5YE Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NE (NE)	424	-	310876 187156
432	**Contemporary Trade Directory Entries** Name: Remploy Ltd Location: Unit C9, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UD Classification: Furniture - Reproduction **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SE (E)	498	-	310879 186623
433	**Contemporary Trade Directory Entries** Name: Pinetree Car Superstore Location: Edge Cars, Main Road, Tonteg, CF38 1LR Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SE (W)	560	-	309472 186622
433	**Contemporary Trade Directory Entries** Name: Bodily Cars Ltd Location: Main Road, Tonteg, Pontypridd, Mid Glamorgan, CF38 1LR Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SE (W)	583	-	309454 186604
433	**Contemporary Trade Directory Entries** Name: The Car Warehouse Location: Main Rd, Tonteg, Pontypridd, Mid Glamorgan, CF38 1LR Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A9SE (W)	589	-	309446 186610
433	**Contemporary Trade Directory Entries** Name: S J Tyres Location: Bryn Coch, Main Road, Tonteg, Pontypridd, CF38 1LR Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SE (W)	590	-	309450 186596
434	**Contemporary Trade Directory Entries** Name: Aesseal South East Plc Location: Q E D Centre, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YR Classification: Engineering Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7NE (SE)	562	-	310822 186419
434	**Contemporary Trade Directory Entries** Name: E N V Y (Enviromental Yields) Ltd Location: Q E D Centre, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YR Classification: Reclaiming - Waste Products **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7NE (SE)	562	-	310822 186419
435	**Contemporary Trade Directory Entries** Name: The Makeover Centre Location: Unit 2, Treforest Trade Park, Main Avenue, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5US Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SE)	573	-	310910 186517
435	**Contemporary Trade Directory Entries** Name: A T S Euromaster Location: Unit Tp1, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (SE)	583	-	310926 186524
435	**Contemporary Trade Directory Entries** Name: Ats Euromaster Ltd Location: Unit Tp1, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (SE)	583	-	310926 186524

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
436	**Contemporary Trade Directory Entries** Name: Pontypridd Washing Machine Repairs Location: 2, Dynea Road, Pontypridd, Mid Glamorgan, CF37 5DN Classification: Washing Machines - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (N)	594	-	310116 187512
437	**Contemporary Trade Directory Entries** Name: Singlam Fabrics Location: Factory B9 Treforest Indust Est, Pontypridd, Mid Glamorgan, CF37 5TL Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SE)	627	-	310823 186330
437	**Contemporary Trade Directory Entries** Name: Western Board Ltd Location: Unit A15, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5TA Classification: Boxes & Cartons **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SE)	636	-	310861 186352
437	**Contemporary Trade Directory Entries** Name: Bryan Bros Trucks Ltd Location: Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5YG Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SE)	643	-	310871 186353
437	**Contemporary Trade Directory Entries** Name: Treforest Textile Printers Location: Factory E6, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5ST Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SE)	653	-	310850 186319
437	**Contemporary Trade Directory Entries** Name: Fabric World Location: Factory E6, Treforest Industrial Estate, Pontypridd, CF37 5ST Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SE)	675	-	310862 186300
438	**Contemporary Trade Directory Entries** Name: Ccwc Services Location: Unit 6 PPG Architectural Coatings, Trade Park, Main Avenue, Pontypridd, CF37 5UR Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	634	-	310940 186450
438	**Contemporary Trade Directory Entries** Name: Car Trade Sales Treforest Location: Unit F7,Business Development Centre,Main Av, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (SE)	649	-	310955 186445
438	**Contemporary Trade Directory Entries** Name: Key Worldwide Logistics Ltd Location: Unit 28 Business In Focus, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Freight Forwarders **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SE)	658	-	310930 186397
438	**Contemporary Trade Directory Entries** Name: Trinity Lifts Location: Business Development Centre,Main Av, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Stairlifts - Manufacturers & Installers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SE)	674	-	310961 186410
438	**Contemporary Trade Directory Entries** Name: Ats Euromaster Ltd Location: Unit 1, Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	675	-	310961 186410

Industrial Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
438	**Contemporary Trade Directory Entries** Name: Autobody Location: Unit 8, Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	675	-	310961 186410
438	**Contemporary Trade Directory Entries** Name: Trinity Lifts & Stairlifts Location: Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Disability Equipment - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	675	-	310961 186410
438	**Contemporary Trade Directory Entries** Name: 4 Recycling Location: Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Recycling Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SE)	675	-	310961 186410
439	**Contemporary Trade Directory Entries** Name: Tesco Petrol Station Location: Gelli-Hirion Industrial Estate, Pontypridd, CF37 5SN Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A15NW (N)	671	-	310325 187683
440	**Contemporary Trade Directory Entries** Name: Tonteg Service Station Location: Main Road, Tonteg, Pontypridd, Mid Glamorgan, CF38 1PW Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9SE (W)	687	-	309365 186547
441	**Contemporary Trade Directory Entries** Name: Autoworx (South Wales) Ltd Location: Unit 11,Business In Focus Centre,Main Avenue, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (SE)	689	-	310979 186410
441	**Contemporary Trade Directory Entries** Name: Legea Uk Ltd Location: Unit 6,Business Development Centre,Main Av, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Sports Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SE)	690	-	310969 186395
441	**Contemporary Trade Directory Entries** Name: J W Precision & General Engineering Ltd Location: Unit 8-9, Business Development Centre, Main Avenue, Treforest Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5UR Classification: Precision Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	692	-	310992 186423
441	**Contemporary Trade Directory Entries** Name: Endless Road Garage Ltd Location: Unit 11, Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	693	-	310989 186418
441	**Contemporary Trade Directory Entries** Name: Laser Wire Solutions Ltd Location: L W Solutions Ltd, Main Avenue, Pontypridd, CF37 5UR Classification: Machinery - Industrial & Commercial **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	693	-	310989 186418

Industrial Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
441	**Contemporary Trade Directory Entries** Name: Control Devices Ltd Location: Unit 25, Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Industrial Instrument & Apparatus Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	721	-	310986 186365
441	**Contemporary Trade Directory Entries** Name: Copyprint Location: Unit 37-38, Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	725	-	311012 186395
441	**Contemporary Trade Directory Entries** Name: Tugbury Electrical Services Ltd Location: Unit 26, Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	732	-	311001 186366
441	**Contemporary Trade Directory Entries** Name: Gas Link Wales & West Location: Unit 35, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	744	-	311026 186382
441	**Contemporary Trade Directory Entries** Name: Chocolate-House Location: Unit 35, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Confectionery Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	744	-	311026 186382
441	**Contemporary Trade Directory Entries** Name: I J B Auto Services Location: Unit 34,Business Development Centre,Main Av, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SE)	749	-	311028 186376
442	**Contemporary Trade Directory Entries** Name: Harp International Ltd Location: Gelli-Hirion Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5SX Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15NW (N)	748	-	310485 187772
443	**Contemporary Trade Directory Entries** Name: S W F Logistics Ltd Location: Forest Ct,Main Ave, Treforest Ind Est, Bridgend, Mid Glamorgan, CF35 5YL Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SE)	752	-	310986 186316
443	**Contemporary Trade Directory Entries** Name: Class Sheet Metal Ltd Location: Unit 12, Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Sheet Metal Work **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A8NW (SE)	767	-	311019 186333
443	**Contemporary Trade Directory Entries** Name: Pall-Ex (South Wales) Ltd Location: Unit D8, Forest Court, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Pallets, Crates & Packing Cases **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A8NW (SE)	767	-	311019 186333

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
443	**Contemporary Trade Directory Entries** Name: South Wales Logistics Location: Unit 3, Forest Court, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A8NW (SE)	767	-	311019 186333
444	**Contemporary Trade Directory Entries** Name: Pinetree Location: Main Road, Tonteg, Pontypridd, Mid Glamorgan, CF38 1PW Classification: Car Dealers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A5NE (W)	766	-	309303 186490
445	**Contemporary Trade Directory Entries** Name: Mythyr Marble Location: Gelli-Hirion Ind Est, Pontypridd, Mid Glamorgan, CF37 5SX Classification: Fireplaces & Mantelpieces **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14NE (N)	777	-	310231 187768
445	**Contemporary Trade Directory Entries** Name: Zenith Print & Packaging Location: Unit B1-B2, Gelli-Hirion Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SX Classification: Boxes & Cartons **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (N)	796	-	310191 187775
445	**Contemporary Trade Directory Entries** Name: Liquid Measure Ltd Location: Unit B, Gelli-Hirion Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SX Classification: Drums, Kegs, Barrels & Casks **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (N)	824	-	310173 187798
446	**Contemporary Trade Directory Entries** Name: Volvo Truck & Bus Location: Unit C, Gelli-Hirion Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SX Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15NW (N)	780	-	310318 187792
446	**Contemporary Trade Directory Entries** Name: Wales & West Truck & Bus Location: Unit C, Gelli-hirion Industrial Estate, Pontypridd, CF37 5SX Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Active** Positional Accuracy: Automatically positioned to the address	A15NW (N)	780	-	310318 187792
447	**Contemporary Trade Directory Entries** Name: Millcroft Designs Ltd Location: E4-E5, Unit, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YP Classification: Upholstery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	789	-	310977 186251
447	**Contemporary Trade Directory Entries** Name: Robins Transport Location: E4-E5, Unit, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YP Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SE)	789	-	310977 186251
447	**Contemporary Trade Directory Entries** Name: Millcroft Designs Location: E4-E5, Unit, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YP Classification: Upholstery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SE)	789	-	310977 186251
447	**Contemporary Trade Directory Entries** Name: Honeywell Uk Ltd Location: E4-E5, Unit, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YP Classification: Car Component Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SE)	790	-	310977 186251

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
448	**Contemporary Trade Directory Entries** Name: Greenham Location: Unit 2, Gelli-Hirion Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SX Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (N)	789	-	310105 187732
449	**Contemporary Trade Directory Entries** Name: Premier Decorating Supplies Location: Main Road, Tonteg, Pontypridd, Mid Glamorgan, CF38 1PN Classification: Painting & Decorating Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A5NE (W)	803	-	309272 186469
449	**Contemporary Trade Directory Entries** Name: C P Motor Co Location: Main Road, Tonteg, PONTYPRIDD, Mid Glamorgan, CF38 1PW Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A5NW (W)	850	-	309232 186443
449	**Contemporary Trade Directory Entries** Name: C P Motor Co Location: Main Road, Tonteg, Pontypridd, Mid Glamorgan, CF38 1PW Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A5NW (W)	850	-	309232 186443
449	**Contemporary Trade Directory Entries** Name: Key Point Motors Location: Main Rd, Tonteg, Pontypridd, Mid Glamorgan, CF38 1PW Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A5NW (W)	851	-	309231 186442
449	**Contemporary Trade Directory Entries** Name: Key Point Motors Location: Main Rd, Tonteg, Pontypridd, Mid Glamorgan, CF38 1PW Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A5NW (W)	851	-	309231 186442
450	**Contemporary Trade Directory Entries** Name: Ian Best Print Location: Unit D6, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Classification: Printers - Glass, Metal, Plastics Etc. **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	825	-	311056 186287
451	**Contemporary Trade Directory Entries** Name: Laser Image Ltd Location: Unit H1, Gelli-Hirion Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SX Classification: Print Finishers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15NW (N)	856	-	310273 187861
452	**Contemporary Trade Directory Entries** Name: Doosan Bab Cat E M E A Location: Unit 6, Doosan House, 3, Heol y Gamlas, Parc Nantgarw, Nantgarw, Cardiff, CF15 7QU Classification: Machinery - Industrial & Commercial **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	869	-	311143 186332
452	**Contemporary Trade Directory Entries** Name: Geith Location: Unit 6, Doosan House, 3, Heol y Gamlas, Parc Nantgarw, Nantgarw, Cardiff, CF15 7QU Classification: Plant & Machinery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	870	-	311144 186332
453	**Contemporary Trade Directory Entries** Name: T 2 G Location: Unit J5, Gelli-Hirion Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SX Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (N)	880	-	310332 187896

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
453	**Contemporary Trade Directory Entries** Name: Alushred Ltd Location: Unit J2, Gelli-Hirion Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5SX Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (N)	904	-	310314 187918
453	**Contemporary Trade Directory Entries** Name: High Precision Wales Location: Unit J1, Gelli-Hirion Industrial Estate, PONTYPRIDD, Mid Glamorgan, CF37 5SX Classification: Precision Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (N)	912	-	310309 187925
454	**Contemporary Trade Directory Entries** Name: Bollore Location: Unit E4, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SW (SE)	889	-	311018 186153
454	**Contemporary Trade Directory Entries** Name: Millcroft Designs Ltd Location: Unit E4, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5YP Classification: Upholstery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8SW (SE)	896	-	311026 186150
454	**Contemporary Trade Directory Entries** Name: Westbridge 3 Furniture Designs Ltd Location: Unit E4, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Furniture Manufacturers - Home & Office **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (SE)	896	-	311026 186151
455	**Contemporary Trade Directory Entries** Name: Jomech Ltd Location: 36, Church Road, Tonteg, Pontypridd, Mid Glamorgan, CF38 1EH Classification: Machinery - Industrial & Commercial **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SW (W)	896	-	309129 186603
456	**Contemporary Trade Directory Entries** Name: Mss Care Direct Ltd Location: Heol-Y-Gamlas,Parc Nantgarw, Nantgarw, Cardiff, South Glamorgan, CF15 7QU Classification: Medical Equipment Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SE)	950	-	311241 186336
457	**Contemporary Trade Directory Entries** Name: R S Components Ltd Location: Forest Court, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Classification: Electronic Component Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	955	-	311146 186191
458	**Contemporary Trade Directory Entries** Name: Aberrhondda Garage Ltd Location: Cardiff Rd, Hawthorn, Pontypridd, Mid Glamorgan, CF37 5AA Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NW)	960	-	309490 187658
458	**Contemporary Trade Directory Entries** Name: Hawthorn Garage Location: Hawthorn Garage, Cardiff Road, Hawthorn, Pontypridd, CF37 5AA Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (NW)	970	-	309509 187685
458	**Contemporary Trade Directory Entries** Name: Car Base Location: Hawthorn Garage, Cardiff Road, Hawthorn, Pontypridd, CF37 5AA Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NW)	970	-	309509 187685

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
458	**Contemporary Trade Directory Entries** Name: J W Cars Location: Hawthorn Garage, Cardiff Road, Hawthorn, Pontypridd, Mid Glamorgan, CF37 5AA Classification: Car Dealers - Used **Status:** **Active** Positional Accuracy: Automatically positioned to the address	A13NE (NW)	982	-	309498 187691
458	**Contemporary Trade Directory Entries** Name: Car Base Location: Hawthorn Garage, Cardiff Road, Hawthorn, Pontypridd, Mid Glamorgan, CF37 5AA Classification: Garage Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NW)	982	-	309498 187691
458	**Contemporary Trade Directory Entries** Name: J & P S Motors Location: Hawthorn Garage, Cardiff Road, Hawthorn, Pontypridd, Mid Glamorgan, CF37 5AA Classification: Car Dealers **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NW)	982	-	309498 187691
458	**Contemporary Trade Directory Entries** Name: J P S Motors Location: J P S Motors,Cardiff Rd, Hawthorn, Pontypridd, Mid Glamorgan, CF37 5AA Classification: Car Dealers **Status:** **Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NE (NW)	985	-	309466 187670
459	**Contemporary Trade Directory Entries** Name: Cleanaway Ltd Location: G/2, Unit, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5YL Classification: Waste Disposal Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (SE)	982	-	311042 186050
460	**Contemporary Trade Directory Entries** Name: Press Gang Location: 12, Spencer Place, Pontypridd, Mid Glamorgan, CF37 5AE Classification: Ironing & Home Laundry Services **Status:** **Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NW)	989	-	309452 187664
461	**Fuel Station Entries** Name: Mfg Treforest Spar Location: Tonteg Road , Treforest Industrial Estate, Pontypridd, Rhondda Cynon Taf, CF37 5UA Brand: Esso Premises Type: Petrol Station **Status:** **Open** Positional Accuracy: Automatically positioned to the address	A10NE (NW)	201	-	310077 187105
462	**Fuel Station Entries** Name: Tesco Pontypridd Location: Gelli Hirion Industrial Estate Road , Rhydyfelin , Pontypridd, Rhondda Cynon Taf, CF37 5SN Brand: TESCO Premises Type: Hypermarket **Status:** **Open** Positional Accuracy: Manually positioned to the address or location	A15NW (N)	568	-	310450 187592
463	**Fuel Station Entries** Name: Tonteg Service Station Location: Main Road , Tonteg , Pontypridd, Rhondda Cynon Taf, CF38 1PW Brand: Obsolete Premises Type: Not Applicable **Status:** **Obsolete** Positional Accuracy: Automatically positioned to the address	A9SE (W)	687	-	309365 186547
464	**Points of Interest - Commercial Services** Name: Egan Waste Services Location: Unit A15, Treforest Industrial Estate, Pontypridd, CF37 5TA Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A10SE (S)	32	10	310238 186762

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
465	**Points of Interest - Commercial Services** Name: T John Transport Location: Unit 2, Severn Road, Treforest Industrial Estate, Pontypridd, CF37 5SP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A10NE (N)	89	10	310235 186989
466	**Points of Interest - Commercial Services** Name: Suterra Location: Unit 1-4, Taffs Mead Road, Treforest Industrial Estate, Pontypridd, CF37 5SU Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A11SW (SE)	113	10	310517 186756
466	**Points of Interest - Commercial Services** Name: R S J International Freight Services Location: 2 Taffs Fall Road, Treforest Industrial Estate, Pontypridd, CF37 5TT Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A11SW (SE)	129	10	310529 186746
466	**Points of Interest - Commercial Services** Name: I R G Location: Unit B8, Treforest Industrial Estate, Pontypridd, CF37 5TF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A11SW (SE)	151	10	310503 186683
467	**Points of Interest - Commercial Services** Name: Sws Vans & Trucks Ltd Location: Unit B17, Treforest Industrial Estate, Pontypridd, CF37 5TF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A11SW (SE)	166	10	310373 186646
467	**Points of Interest - Commercial Services** Name: S W S Commercial Servicing Ltd Location: Unit B17, Treforest Industrial Estate, Pontypridd, CF37 5TF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A11SW (SE)	166	10	310373 186646
468	**Points of Interest - Commercial Services** Name: Mfg Treforest Spar Location: Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A10NE (NW)	201	10	310077 187105
468	**Points of Interest - Commercial Services** Name: Car Wash Location: Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A10NE (NW)	201	10	310077 187105
468	**Points of Interest - Commercial Services** Name: Euro Motor Works Ltd Location: Unit 23/B Tonteg Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NE (NW)	226	10	310091 187130
469	**Points of Interest - Commercial Services** Name: Maesycoed Motors Location: Heol Groeswen, Upper Boat, Pontypridd, CF37 5YY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A11NE (NE)	262	10	310736 187065
470	**Points of Interest - Commercial Services** Name: A S S W Car & Commercial Location: Unit 3c Upper Boat Trading Estate, Pontypridd, CF37 5BP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A15SW (N)	280	10	310387 187296

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
471	**Points of Interest - Commercial Services** Name: One Stop Autos Location: Unit B20, Taffs Fall Road, Treforest Industrial Estate, Pontypridd, CF37 5TT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A11SE (SE)	315	10	310693 186657
472	**Points of Interest - Commercial Services** Name: C & G Motors Location: Unit B27, Treforest Industrial Estate, Pontypridd, CF37 5YB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NW (SE)	316	10	310528 186511
472	**Points of Interest - Commercial Services** Name: Nationwide Crash Repair Centres Ltd Location: Unit 5-7, Riverside Industrial Park, Treforest, Pontypridd, CF37 5TG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SE)	358	10	310584 186491
472	**Points of Interest - Commercial Services** Name: Nationwide Crash Repair Centres Ltd Location: Unit 5/6, Riverside Industrial Park, Treforest, Pontypridd, CF37 5TG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SE)	360	10	310602 186498
472	**Points of Interest - Commercial Services** Name: Amgen Cymru Location: Unit B23 Ty Glantaf, Taffs Fall Road, Treforest Industrial Estate, Pontypridd, CF37 5TT Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A11SE (SE)	380	10	310668 186522
473	**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	A10SW (W)	347	10	309657 186810
473	**Points of Interest - Commercial Services** Name: Scrap Yard Location: CF38 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	347	10	309657 186811
474	**Points of Interest - Commercial Services** Name: W H Way & Son Location: Springfield House, Tonteg, Pontypridd, CF38 1SS Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A10NW (W)	370	10	309650 186908
475	**Points of Interest - Commercial Services** Name: Griffin Mill Garages Ltd Location: Upper Boat, Pontypridd, CF37 5YE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A11NE (NE)	420	10	310871 187155
476	**Points of Interest - Commercial Services** Name: Tesco Pontypridd Location: Gelli Hirion Industrial Estate Road, Rhydyfelin, Pontypridd, CF37 5SN Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A15NW (N)	552	10	310432 187576
476	**Points of Interest - Commercial Services** Name: Car Wash Location: Gelli Hirion Industrial Estate Road, Rhydyfelin, Pontypridd, Mid Glamorgan, CF37 5SN Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A15NW (N)	568	10	310450 187592

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
477	**Points of Interest - Commercial Services** Name: ATS Euromaster Location: Unit 1 Treforest Trade Park, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5US Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SW (SE)	583	10	310926 186524
478	**Points of Interest - Commercial Services** Name: Auto Worx Location: Unit 31, Business Development Centre, Main Av, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SE)	674	10	310961 186410
478	**Points of Interest - Commercial Services** Name: Auto Worx Location: Unit 11 Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SE)	674	10	310961 186410
478	**Points of Interest - Commercial Services** Name: 4 Recycling Location: Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A8NW (SE)	675	10	310961 186410
478	**Points of Interest - Commercial Services** Name: A B Styling Location: Unit 8-9 Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SE)	692	10	310992 186423
478	**Points of Interest - Commercial Services** Name: Endless Road Garage Ltd Location: Unit 11 Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SE)	693	10	310989 186418
478	**Points of Interest - Commercial Services** Name: Key Worldwide Logistics Ltd Location: Unit 28-32 Business Development Centre, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8NW (SE)	743	10	311006 186355
478	**Points of Interest - Commercial Services** Name: I J B Auto Services Location: Unit 34, Business Development Centre, Main Av, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SE)	749	10	311028 186376
479	**Points of Interest - Commercial Services** Name: Wales & West Truck & Bus Location: Unit C, Gelli-hirion Industrial Estate, Pontypridd, CF37 5SX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A15NW (N)	779	10	310318 187791
479	**Points of Interest - Commercial Services** Name: Volvo Truck & Bus Location: Unit C, Gelli-Hirion Industrial Estate, Pontypridd, CF37 5SX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A15NW (N)	780	10	310318 187792

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
480	**Points of Interest - Commercial Services** Name: Robins Transport Location: E4-E5 Unit, Treforest Industrial Estate, Pontypridd, CF37 5YP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8NW (SE)	789	10	310977 186251
481	**Points of Interest - Commercial Services** Name: Bollore Location: Unit E4, Main Avenue, Treforest Industrial Estate, Pontypridd, CF37 5UR Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A8SW (SE)	890	10	311018 186152
482	**Points of Interest - Commercial Services** Name: Care Environmental Services Ltd Location: Unit J3, Gelli-Hirion Industrial Estate, Pontypridd, CF37 5SX Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A19SW (N)	895	10	310320 187909
482	**Points of Interest - Commercial Services** Name: Care Environmental Services Ltd Location: Unit J3, Gelli-Hirion Ind Est, Pontypridd, Mid Glamorgan, CF37 5SX Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A19SW (N)	896	10	310320 187910
483	**Points of Interest - Commercial Services** Name: Hawthorn Garage Location: Hawthorn Garage, Cardiff Road, Hawthorn, Pontypridd, CF37 5AA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NW)	970	10	309509 187685
483	**Points of Interest - Commercial Services** Name: Car Base Location: Hawthorn Garage, Cardiff Road, Hawthorn, Pontypridd, CF37 5AA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NW)	982	10	309498 187691
483	**Points of Interest - Commercial Services** Name: Car Base Location: Hawthorn Garage, Cardiff Road, Hawthorn, Pontypridd, CF37 5AA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NW)	982	10	309497 187691
484	**Points of Interest - Education and Health** Name: The Pet Memorial & Gifts Shop Location: Unit A6, Severn Road, Treforest Industrial Estate, Pontypridd, CF37 5SQ Category: Animal Welfare Class Code: Pet Cemeteries and Crematoria Positional Accuracy: Positioned to address or location	A10NE (W)	0	10	310193 186866
485	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (W)	0	10	310070 186851
485	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (W)	0	10	310068 186845
485	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10NE (W)	0	10	310075 186856
485	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NE (W)	0	10	310066 186863

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
485	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10SE (W)	0	10	310066 186839
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310129 186750
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310120 186747
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310125 186743
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310110 186763
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310183 186707
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310176 186710
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310164 186717
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310160 186721
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310171 186714
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310124 186754
486	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	0	10	310175 186720

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
486	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	0	10	310137 186754
486	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	0	10	310109 186760
486	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	0	10	310189 186731
486	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10SE (SW)	0	10	310153 186747
487	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10NE (W)	0	10	310078 186861
487	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10NE (W)	0	10	310096 186879
487	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NE (W)	0	10	310091 186883
487	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NE (W)	0	10	310097 186864
487	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NE (W)	0	10	310105 186878
487	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NE (W)	0	10	310082 186870
487	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NE (NW)	45	10	310133 186925
487	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NE (NW)	64	10	310139 186944

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
488	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10SE (SW)	0	10	310100 186770
489	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11NW (NE)	19	10	310384 186963
490	**Points of Interest - Manufacturing and Production** Name: Treforest Industrial Estate (Ystad Ddiwydiannol Trefforest) Location: CF37 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A11NW (NE)	51	10	310280 186894
491	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NE (N)	117	10	310230 187020
492	**Points of Interest - Manufacturing and Production** Name: Upper Boat Industrial Park Location: CF37 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A11NW (NE)	176	10	310523 187187
493	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11NW (N)	217	10	310287 187162
493	**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	A11NW (N)	235	10	310275 187176
493	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15SW (N)	245	10	310291 187207
494	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SW (SE)	228	10	310461 186583
495	**Points of Interest - Manufacturing and Production** Name: Treforest Industrial Estate Location: CF37 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A11SE (SE)	238	10	310624 186692
495	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SE (SE)	246	10	310592 186635
495	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A11SE (SE)	248	10	310592 186632

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
495	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A11SE (SE)	252	10	310597 186631
496	**Points of Interest - Manufacturing and Production** Name: Taff Business Centre Location: CF37 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A10NE (NW)	280	10	310088 187184
497	**Points of Interest - Manufacturing and Production** Name: Shaft (disused) Location: CF38 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A7NW (S)	321	10	310292 186382
498	**Points of Interest - Manufacturing and Production** Name: Riverside Industrial Park Location: CF37 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A7NE (SE)	381	10	310609 186478
499	**Points of Interest - Manufacturing and Production** Name: Q E D Centre Location: Q E D Centre, Treforest Industrial Estate, Pontypridd, CF37 5YR Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A7NE (SE)	562	10	310822 186419
499	**Points of Interest - Manufacturing and Production** Name: Q E D Centre Location: Q E D Centre, Treforest Industrial Estate, Pontypridd, CF37 5YR Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A7NE (SE)	562	10	310822 186419
500	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (N)	643	10	310159 187595
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	708	10	310490 187732
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	712	10	310493 187735
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	713	10	310497 187736
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	716	10	310500 187739
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	718	10	310503 187741

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
501	**Points of Interest - Manufacturing and Production** Name: Tanks Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (N)	719	10	310492 187742
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	721	10	310505 187744
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	724	10	310509 187746
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	727	10	310511 187749
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	730	10	310514 187752
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	732	10	310517 187754
501	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (N)	735	10	310519 187757
502	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (N)	759	10	310313 187770
502	**Points of Interest - Manufacturing and Production** Name: Gelli Hirion Industrial Estate Location: CF37 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14NE (N)	774	10	310228 187764
503	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF15 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NW (SE)	790	10	311124 186458
504	**Points of Interest - Manufacturing and Production** Name: Tank Location: CF37 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NW (SE)	836	10	311076 186294
505	**Points of Interest - Manufacturing and Production** Name: L Johnson & Son Location: Maes Bach, Willowford Road, Tonteg, Pontypridd, CF38 1SL Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A3NW (S)	976	10	310571 185789

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
505	**Points of Interest - Manufacturing and Production** Name: L Johnson & Son Location: Maes Bach, Willowford Road, Tonteg, Pontypridd, CF38 1SL Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A3NW (S)	976	10	310570 185788
506	**Points of Interest - Public Infrastructure** Name: Egan Waste Services Location: Unit A 15 Severn Road, Treforest Industrial Estate, Pontypridd, CF37 5YL Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A10SE (SW)	23	10	310199 186771
507	**Points of Interest - Public Infrastructure** Name: Outfall Location: CF37 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A11NE (E)	148	10	310615 186887
508	**Points of Interest - Public Infrastructure** Name: Esso Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	186	10	310082 187090
508	**Points of Interest - Public Infrastructure** Name: Esso Location: Tonteg Road, Taff Business Centre Vale, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	201	10	310077 187105
508	**Points of Interest - Public Infrastructure** Name: Treforest Service Station Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	201	10	310077 187105
508	**Points of Interest - Public Infrastructure** Name: Treforest Service Station Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	201	10	310077 187105
508	**Points of Interest - Public Infrastructure** Name: Mfg Treforest Spar Location: Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	201	10	310077 187105
508	**Points of Interest - Public Infrastructure** Name: Treforest Service Station Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	202	10	310077 187106
508	**Points of Interest - Public Infrastructure** Name: Community Safety Partnership Location: Unit 2 Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	247	10	310089 187151
508	**Points of Interest - Public Infrastructure** Name: BP Petrol Station Location: Unit 2 Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	247	10	310089 187151

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
508	**Points of Interest - Public Infrastructure** Name: Esso Garage Location: Taff Business Centre, Tonteg Road, Treforest Industrial Estate, Pontypridd, CF37 5UA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A14SE (N)	298	10	310156 187200
508	**Points of Interest - Public Infrastructure** Name: Weir Location: CF37 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14SE (NW)	311	10	310061 187214
508	**Points of Interest - Public Infrastructure** Name: Weir Location: CF37 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14SE (NW)	313	10	310059 187216
509	**Points of Interest - Public Infrastructure** Name: South Wales Police Location: Fairway Court, Tonteg Rd, Treforest Ind Est, Pontypridd, Mid Glamorgan, CF37 5UA Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A11NW (N)	200	10	310316 187168
509	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: CF37 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A11NW (N)	217	10	310282 187155
509	**Points of Interest - Public Infrastructure** Name: South Wales Police Location: Fairway Court, Tonteg Road, Treforest Industrial Estate, Pontypridd, Mid Glamorgan, CF37 5UA Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A11NW (N)	232	10	310267 187161
510	**Points of Interest - Public Infrastructure** Name: Refuse Tip Location: CF37 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A7NW (SE)	318	10	310491 186497
510	**Points of Interest - Public Infrastructure** Name: Tip (Disused) Location: CF38 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A7NW (SE)	355	10	310529 186470
510	**Points of Interest - Public Infrastructure** Name: Refuse Tip (Disused) Location: CF38 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A7NW (SE)	356	10	310529 186469
511	**Points of Interest - Public Infrastructure** Name: Cynon Valley Waste Disposal Co Ltd Location: Unit 23 Bridge Road, Treforest Industrial Estate, Treforest, Pontypridd, CF37 1TE Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A11SE (SE)	381	10	310668 186521
512	**Points of Interest - Public Infrastructure** Name: Tesco Pontypridd Location: Gelli Hirion Industrial Estate Road, Rhydyfelin, Pontypridd, CF37 5SN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A15NW (N)	568	10	310450 187592

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
512	**Points of Interest - Public Infrastructure** Name: Weir Location: CF37 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A15NW (N)	628	10	310453 187652
512	**Points of Interest - Public Infrastructure** Name: Weir Location: CF37 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A15NW (N)	630	10	310450 187654
513	**Points of Interest - Public Infrastructure** Name: Trefforest Estate Rail Station Location: Willowford Road, CF38 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A7NE (SE)	597	10	310671 186267
513	**Points of Interest - Public Infrastructure** Name: Treforest Estate Halt Location: Willowford Road, CF38 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A7NE (SE)	597	10	310671 186267
514	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Filling Station Location: Gelli-Hirion Industrial Estate, Pontypridd, CF37 5SN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A15NW (N)	666	10	310323 187677
514	**Points of Interest - Public Infrastructure** Name: Tesco Filling Station Location: Gelli-Hirion Industrial Estate, Pontypridd, CF37 5SN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A15NW (N)	671	10	310325 187683
515	**Points of Interest - Public Infrastructure** Name: Weir Location: CF37 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14NW (NW)	955	10	309854 187831
515	**Points of Interest - Public Infrastructure** Name: Weir Location: CF37 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14NW (NW)	956	10	309852 187831
515	**Points of Interest - Public Infrastructure** Name: Weirs Location: CF37 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14NW (N)	986	10	309848 187861
515	**Points of Interest - Public Infrastructure** Name: Weirs Location: CF37 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14NW (N)	986	10	309848 187861
516	**Points of Interest - Public Infrastructure** Name: Sewage Pumping Station Location: CF38 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A9SW (W)	959	10	309045 186798
517	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Fairmound Place, CF38 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A6NW (SW)	707	10	309576 186235

Industrial Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
517	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A6NW (SW)	708	10	309576 186234
518	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14NW (NW)	822	10	309808 187678
518	**Points of Interest - Recreational and Environmental** Name: Playground Location: Laurel Avenue, CF37 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A14NW (NW)	822	10	309805 187677
519	**Points of Interest - Recreational and Environmental** Name: Playground Location: Underhill Drive, CF38 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A5NW (SW)	950	10	309184 186318
519	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A5NW (SW)	951	10	309183 186318
520	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	971	10	310135 187941
520	**Points of Interest - Recreational and Environmental** Name: Playground Location: (Glan Y Nant), CF37 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A18SE (N)	971	10	310134 187941

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
521	**Ancient Woodland** Name: Not Supplied Reference: 15748 Area(m²): 5891.47 Type: Ancient and Semi-Natural Woodland	A10SE (SW)	0	2	310083 186779
522	**Ancient Woodland** Name: Not Supplied Reference: 15746 Area(m²): 3189.22 Type: Ancient and Semi-Natural Woodland	A11SW (S)	138	2	310270 186575
523	**Ancient Woodland** Name: Not Supplied Reference: 15745 Area(m²): 45797.19 Type: Ancient and Semi-Natural Woodland	A10SE (S)	165	2	310234 186527
524	**Ancient Woodland** Name: Not Supplied Reference: 11870 Area(m²): 9129.48 Type: Ancient and Semi-Natural Woodland	A10SE (SW)	186	2	309964 186605
525	**Ancient Woodland** Name: Not Supplied Reference: 22145 Area(m²): 38260.31 Type: Restored Ancient Woodland Site	A15SE (NE)	335	2	310719 187236
526	**Ancient Woodland** Name: Not Supplied Reference: 22143 Area(m²): 89546.4 Type: Restored Ancient Woodland Site	A12NW (E)	452	2	310939 187011
527	**Ancient Woodland** Name: Not Supplied Reference: 17930 Area(m²): 66509.32 Type: Ancient and Semi-Natural Woodland	A9NE (W)	504	2	309508 186887
528	**Ancient Woodland** Name: Not Supplied Reference: 15749 Area(m²): 7609.61 Type: Ancient and Semi-Natural Woodland	A9SE (W)	516	2	309488 186796
529	**Ancient Woodland** Name: Not Supplied Reference: 15742 Area(m²): 12548.28 Type: Ancient and Semi-Natural Woodland	A7NW (S)	521	2	310432 186226
530	**Ancient Woodland** Name: Not Supplied Reference: 15743 Area(m²): 4942.13 Type: Ancient and Semi-Natural Woodland	A7NE (SE)	530	2	310667 186335
531	**Ancient Woodland** Name: Not Supplied Reference: 17931 Area(m²): 30967.83 Type: Ancient and Semi-Natural Woodland	A10NW (W)	535	2	309587 187132
532	**Ancient Woodland** Name: Not Supplied Reference: 22146 Area(m²): 6586.43 Type: Restored Ancient Woodland Site	A15NW (NE)	535	2	310551 187551
533	**Ancient Woodland** Name: Not Supplied Reference: 8420 Area(m²): 43214.92 Type: Ancient and Semi-Natural Woodland	A7NW (SE)	544	2	310575 186285
534	**Ancient Woodland** Name: Not Supplied Reference: 15741 Area(m²): 3450.56 Type: Ancient and Semi-Natural Woodland	A7NE (SE)	672	2	310709 186201

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
535	**Ancient Woodland** Name: Not Supplied Reference: 50290 Area(m²): 29566.24 Type: Ancient Woodland Site of Unknown Category	A7SE (SE)	719	2	310672 186135
536	**Ancient Woodland** Name: Not Supplied Reference: 23029 Area(m²): 16096.72 Type: Restored Ancient Woodland Site	A15NW (N)	728	2	310554 187746
537	**Ancient Woodland** Name: Not Supplied Reference: 22144 Area(m²): 5691.54 Type: Restored Ancient Woodland Site	A15NE (NE)	733	2	310913 187597
538	**Ancient Woodland** Name: Not Supplied Reference: 22147 Area(m²): 7610.61 Type: Restored Ancient Woodland Site	A15NE (NE)	821	2	310765 187784
539	**Ancient Woodland** Name: Not Supplied Reference: 17936 Area(m²): 58920.3 Type: Ancient and Semi-Natural Woodland	A13SE (NW)	926	2	309319 187427
540	**Ancient Woodland** Name: Not Supplied Reference: 11868 Area(m²): 7557.6 Type: Ancient and Semi-Natural Woodland	A7SE (SE)	971	2	310909 185971
541	**Ancient Woodland** Name: Not Supplied Reference: 23030 Area(m²): 8472.3 Type: Restored Ancient Woodland Site	A19SE (N)	987	2	310680 187985

Data Currency

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Caerphilly County Borough Council - Environmental Health Department	August 2013	Annual Rolling Update
Cardiff Council - Pollution Control Division	October 2017	Annual Rolling Update
Rhondda Cynon Taff County Borough Council - Environmental Services	October 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	November 2019	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		
Natural Resources Wales	November 2019	Quarterly
Environment Agency - Welsh Region	October 2019	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Caerphilly County Borough Council - Environmental Health Department	February 2013	Variable
Cardiff Council - Pollution Control Division	March 2016	Variable
Rhondda Cynon Taff County Borough Council - Public Health and Protection Division	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Cardiff Council - Pollution Control Division	March 2016	Annual Rolling Update
Rhondda Cynon Taff County Borough Council - Public Health and Protection Division	September 2014	Annual Rolling Update
Caerphilly County Borough Council - Environmental Health Department	September 2014	Not Applicable
Local Authority Pollution Prevention and Control Enforcements		
Cardiff Council - Pollution Control Division	March 2016	Variable
Caerphilly County Borough Council - Environmental Health Department	September 2014	Variable
Rhondda Cynon Taff County Borough Council - Public Health and Protection Division	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	October 2019	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Natural Resources Wales	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Natural Resources Wales	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Natural Resources Wales	January 2015	Annually
Environment Agency - Welsh Region	June 2016	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency Wales - South East Area	October 2019	Quarterly
Natural Resources Wales	October 2019	Quarterly
Water Abstractions		
Natural Resources Wales	November 2019	Quarterly
Environment Agency - Welsh Region	October 2019	Quarterly

Data Currency

Agency & Hydrological	Version	Update Cycle
Water Industry Act Referrals Natural Resources Wales Environment Agency - Welsh Region	 November 2019 October 2017	 Quarterly Quarterly
Groundwater Vulnerability Map Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations Natural Resources Wales	January 2018	Annually
Source Protection Zones Natural Resources Wales	November 2016	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	August 2019	Quarterly
Flooding from Rivers or Sea without Defences Natural Resources Wales	November 2019	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas Natural Resources Wales	August 2019	Quarterly
Flood Defences Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	October 2019	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

Data Currency

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	July 2018	Quarterly
Natural Resources Wales	July 2018	Quarterly
Licensed Waste Management Facilities (Locations)		
Natural Resources Wales	November 2019	Quarterly
Environment Agency Wales - South East Area	October 2019	Quarterly
Local Authority Landfill Coverage		
Caerphilly County Borough Council - Environmental Health Department	May 2000	Not Applicable
Cardiff Council	May 2000	Not Applicable
Rhondda Cynon Taff County Borough Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Caerphilly County Borough Council - Environmental Health Department	May 2000	Not Applicable
Cardiff Council	May 2000	Not Applicable
Rhondda Cynon Taff County Borough Council	May 2000	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	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Caerphilly County Borough Council - Planning Department	February 2016	Variable
Rhondda Cynon Taff County Borough Council - Planning Department	February 2016	Variable
Cardiff Council - Regulatory Services	October 2015	Variable
Planning Hazardous Substance Consents		
Caerphilly County Borough Council - Planning Department	February 2016	Variable
Rhondda Cynon Taff County Borough Council - Planning Department	February 2016	Variable
Cardiff Council - Regulatory Services	October 2015	Variable

Intégral Géotechnique

Data Currency

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	October 2019	Bi-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	January 2019	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	October 2019	Quarterly
Fuel Station Entries Catalist Ltd - Experian	December 2019	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	December 2019	Quarterly
Points of Interest - Education and Health PointX	December 2019	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2019	Quarterly
Points of Interest - Public Infrastructure PointX	December 2019	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2019	Quarterly
Underground Electrical Cables National Grid	December 2015	

Data Currency

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural Resources Wales	August 2018	Bi-Annually
Areas of Adopted Green Belt Cardiff Council	November 2019	As notified
Areas of Unadopted Green Belt Cardiff Council	November 2019	As notified
Areas of Outstanding Natural Beauty Natural Resources Wales	June 2019	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 Caerphilly County Borough Council Cardiff Council Rhondda Cynon Taff 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	June 2019	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 2019 October 2005	Bi-Annually
Ramsar Sites Natural Resources Wales	July 2019	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	March 2019	Bi-Annually
Special Areas of Conservation Natural Resources Wales	August 2018	Bi-Annually
Special Protection Areas Natural Resources Wales	August 2018	Bi-Annually

Data Suppliers

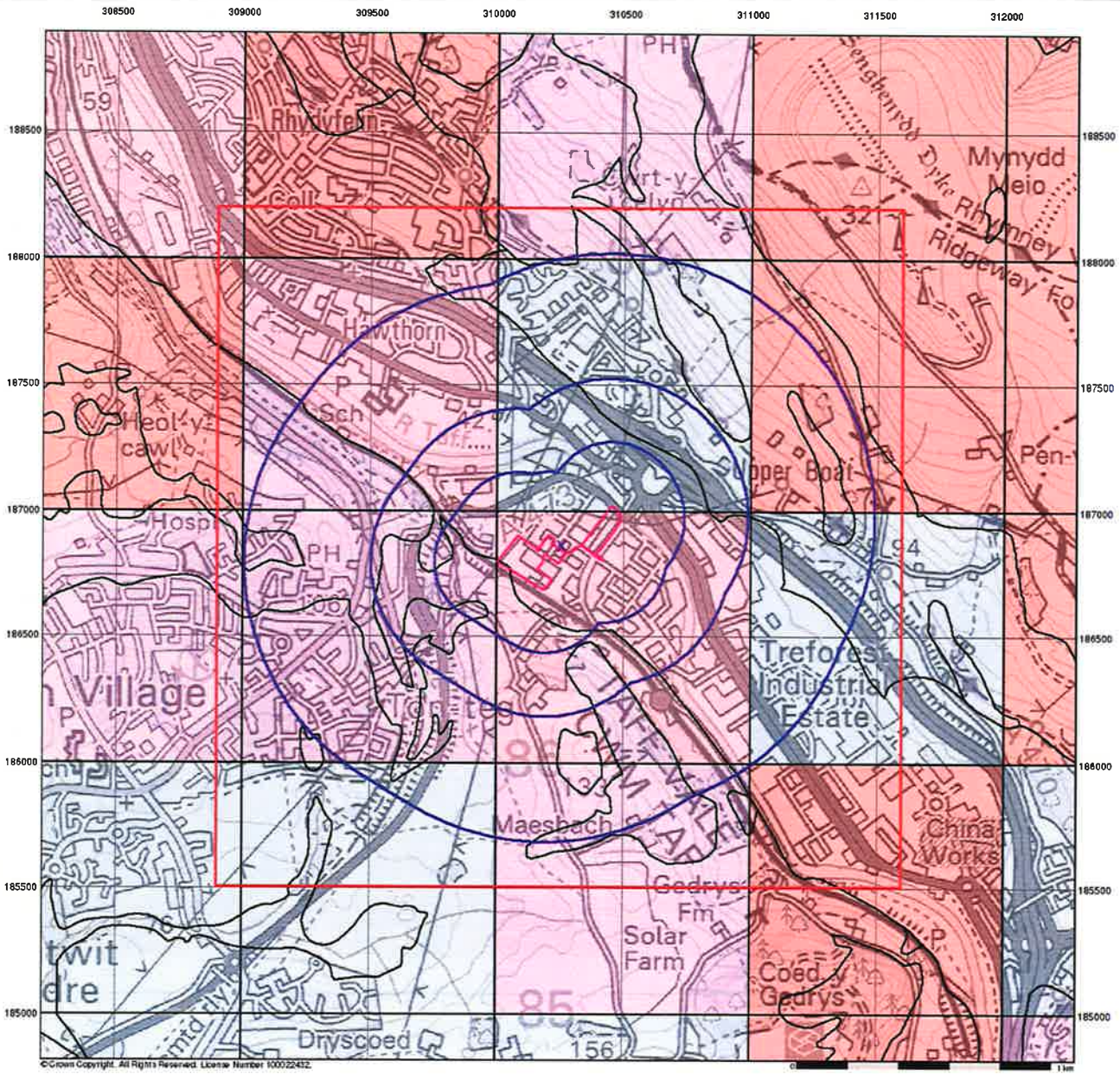
A selection of organisations who provide data within this report

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

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**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	**Rhondda Cynon Taff County Borough Council - Public Health and Protection Division** Community Services, RCT Borough Council, Dinas Esaf Estate, Williamstown, RCT, CF40 1NY	Telephone: 01443 442100 Website: www.rhondda-cynon-taff.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	**Rhondda Cynon Taff County Borough Council** Headquarters - The Pavillions, Cambrian Park, Clydach Vale, Rhondda, CF40 2XX	Telephone: 01443 424000 Fax: 01443 424024 Website: www.rhondda-cynon-taff.gov.uk
7	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
8	**Rhondda Cynon Taff County Borough Council - Planning Department** The Pavillions, Cambrian Park, Clydach Vale, CF40 2XX	Telephone: 01443 494700 Fax: 01443 424024 Website: www.rhondda-cynon-taff.gov.uk
9	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
10	**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.



Intégral Géotechnique

Groundwater Vulnerability

General

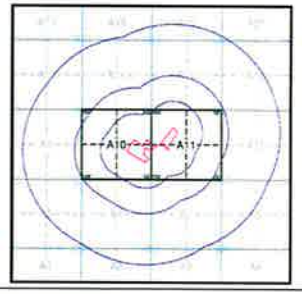
Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer
Soluble Rock

Site Sensitivity Context Map - Slice A



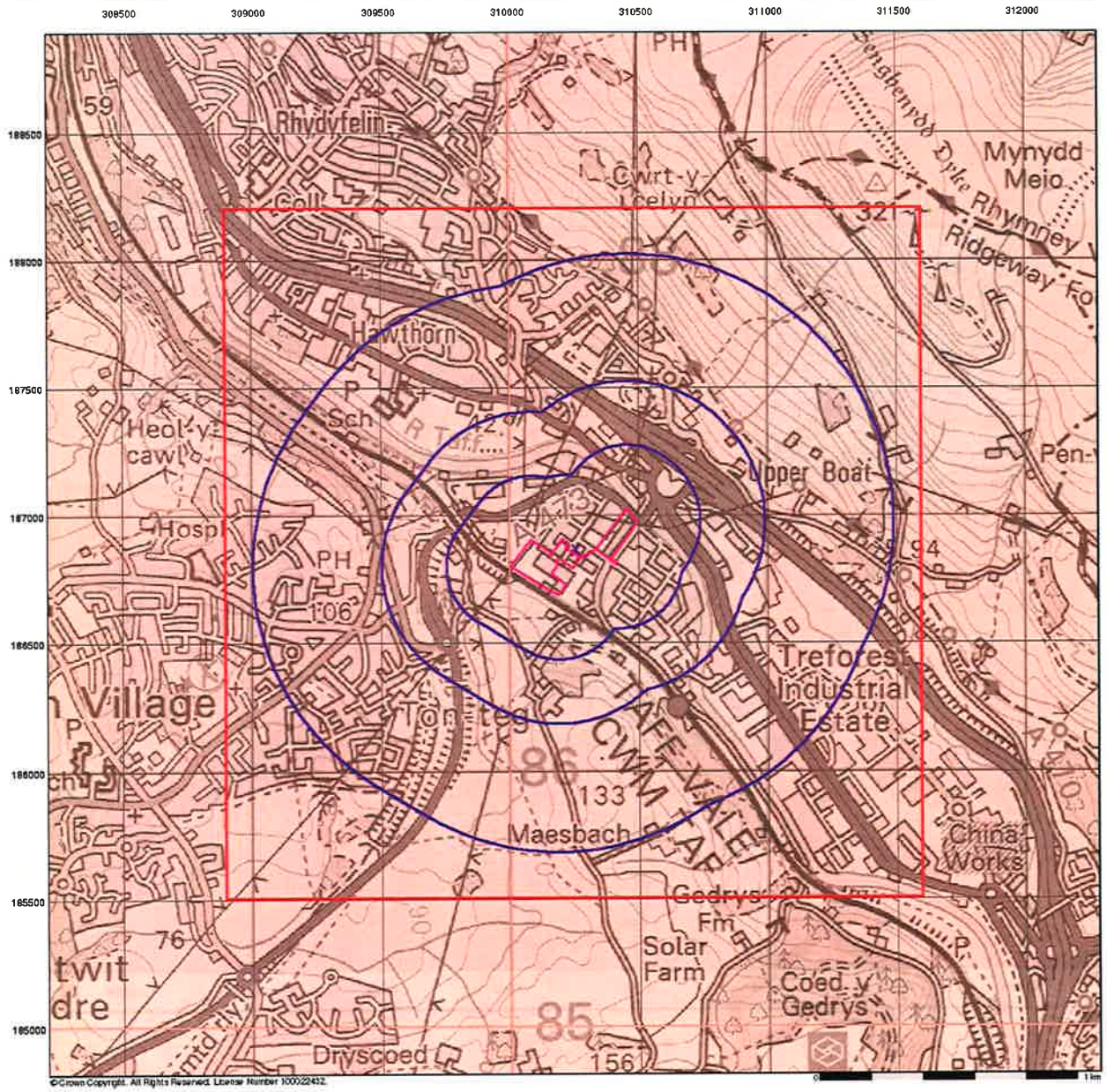
Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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



Intégral Géotechnique

Bedrock Aquifer Designation

General

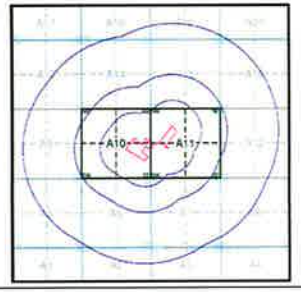
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



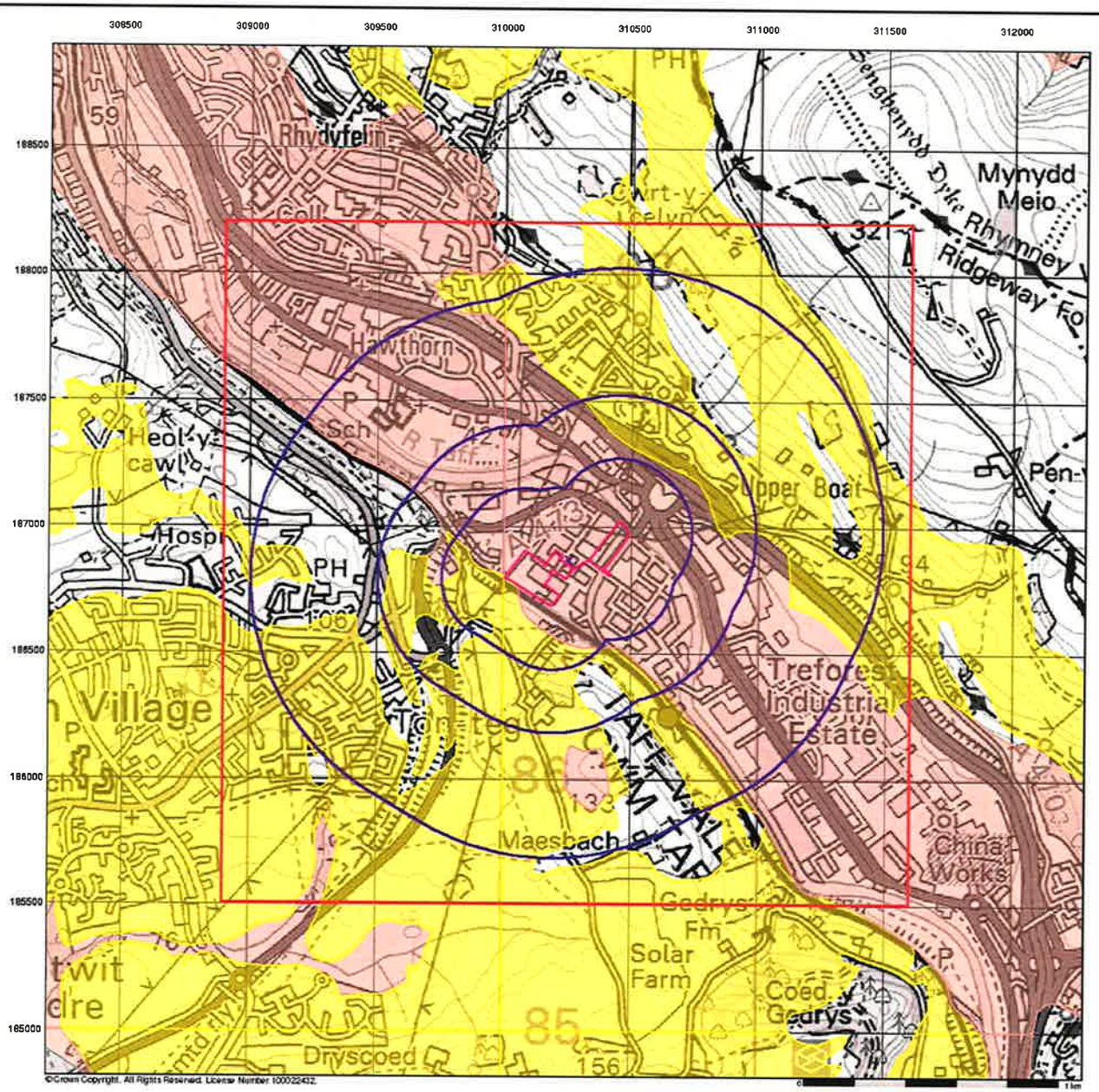
Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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



Intégral Géotechnique

Superficial Aquifer Designation

General

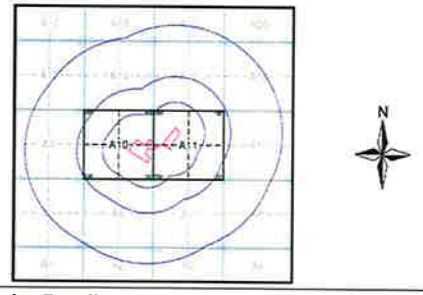
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



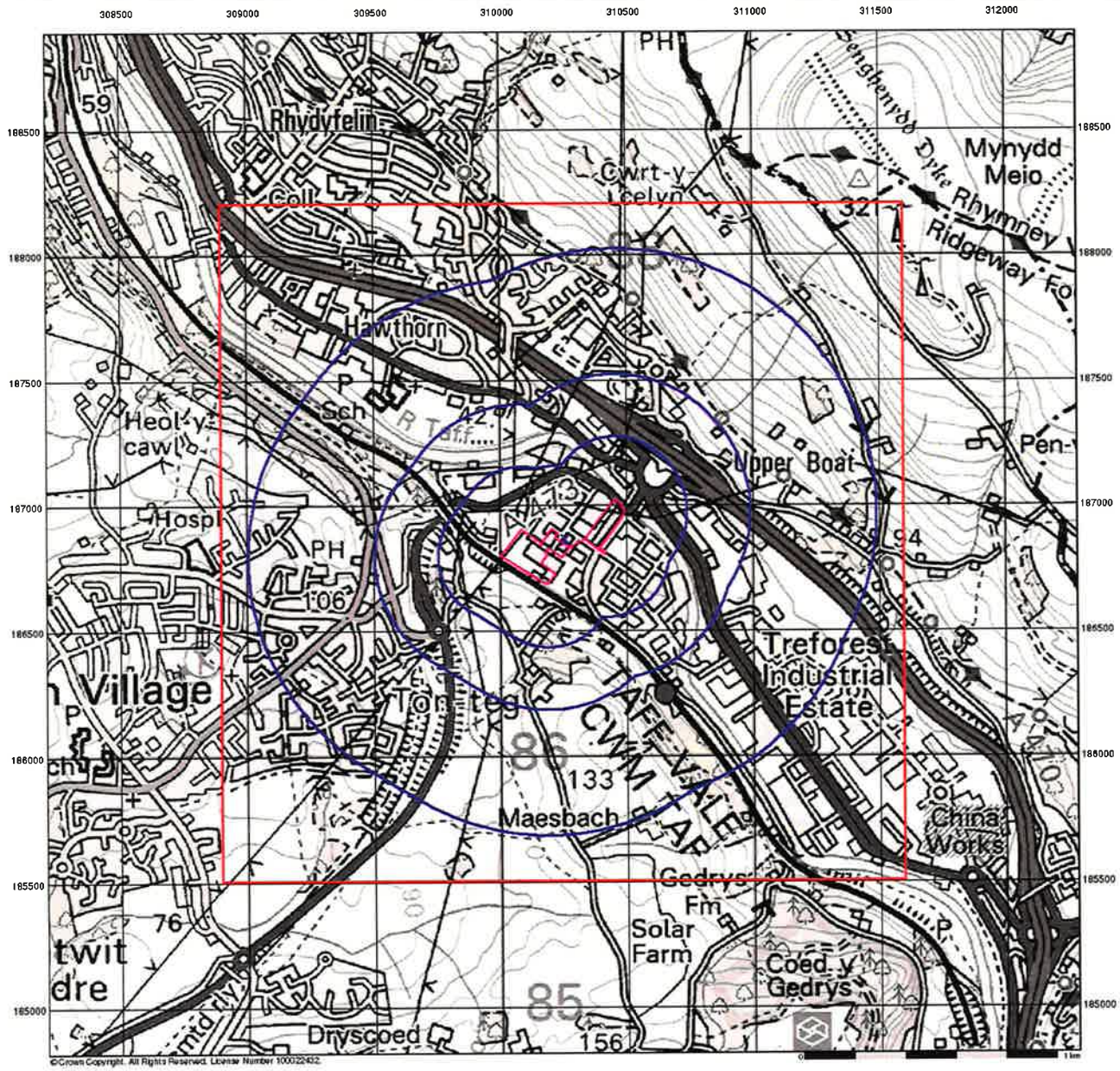
Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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



Intégral Géotechnique

Source Protection Zones

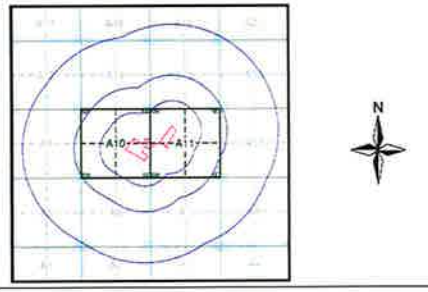
General

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

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



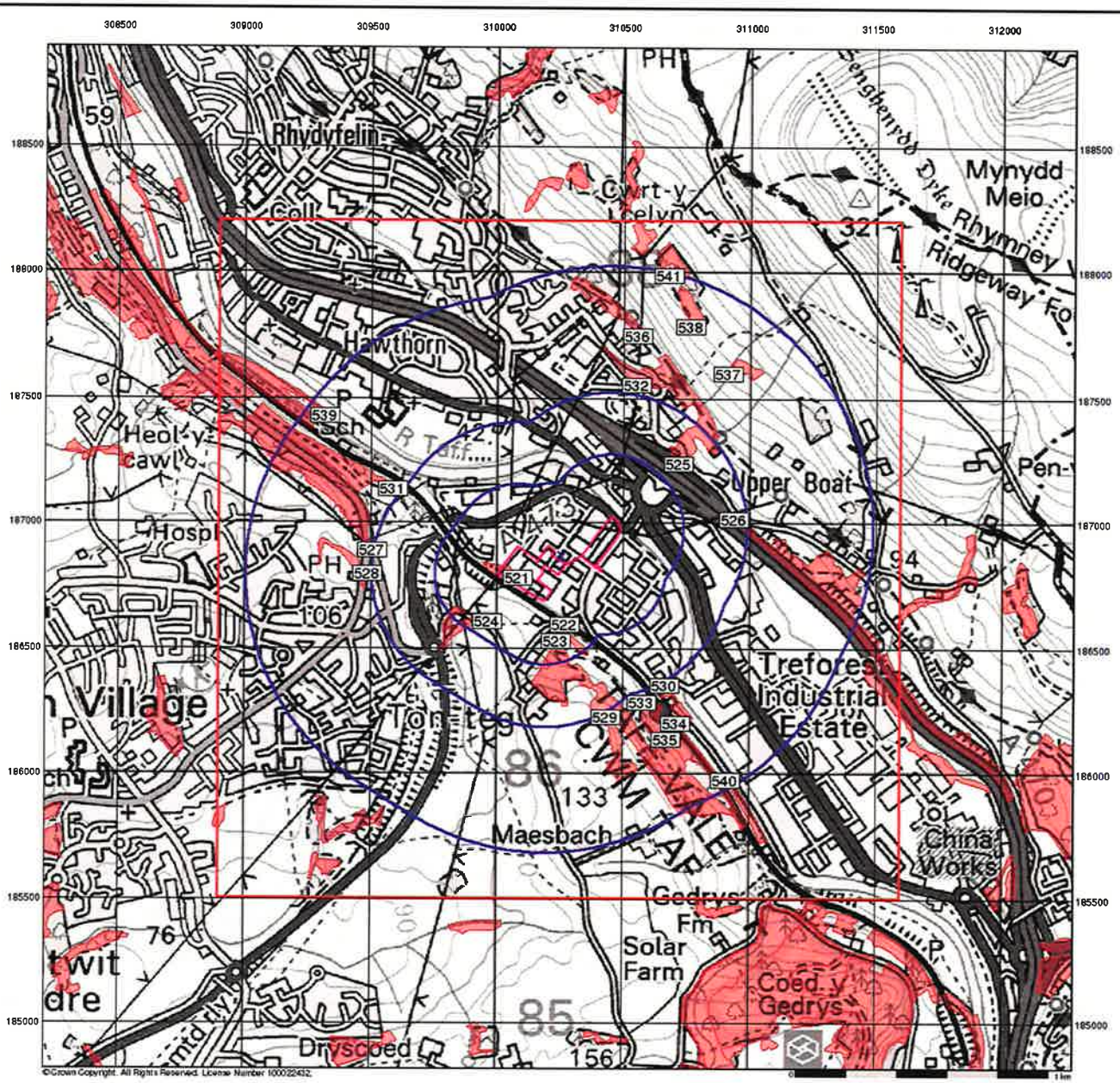
Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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



Intégral Géotechnique

Sensitive Land Uses

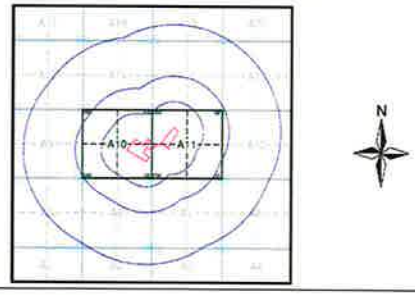
General

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

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
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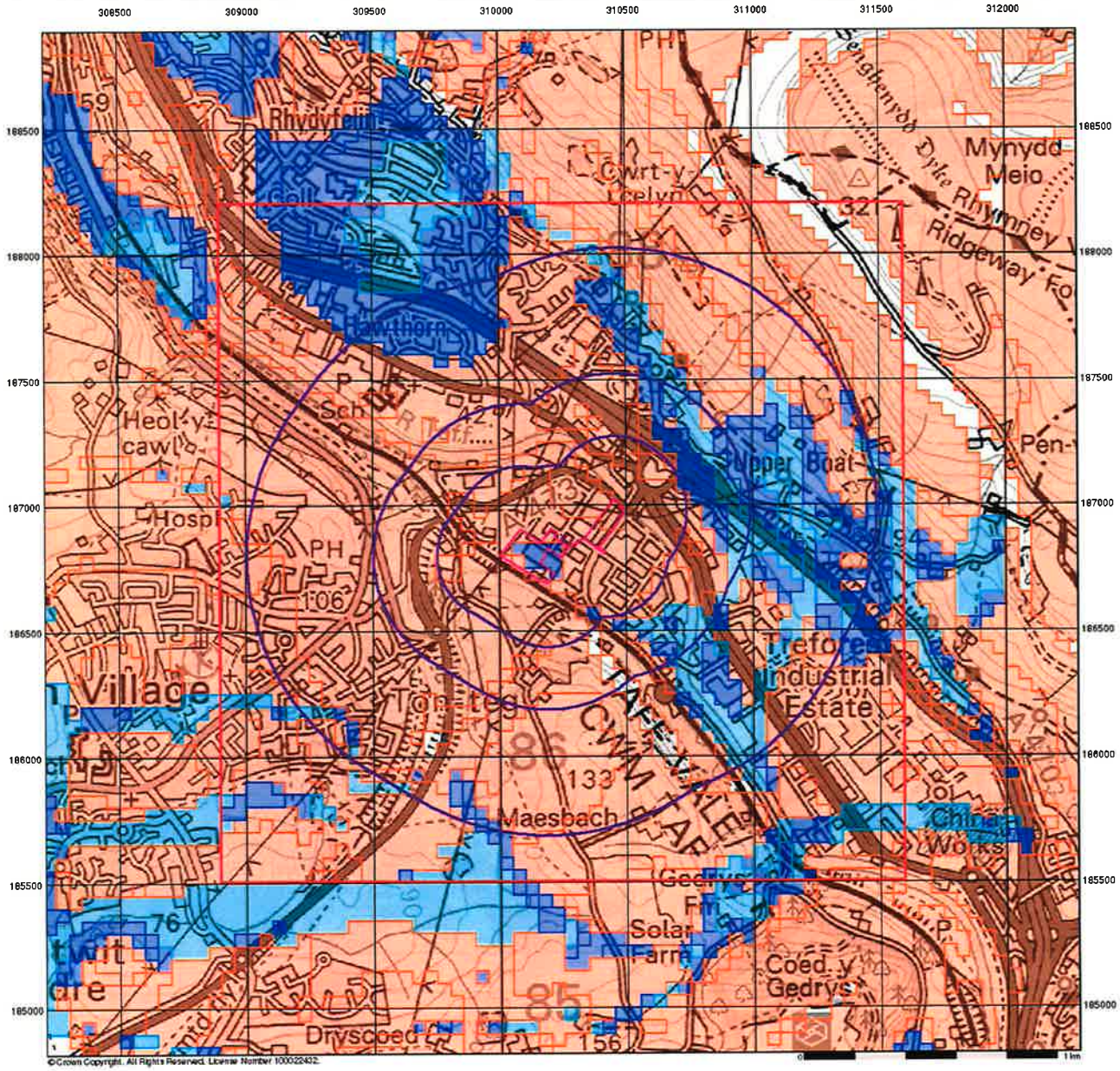


Intégral Géotechnique

BGS Flood GFS Data

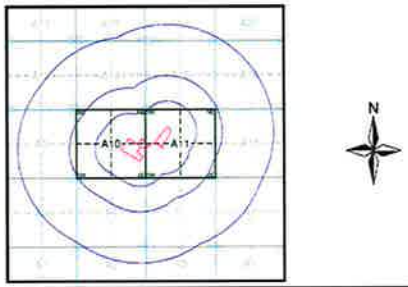
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

Landmark INFORMATION GROUP
Tel: 0844 844 9952
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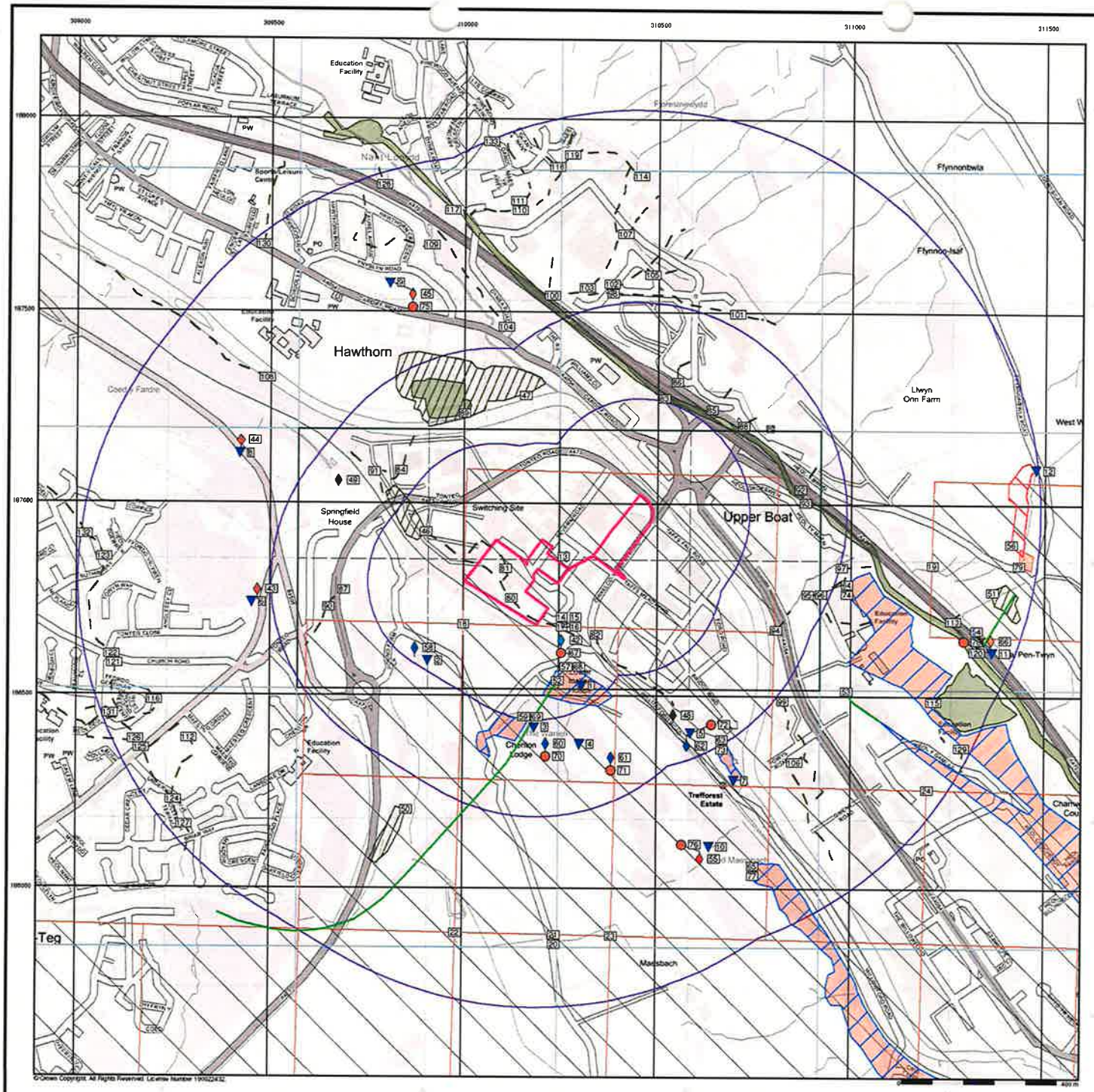
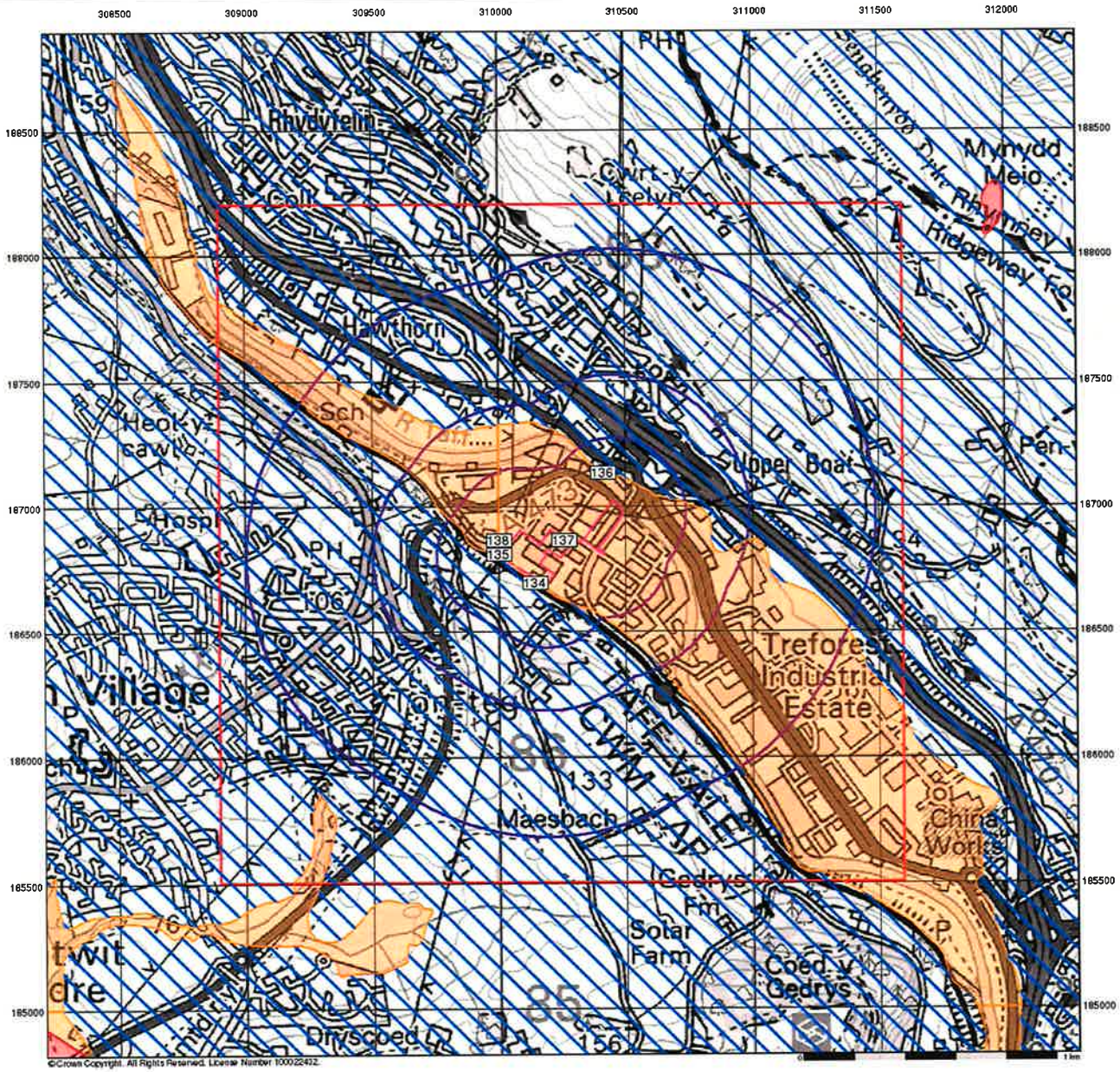

Education Facility
Sports Leisure Centre
PW
PO
Hawthorn
Coed-y-Fandre
Springfield House
Switching Site
Upper Boat
Flynnontwla
Flynnon-Isaf
Llwyn Onn Farm
Pen-Twyn
Chalybeate
Trefforest Estate
Maesbach
Teg
Education Facility
Chorlton Lodge
Education Facility
Education Facility
Education Facility



Intégral Géotechnique

Ground Stability Data (1:50,000)

General

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

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

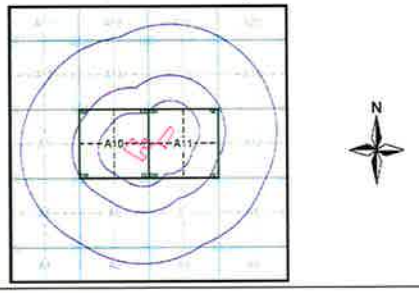
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice A



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

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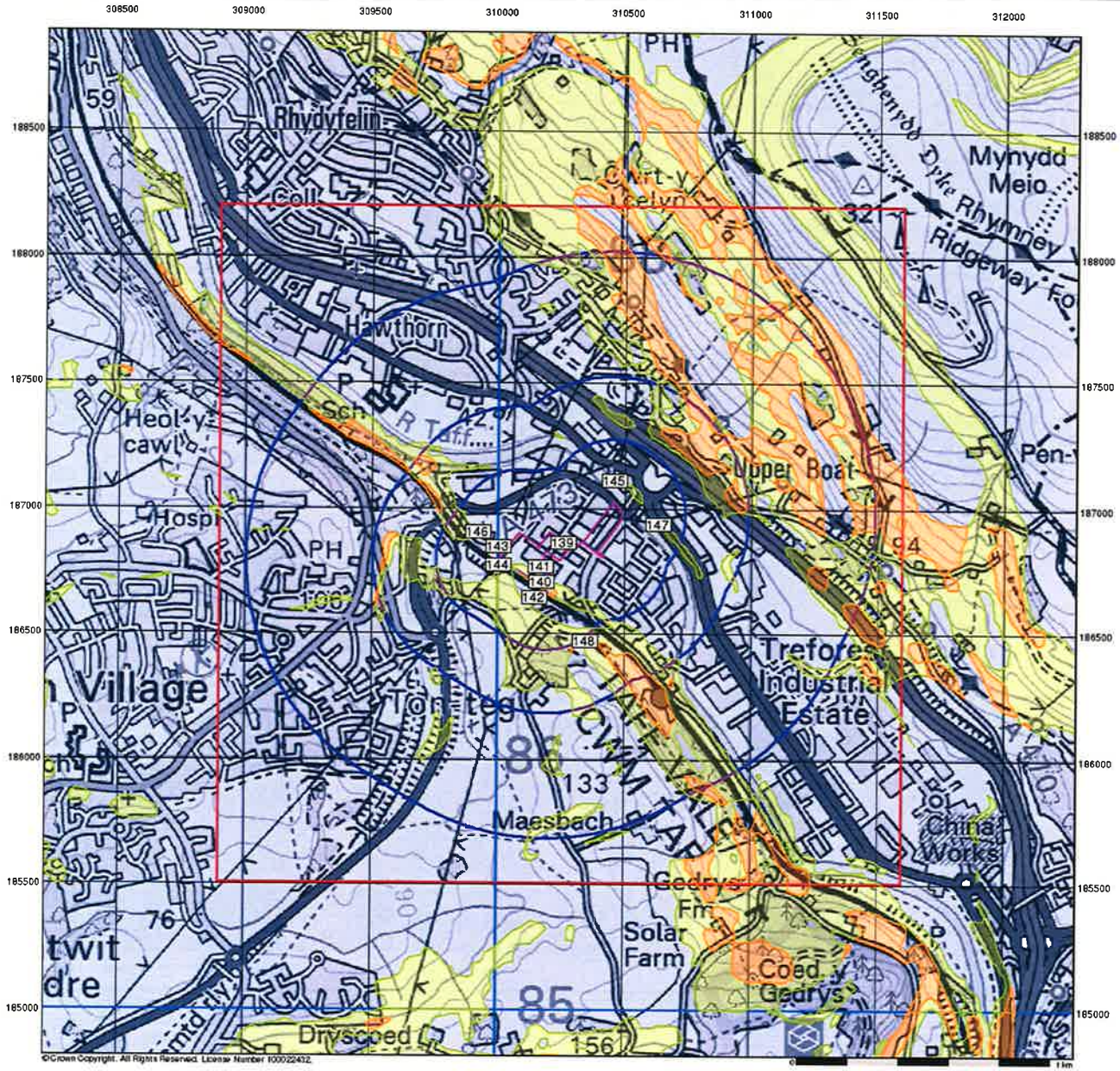


Intégral Géotechnique

Ground Stability Data (1:50,000)

General

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

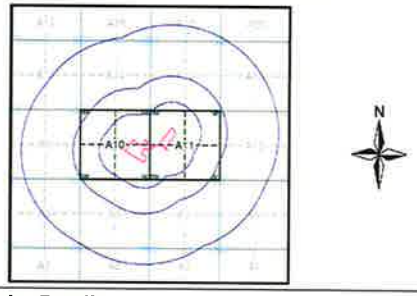
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

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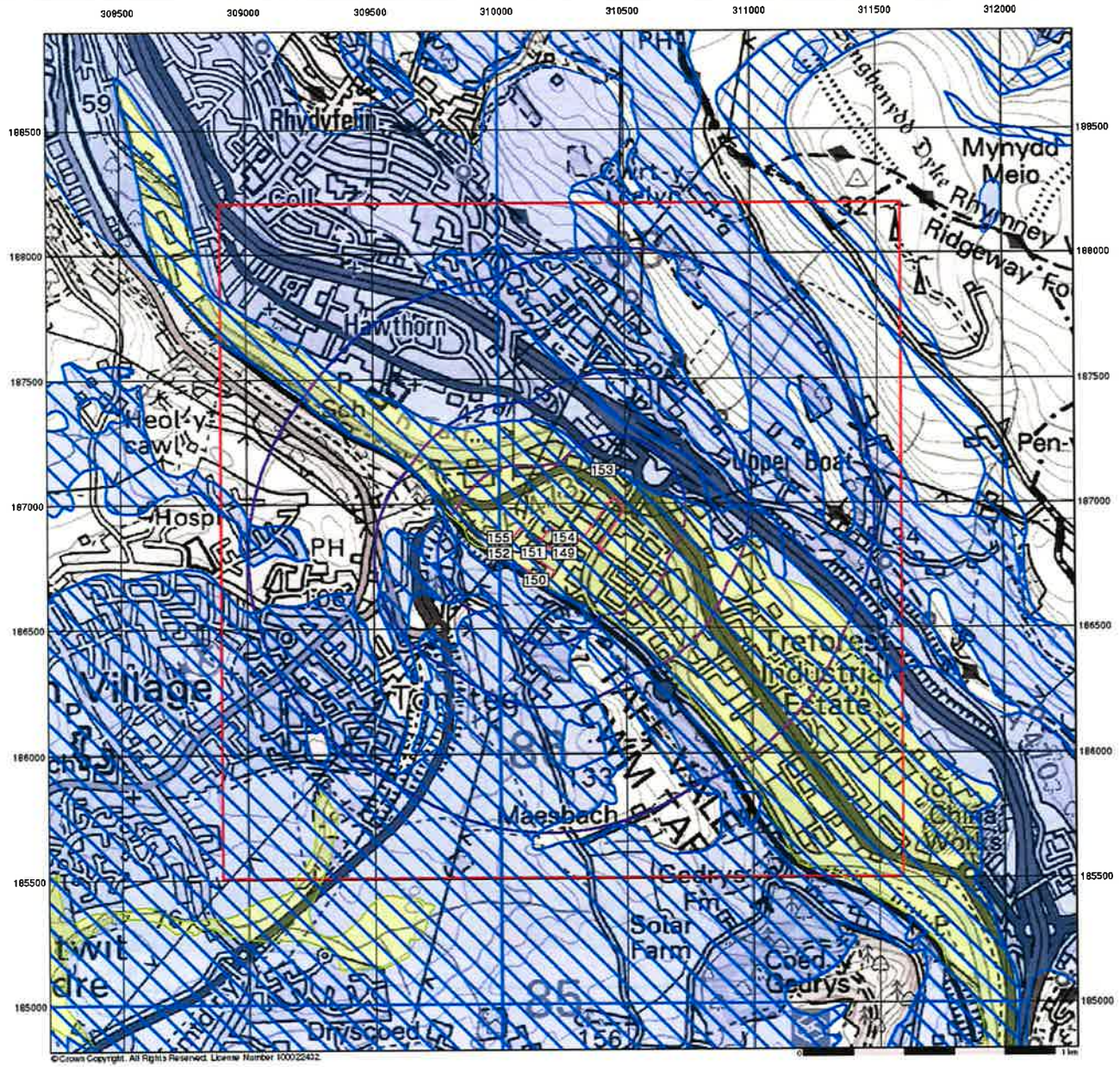


Intégral
Géotechnique

Ground Stability Data (1:50,000)

General

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

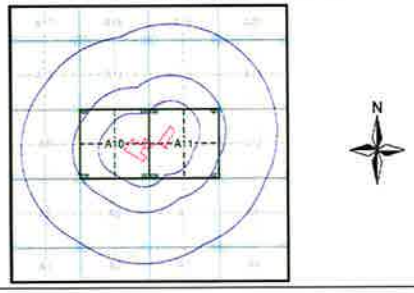
Potential for Running Sand Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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

Intégral
Géotechnique

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
228391279_1_1

Customer Reference:
11121/LP

National Grid Reference:
310260, 186860

Slice:
A

Site Area (Ha):
4.09

Search Buffer (m):
1000

Site Details:

P B Gelatins
Severn Road
Treforest Industrial Estate
PONTYPRIDD
CF37 5SQ

Client Details:

MR H Pritchard
Integral Geotechnique
Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX

Intégral
Géotechnique

Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	5
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	7
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	12
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
Historical Map List	14
The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
Data Currency	16
Data Suppliers	17
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The brine subsidence data relating to the Driotwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

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Report Version v53.0

Intégral Géotechnique

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1		2	3	7
Coal Mining Affected Areas	pg 3	Yes	n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 3	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas	pg 3	1	5		6
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)	pg 5		4	n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)	pg 5		3	n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)	pg 5		2	n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)	pg 5		3	n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 6	1	4	n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts	pg 7		1		
Disturbed Ground					
General Quarrying	pg 7				3
Heap, unknown constituents	pg 7		1	3	2
Mineral Railway	pg 7		1		2
Mining & quarrying general	pg 7				2
Mining of coal & lignite	pg 7		3	4	2
Quarrying of sand & clay, operation of sand & gravel pits	pg 8				1
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 8		3	4	6
Potentially Infilled Land (Water)	pg 8	2	1	14	37
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 12	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 12	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 12	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 12	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 13	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 13	Yes	Yes	n/a	n/a
Salt Mining Related Features					

Intégral Géotechnique

Report Version v53.0

Summary

Intégral Géotechnique

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160433 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A11SW (S)	194	1	310305 186531
2	**BGS Recorded Mineral Sites** Site Name: Oldmill Cottage Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160431 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A10SW (SW)	223	1	309907 186596
3	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160432 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A6NE (S)	266	1	310183 186421
4	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160434 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Hughes Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NW (S)	328	1	310300 186378
5	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160435 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	434	1	310587 186408
6	**BGS Recorded Mineral Sites** Site Name: Three Horse Shoes Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160430 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A9SE (W)	554	1	309452 186747

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**BGS Recorded Mineral Sites** Site Name: Maes-Mawr Colliery Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160436 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7NE (SE)	593	1	310699 186286
8	**BGS Recorded Mineral Sites** Site Name: Coed Y Fardre Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160429 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A9NE (W)	673	1	309420 187132
9	**BGS Recorded Mineral Sites** Site Name: White Hawthorn Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160428 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NW (NW)	681	1	309870 187550
10	**BGS Recorded Mineral Sites** Site Name: Coed Maes-Bach Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160452 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grovesend Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SE (SE)	726	1	310636 186114
11	**BGS Recorded Mineral Sites** Site Name: Ty'N-Y-Wern Clay Pit Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160437 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Till, Devensian Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A12SE (E)	942	1	311364 186621
12	**BGS Recorded Mineral Sites** Site Name: Tai'R Level Location: Rhydyfelin, Caerphilly, Mid Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 160427 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Brithdir Member Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12NE (E)	994	1	311475 187096

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A11NW (NW)	0	2	310258 186863
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A11NW (NW)	0	3	310258 186863
	Non Coal Mining Areas of Great Britain No Hazard				
13	**Potential Mining Areas** Name: Maesmawr Llantwit Ceased Operation: 1878 Commodity: Coal; Seam unnamed Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Forster Brown and Rees, Guildhall Chambers, Cardiff.	A11NW (NW)	0	4	310258 186863
14	**Potential Mining Areas** Name: Maesmawr Llantwit Ceased Operation: Not Supplied Commodity: Coal; Yard; Two Feet Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: (i) Forster Brown and Rees, Guildhall Chambers, Cardiff. (ii) D.P. Thomas, "Kymin," Newton, Porthcawl.	A11SW (S)	5	4	310254 186681
15	**Potential Mining Areas** Name: Warren Llantwit or Maesmawr Ceased Operation: 1908 Commodity: Coal; No.1; 2 and 3 Llantwit Reference: 5242 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A11SW (S)	5	4	310254 186681
16	**Potential Mining Areas** Name: Rhyd-Yr-Helyg Ceased Operation: 1876 Commodity: Coal; Maesmawr Three Feet; Maesmawr Four Feet Reference: 615 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A11SW (S)	5	4	310254 186681
17	**Potential Mining Areas** Name: Taff Llantwit and Maesmawr Ceased Operation: Not Supplied Commodity: Coal; Three Feet; Four Feet Reference: Not Supplied Alternate Name/Mine: Duffryn Alternate Name/Mine: Rhyd-Yr-helyg Custodian: D.P. Thomas, "Kymin", Newton, Porthcawl.	A11SW (S)	5	4	310254 186681
18	**Potential Mining Areas** Name: Llantwit-Fardre Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A10SE (SW)	98	4	309999 186686
19	**Potential Mining Areas** Name: Groeswen Ceased Operation: Not Supplied Commodity: Coal; Penygroes or Stinking Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: D.P. Thomas, "Kymin", Newton, Porthcawl.Robert T. Rees, Bute Estate Office Mardy Offices, Aberdare.	A12SW (E)	724	4	311210 186843

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**Potential Mining Areas** Name: Rhyd-Yr-Helyg Ceased Operation: Not Supplied Commodity: Coal; No.3 Llantwit (or Maesmawr Three Feet); No.4 Llantwit (or Maesmawr Four Feet) Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Forster Brown and Rees, Guildhall Chambers, Cardiff.	A6SE (S)	809	4	310237 185876
21	**Potential Mining Areas** Name: Taff Llantwit Ceased Operation: 1898 Commodity: Coal; No.3 Llantwit; Penygroes Reference: Not Supplied Alternate Name/Mine: Duffryn Bach Custodian: D.P. Thomas, "Kymin", Newton, Porthcawl.	A6SE (S)	809	4	310237 185876
22	**Potential Mining Areas** Name: Taff Llantwit Ceased Operation: 1897 Commodity: Coal; No.3 Llantwit Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Forster Brown and Rees, Guildhall Chambers, Cardiff.	A6SE (S)	831	4	309982 185882
23	**Potential Mining Areas** Name: Rhyd-Yr-Helyg Ceased Operation: 1869 Commodity: Coal; Maesmawr Two Feet Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Robert T. Rees, Bute Estate Office, Mardy Offices, Aberdare.	A7SW (S)	836	4	310384 185873
24	**Potential Mining Areas** Name: Taff Rhondda Navigation Ceased Operation: 1927 Commodity: Coal; Two Feet Nine; Four Feet; Six Feet; Nine Feet Reference: 9274 Alternate Name/Mine: Nantgarw Custodian: Not Supplied	A8NW (SE)	955	4	311197 186258

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**Extractive Industries or Potential Excavations from 1855-1909** Use: Railway Embankment First Map Published Date: 1875 Last Map Published Date: Not Applicable	A10SE (S)	5	-	310197 186681
26	**Extractive Industries or Potential Excavations from 1855-1909** Use: Trial Shaft First Map Published Date: 1875 Last Map Published Date: Not Applicable	A11SW (S)	72	-	310249 186646
27	**Extractive Industries or Potential Excavations from 1855-1909** Use: Railway Embankment First Map Published Date: 1875 Last Map Published Date: Not Applicable	A10SE (W)	82	-	309930 186833
28	**Extractive Industries or Potential Excavations from 1855-1909** Use: Well First Map Published Date: 1875 Last Map Published Date: Not Applicable	A11NW (NE)	84	-	310553 187042
29	**Extractive Industries or Potential Excavations from 1893-1915** Use: Old Air Shaft First Map Published Date: 1900 Last Map Published Date: Not Applicable	A10SE (S)	47	-	310235 186664
30	**Extractive Industries or Potential Excavations from 1893-1915** Use: Old Shaft First Map Published Date: 1900 Last Map Published Date: Not Applicable	A11SW (S)	70	-	310248 186648
31	**Extractive Industries or Potential Excavations from 1893-1915** Use: Railway Embankment First Map Published Date: 1900 Last Map Published Date: Not Applicable	A10SE (W)	77	-	309944 186846
32	**Extractive Industries or Potential Excavations from 1906-1937** Use: Old Air Shaft First Map Published Date: 1919 Last Map Published Date: Not Applicable	A10SE (S)	40	-	310232 186666
33	**Extractive Industries or Potential Excavations from 1906-1937** Use: Old Shaft First Map Published Date: 1919 Last Map Published Date: Not Applicable	A10SE (S)	68	-	310245 186649
34	**Extractive Industries or Potential Excavations from 1924-1949** Use: Unspecified Deposited Material First Map Published Date: 1943 Last Map Published Date: Not Applicable	A10SE (S)	43	-	310236 186666
35	**Extractive Industries or Potential Excavations from 1924-1949** Use: Old Air Shaft First Map Published Date: 1943 Last Map Published Date: Not Applicable	A10SE (S)	61	-	310241 186654

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	**Extractive Industries or Potential Excavations from 1924-1949** Use: Old Shaft First Map Published Date: 1943 Last Map Published Date: Not Applicable	A11SW (S)	71	-	310250 186649
37	**Extractive Industries or Potential Excavations from 1950-1980** Use: Railway Cutting First Map Published Date: 1958 Last Map Published Date: 1960	A10SE (SW)	0	-	310104 186739
38	**Extractive Industries or Potential Excavations from 1950-1980** Use: Railway Embankment First Map Published Date: 1958 Last Map Published Date: 1960	A10SE (S)	11	-	310235 186679
39	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1958 Last Map Published Date: 1960	A10SE (S)	39	-	310226 186669
40	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Materlal First Map Published Date: 1958 Last Map Published Date: 1960	A10SE (S)	50	-	310234 186660
41	**Extractive Industries or Potential Excavations from 1950-1980** Use: Disused Air Shaft First Map Published Date: 1958 Last Map Published Date: 1960	A10SE (S)	51	-	310229 186656

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**Air Shafts** Use: Not Supplied Date of Mapping: 1885	A11SW (S)	75	-	310253 186646
43	**General Quarrying** Use: Not Supplied Date of Mapping: 1885 - 1953	A9SE (W)	539	-	309468 186749
44	**General Quarrying** Use: Not Supplied Date of Mapping: 1901	A9NE (W)	669	-	309423 187129
45	**General Quarrying** Use: Not Supplied Date of Mapping: 1901	A14NW (NW)	677	-	309864 187544
46	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1921	A10NW (W)	159	-	309902 186927
47	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1953	A14SE (N)	328	-	310158 187283
48	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1993	A7NW (SE)	378	-	310542 186450
49	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1993	A10NW (W)	419	-	309676 187058
50	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1965	A6NW (SW)	586	-	309854 186205
51	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1953	A12SE (E)	898	-	311365 186774
52	**Mineral Railway** Use: Not Supplied Date of Mapping: 1885	A10SE (S)	157	-	310244 186540
53	**Mineral Railway** Use: Not Supplied Date of Mapping: 1965	A8NW (SE)	644	-	310989 186513
54	**Mineral Railway** Use: Not Supplied Date of Mapping: 1901	A12SE (E)	916	-	311342 186637
55	**Mining & quarrying general** Use: Not Supplied Date of Mapping: 1901	A7SE (SE)	725	-	310613 186098
56	**Mining & quarrying general** Use: Not Supplied Date of Mapping: 1885 - 1993	A12NE (E)	918	-	311413 186898
57	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1885 - 1901	A11SW (S)	132	-	310265 186576
58	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1885	A10SW (SW)	238	-	309873 186600
59	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1901	A6NE (S)	245	-	310157 186444
60	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1901	A6NE (S)	312	-	310213 186375
61	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1901	A7NW (S)	397	-	310382 186340
62	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1901	A7NW (SE)	438	-	310578 186400

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1901	A7NE (SE)	490	-	310670 186387
64	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1965	A12SW (E)	532	-	310991 186793
65	**Mining of coal & lignite** Use: Not Supplied Date of Mapping: 1886 - 1901	A7SE (SE)	819	-	310750 186059
66	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1901	A12SE (E)	940	-	311361 186617
67	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A11SW (S)	75	-	310253 186646
68	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A11SW (S)	132	-	310265 186576
69	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A6NE (S)	245	-	310157 186444
70	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A6NE (S)	312	-	310213 186375
71	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7NW (S)	397	-	310382 186340
72	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7NW (SE)	438	-	310578 186400
73	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7NE (SE)	490	-	310670 186387
74	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SW (E)	532	-	310991 186793
75	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14NW (NW)	677	-	309864 187544
76	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SE (SE)	725	-	310613 186098
77	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SE (SE)	819	-	310750 186059
78	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SE (E)	940	-	311361 186617
79	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SE (E)	952	-	311434 186843
80	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A10SE (SW)	0	-	310125 186756
81	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A10SE (W)	0	-	310109 186831
82	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A11SW (SE)	142	-	310344 186660
83	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SW (NE)	254	-	310517 187276

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
84	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A10NW (NW)	287	-	309837 187086
85	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SE (NE)	289	-	310639 187247
86	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SW (NE)	310	-	310549 187319
87	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A10SW (W)	314	-	309691 186776
88	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15SE (NE)	317	-	310722 187205
89	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14SE (NW)	339	-	310000 187236
90	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A10SW (W)	359	-	309651 186731
91	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A10NW (NW)	360	-	309768 187082
92	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (E)	386	-	310870 187038
93	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (E)	394	-	310882 187004
94	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A11SE (E)	414	-	310808 186674
95	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A11SE (E)	448	-	310889 186767
96	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A11SE (E)	459	-	310902 186768
97	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A12SW (E)	506	-	310977 186837
98	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	510	-	310383 187547
99	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A7NE (SE)	519	-	310825 186488
100	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NE (N)	532	-	310226 187541
101	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A15SE (NE)	534	-	310705 187496
102	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	538	-	310380 187557
103	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	555	-	310316 187562
104	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A14SE (N)	556	-	310108 187460

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
105	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	573	-	310485 187596
106	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A7NE (SE)	650	-	310856 186329
107	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A15NW (N)	678	-	310413 187702
108	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A13SE (NW)	728	-	309492 187327
109	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A14NE (NW)	786	-	309913 187671
110	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NE (N)	795	-	310141 187762
111	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NE (N)	810	-	310136 187769
112	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A5NE (SW)	822	-	309292 186387
113	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12SE (E)	822	-	311264 186698
114	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A15NW (N)	829	-	310453 187853
115	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A8NW (E)	860	-	311214 186486
116	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A5NW (W)	861	-	309202 186486
117	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A14NE (N)	866	-	309966 187762
118	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (N)	878	-	310238 187875
119	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A19SW (N)	901	-	310275 187907
120	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A12SE (E)	903	-	311326 186631
121	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A9SW (W)	930	-	309099 186583
122	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A9SW (W)	933	-	309091 186607
123	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A9NW (W)	935	-	309071 186860
124	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A5NE (SW)	942	-	309253 186228
125	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A5NW (SW)	943	-	309169 186361

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Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
126	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A5NW (SW)	945	-	309154 186384
127	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A5SE (SW)	961	-	309281 186164
128	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NW (NW)	970	-	309790 187828
129	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1953	A8NE (SE)	975	-	311286 186367
130	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A13NE (NW)	976	-	309482 187671
131	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1885	A5NW (W)	980	-	309088 186451
132	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A9NW (W)	991	-	309021 186917
133	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A18SE (N)	996	-	310065 187941

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
134	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
135	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	4	1	310000 186806
136	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	98	1	310411 187134
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	8	1	310000 186863
137	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
138	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	8	1	310000 186863
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	4	1	310000 186806
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	98	1	310411 187134
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	4	1	310000 186863
139	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
140	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310169 186706
141	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310166 186743
142	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
143	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	4	1	310000 186863
144	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	24	1	310000 186773
145	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	73	1	310457 187110

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
146	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	129	1	309919 186908
147	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	146	1	310631 186938
148	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	234	1	310342 186470
149	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
150	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
151	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	4	1	310000 186806
152	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	8	1	310000 186863
153	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	98	1	310411 187134
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	174	1	309953 186620
154	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (NW)	0	1	310258 186863
155	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NE (W)	4	1	310000 186863
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	310141 186693
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NW (NE)	98	1	310411 187134
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	174	1	309953 186620

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Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Glamorganshire	036_03	1875
Glamorganshire	036_03	1875
Glamorganshire	036_04	1875
Glamorganshire	036_07	1875
Glamorganshire	036_07	1875
Glamorganshire	036_08	1877
Glamorganshire	036_03	1900
Glamorganshire	036_03	1900
Glamorganshire	036_04	1900
Glamorganshire	036_07	1900
Glamorganshire	036_07	1900
Glamorganshire	036_08	1900
Glamorganshire	036_07	1919
Glamorganshire	036_07	1919
Glamorganshire	036_03	1920
Glamorganshire	036_03	1920
Glamorganshire	036_04	1920
Glamorganshire	036_08	1920
Glamorganshire	036_03	1936
Glamorganshire	036_03	1936
Glamorganshire	036_04	1943
Glamorganshire	036_07	1943
Glamorganshire	036_07	1943
Glamorganshire	036_08	1943
Ordnance Survey Plan	ST1086	1960
Ordnance Survey Plan	ST1086	1960
Ordnance Survey Plan	ST1087	1960
Ordnance Survey Plan	ST1087	1960
Ordnance Survey Plan	ST0986	1961
Ordnance Survey Plan	ST0987	1962

Intégral Géotechnique

Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Glamorganshire	036_00	1885
Glamorganshire	036_NE	1901
Glamorganshire	036_NE	1921
Glamorganshire	036_NE	1953
Ordnance Survey Plan	ST08NE	1965
Ordnance Survey Plan	ST18NW	1965
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	ST08NE	1993
Ordnance Survey Plan	ST18NW	1993

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2019	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Man Made Mining Cavities Peter Brett Associates	July 2019	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	July 2019	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	March 2019	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Brine Subsidence Solution Area Johnson Poole & Bloomer	January 2015	Annual Rolling Update

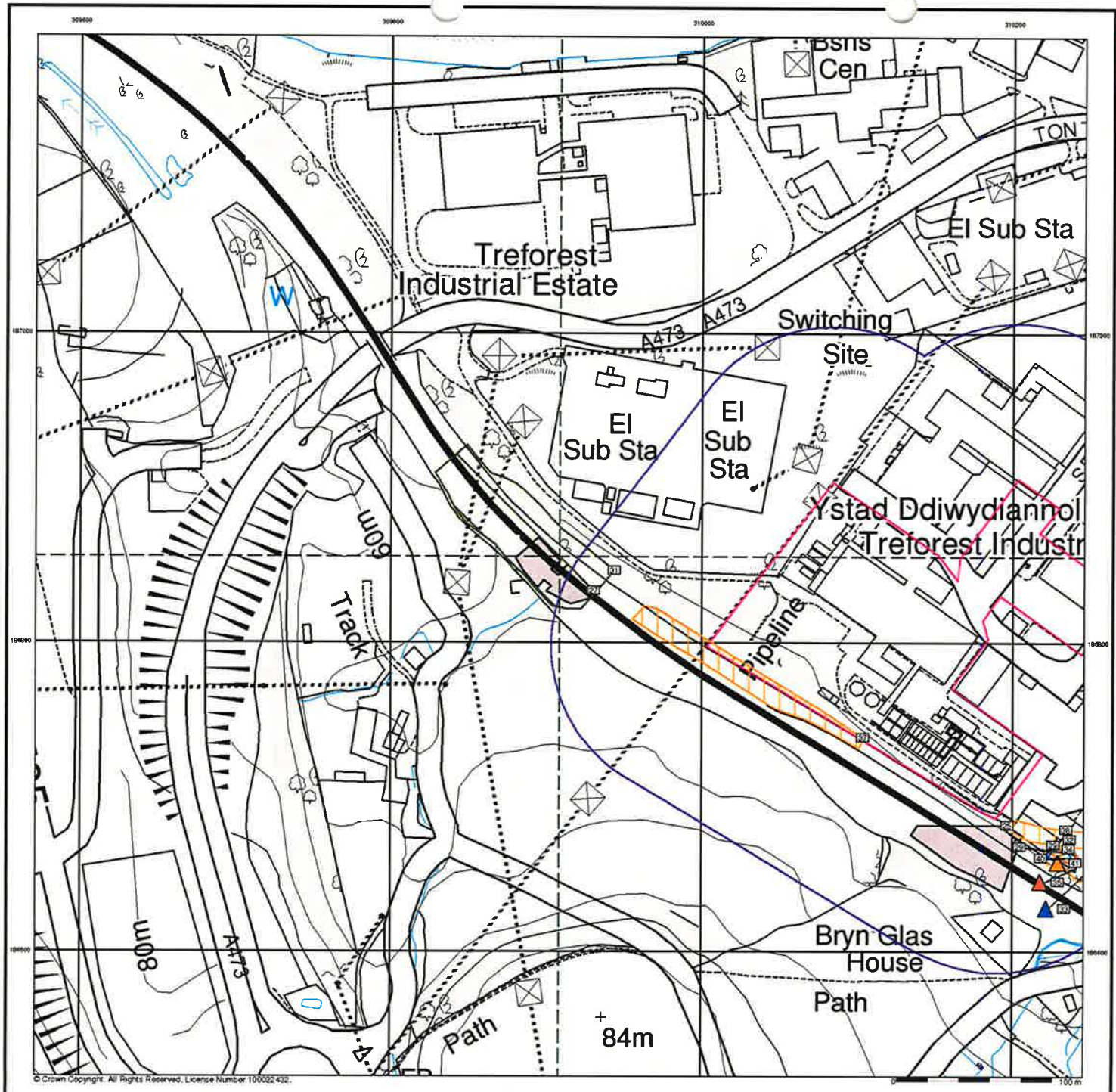
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	
Johnson Poole & Bloomer	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
3	**Ove Arup & Partners** Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	Telephone: 0191 261 6080 Fax: 0191 261 7879
4	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9960 Fax: 0844 844 9951 Email: customerservice@promap.co.uk Website: www.landmarkinfo.co.uk
-	**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



Intégral Géotechnique

Historical Land Use Information (1:2,500)

General

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

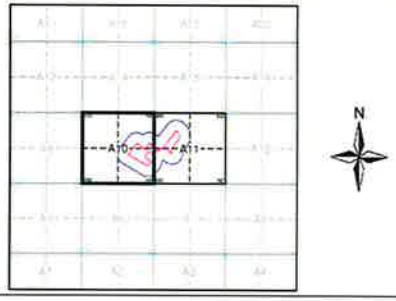
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	□
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▨
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▨

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▨

Mining and Ground Stability - Segment A10



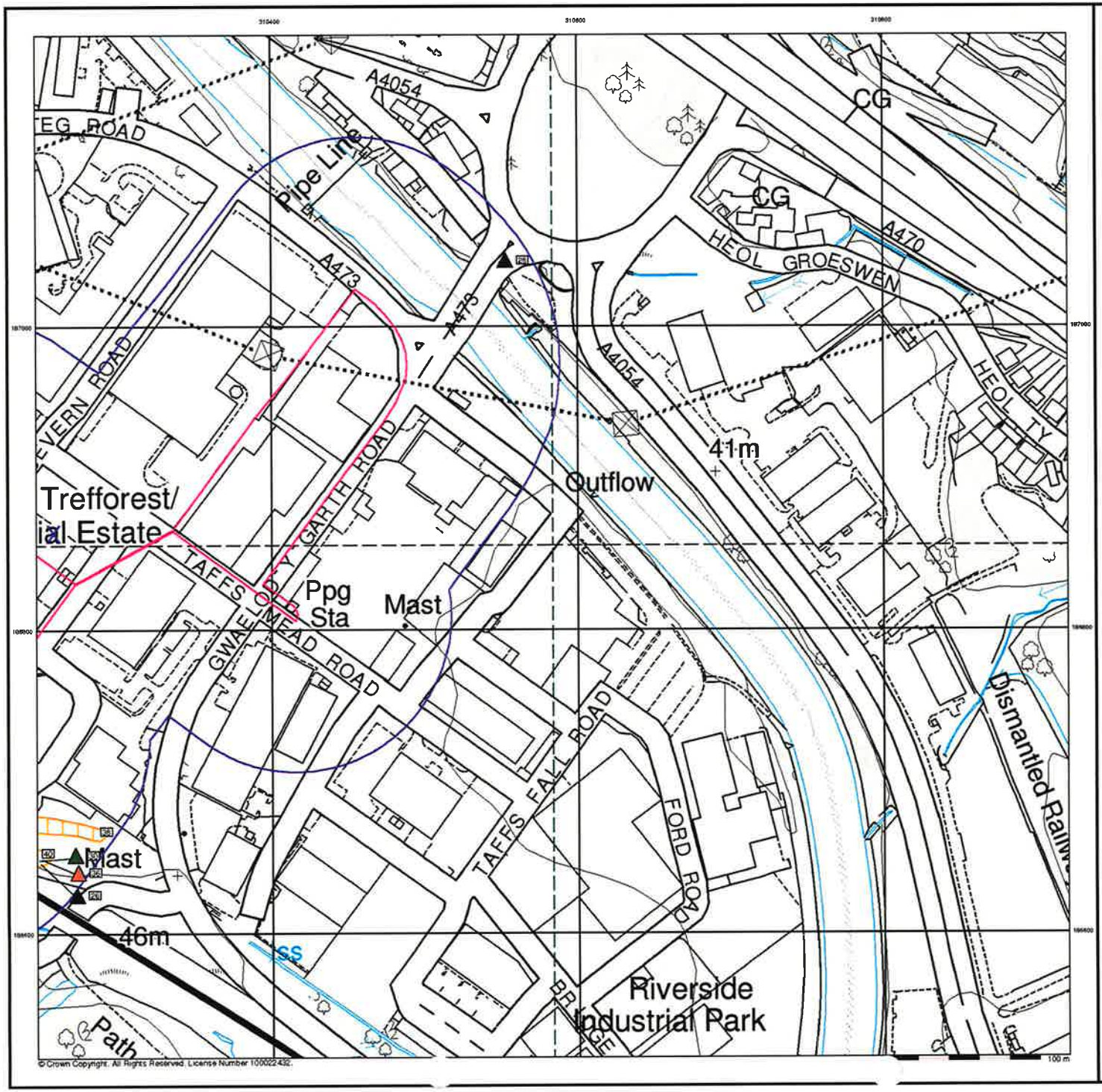
Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Plot Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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



Intégral Géotechnique

Historical Land Use Information (1:2,500)

General

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

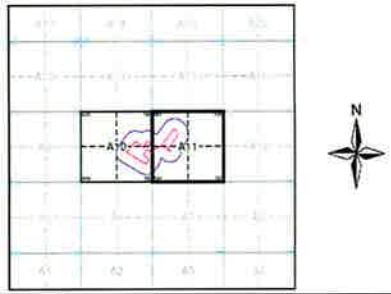
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	□
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▨
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▨

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▨

Mining and Ground Stability - Segment A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Plot Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	SLIP	Landslide Deposit	Sandstone	Not Supplied - Quaternary

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	RTDU	River Terrace Deposits (Undifferentiated)	Sand and Gravel	Not Supplied - Quaternary
	PEAT	Peat	Peat	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	BD	Brithdir Member	Sandstone	Not Supplied - Westphalian
	H	Hughes Member	Sandstone	Not Supplied - Westphalian
	GDB	Grovesend Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	H	Hughes Member	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	GDB	Grovesend Formation	Sandstone	Not Supplied - Westphalian
	BD	Brithdir Member	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	RA	Rhondda Member	Sandstone	Not Supplied - Westphalian
	LLFB	Llynfi Member	Sandstone	Not Supplied - Westphalian
		Faults		
		Rock Segments		

Intégral Géotechnique

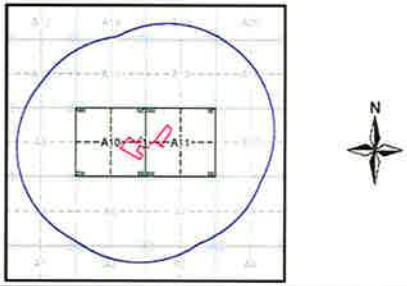
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	249
Map Name:	Newport
Map Date:	1968
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A

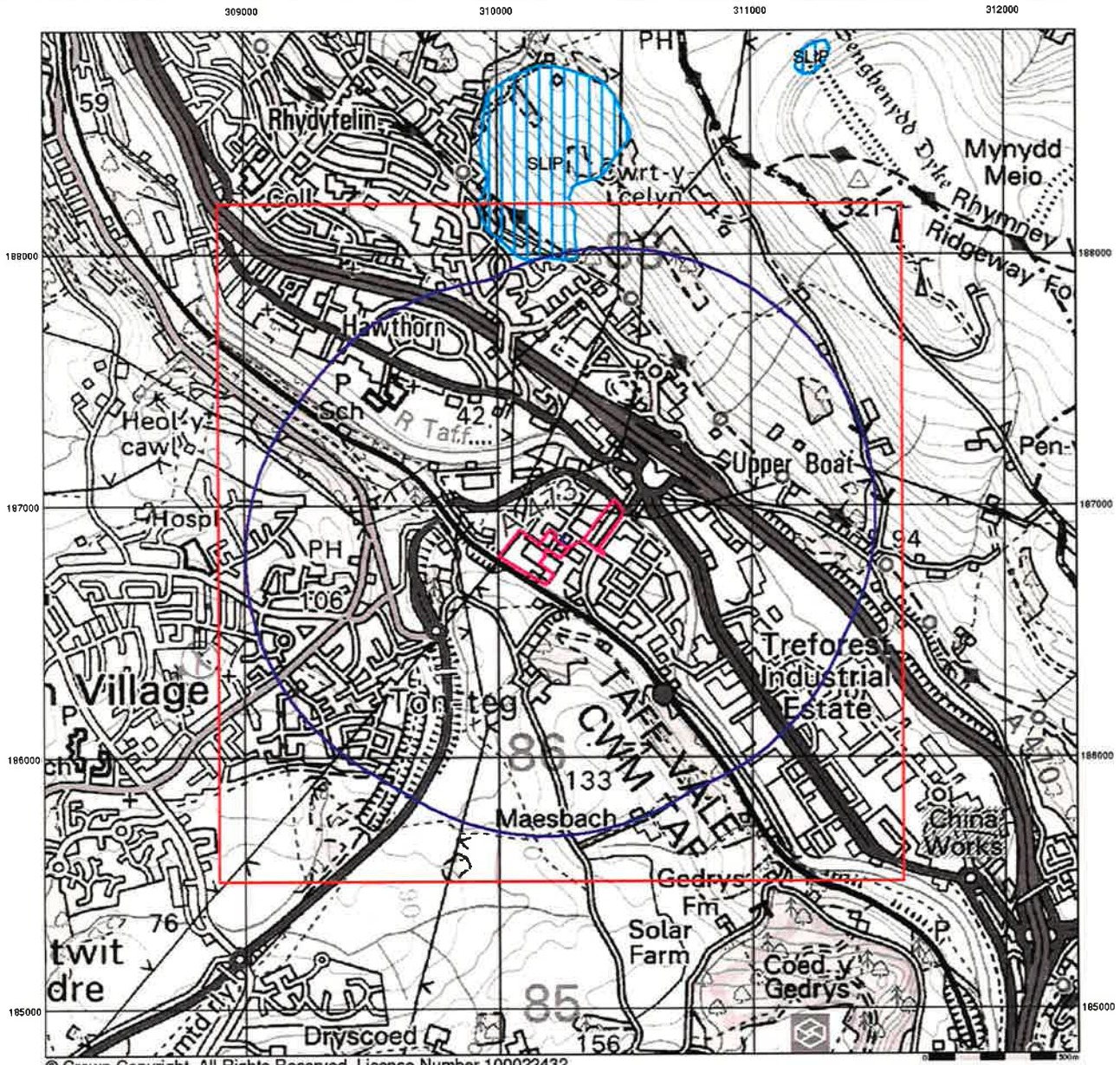


Order Details:

Order Number:	228391279_1_1
Customer Reference:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details:

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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Intégral Géotechnique

Artificial Ground and Landslip

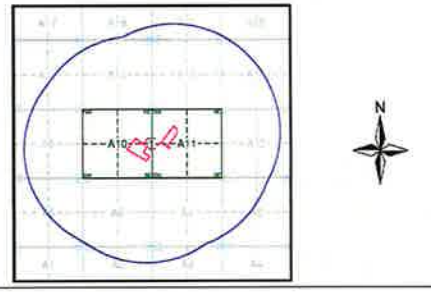
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



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Slice:	A
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Search Buffer (m):	1000

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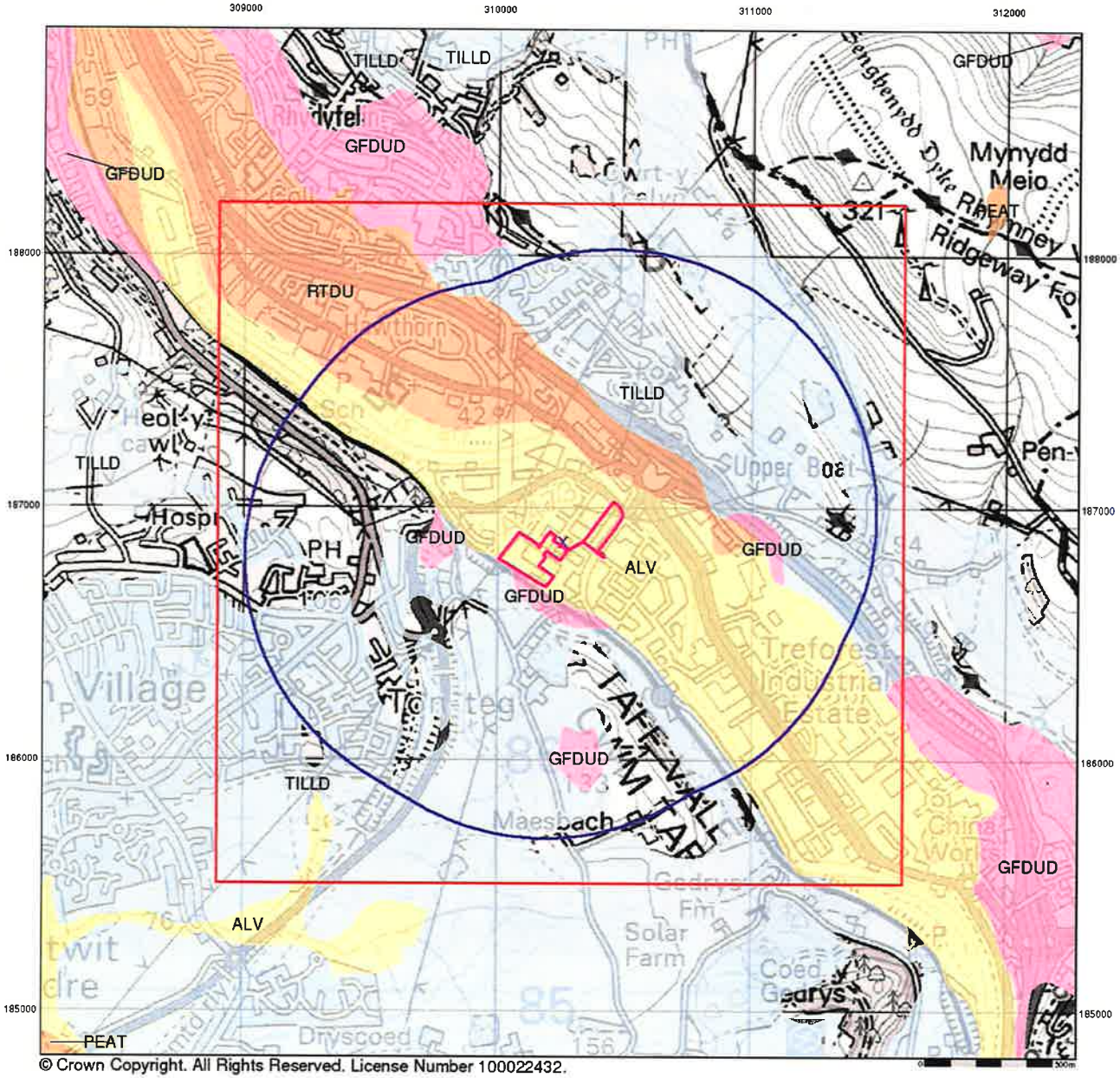
P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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



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Intégral Géotechnique

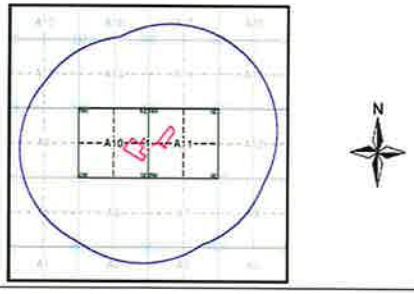
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



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Customer Reference:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

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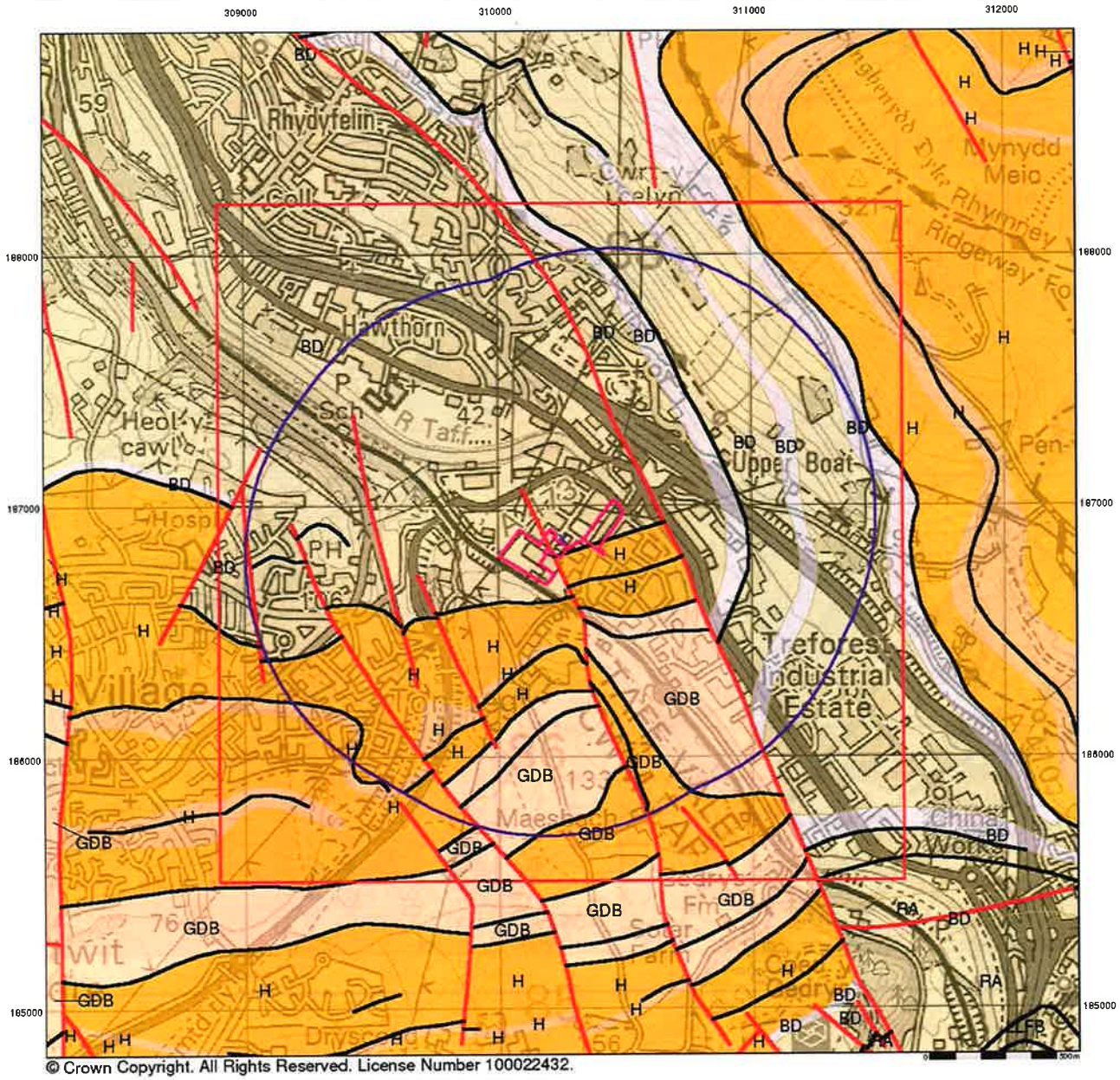

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Intégral Géotechnique

Bedrock and Faults

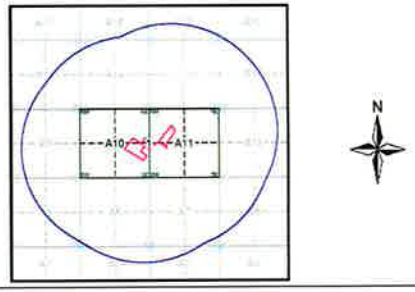
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



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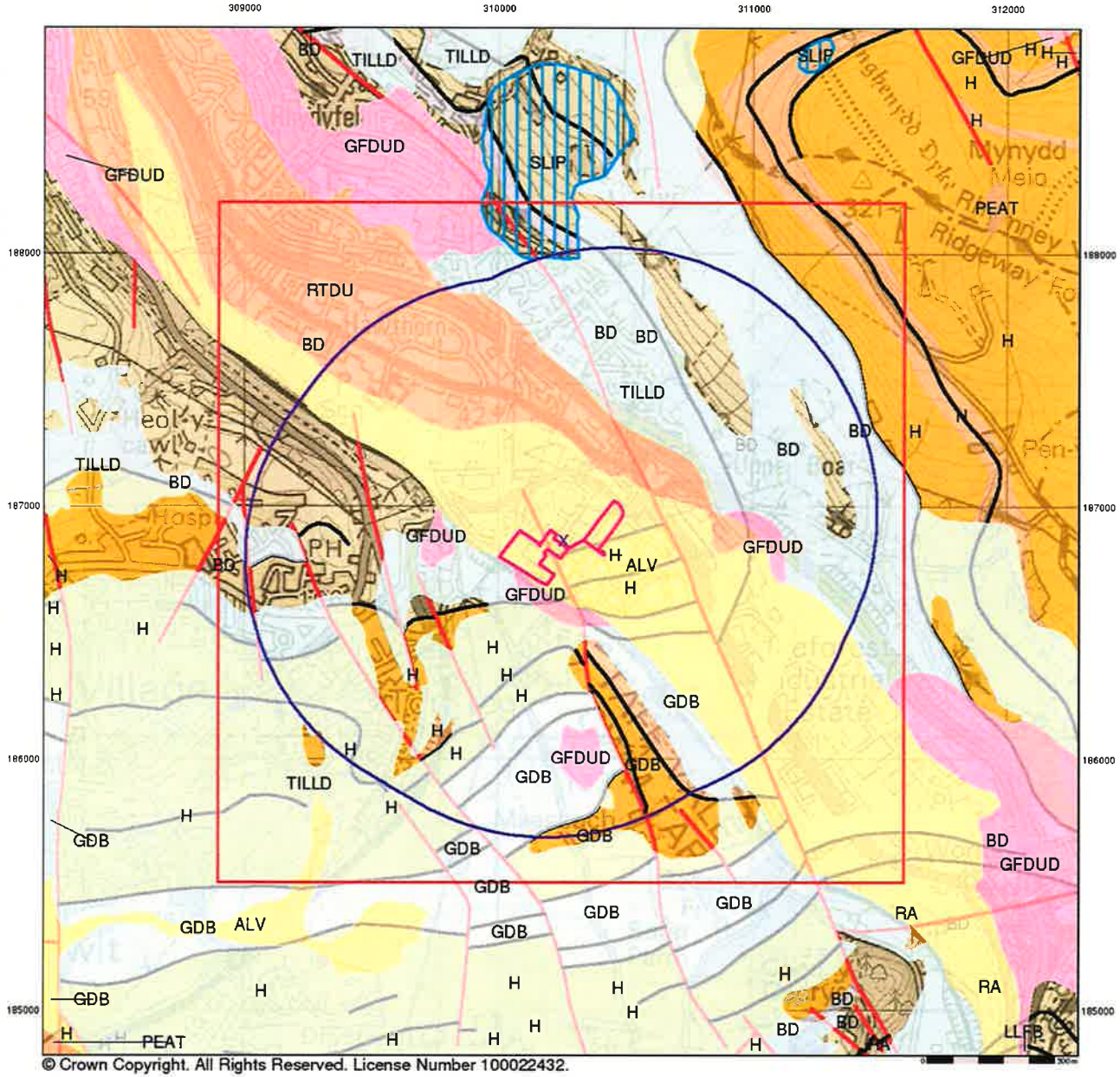

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Intégral Géotechnique

Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

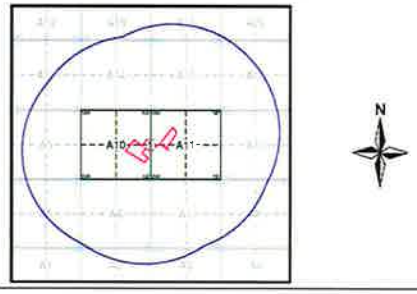
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



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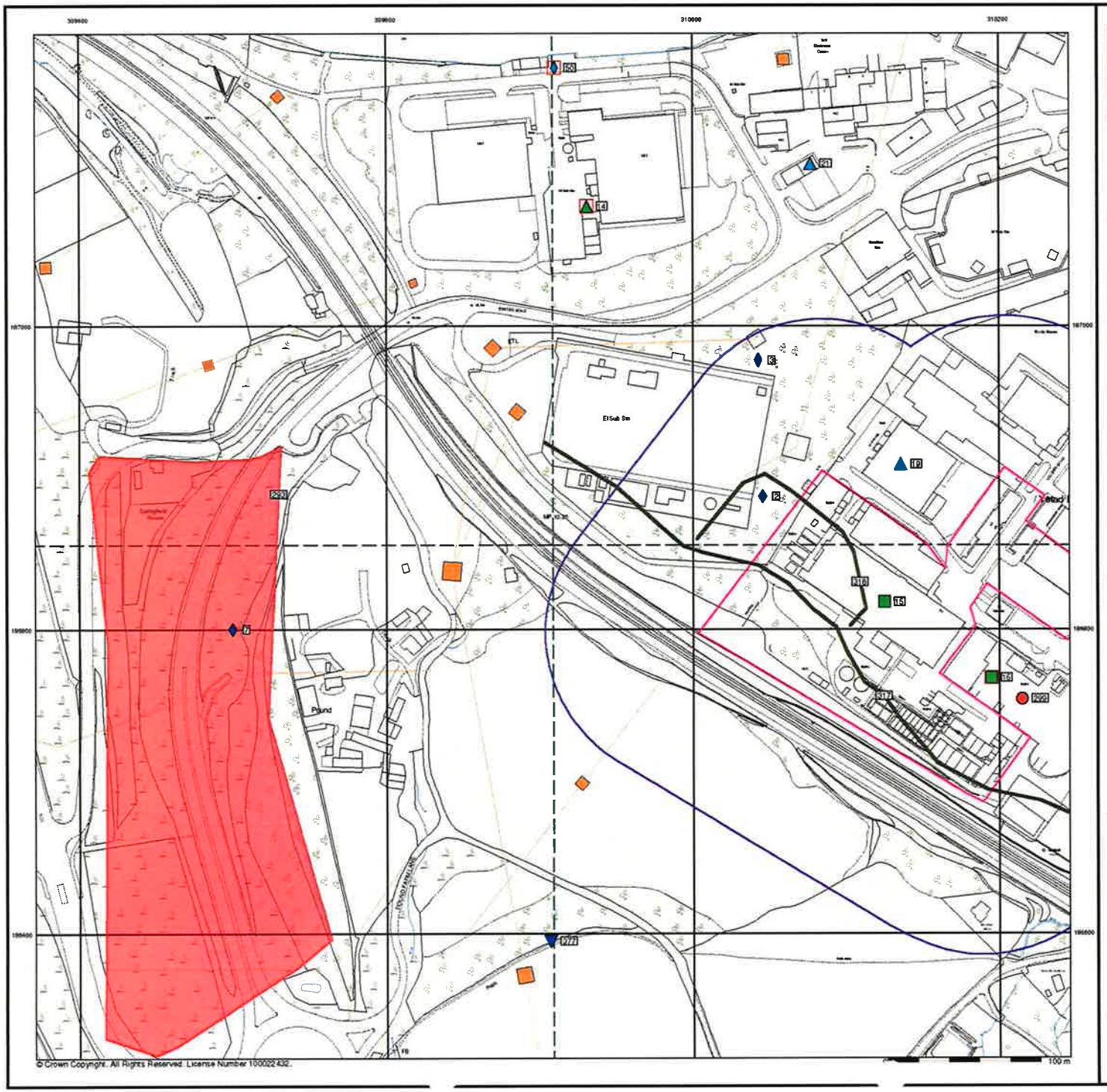
Site Details:

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ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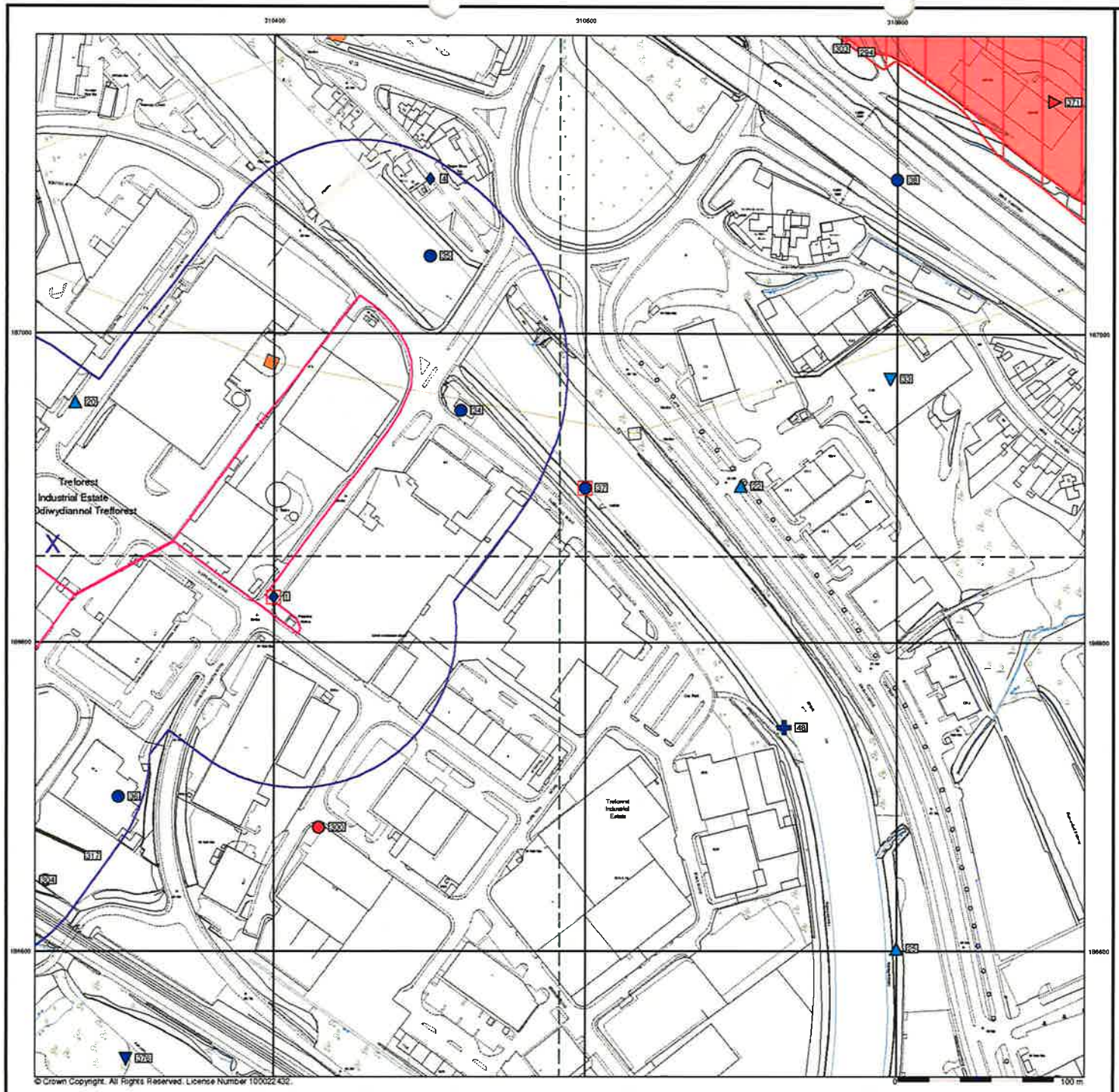

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Intégral
Géotechnique

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several or Type at Location
- Pylon
- Overhead Transmission Line

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

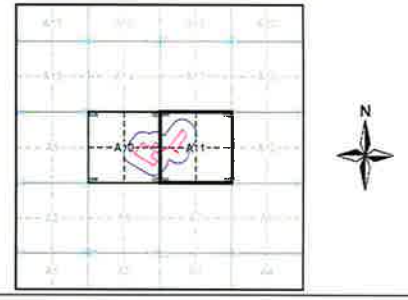
Geological

- 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)
- Registered Landfill Site
- 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 - Segment A11



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Plot Buffer (m):	100

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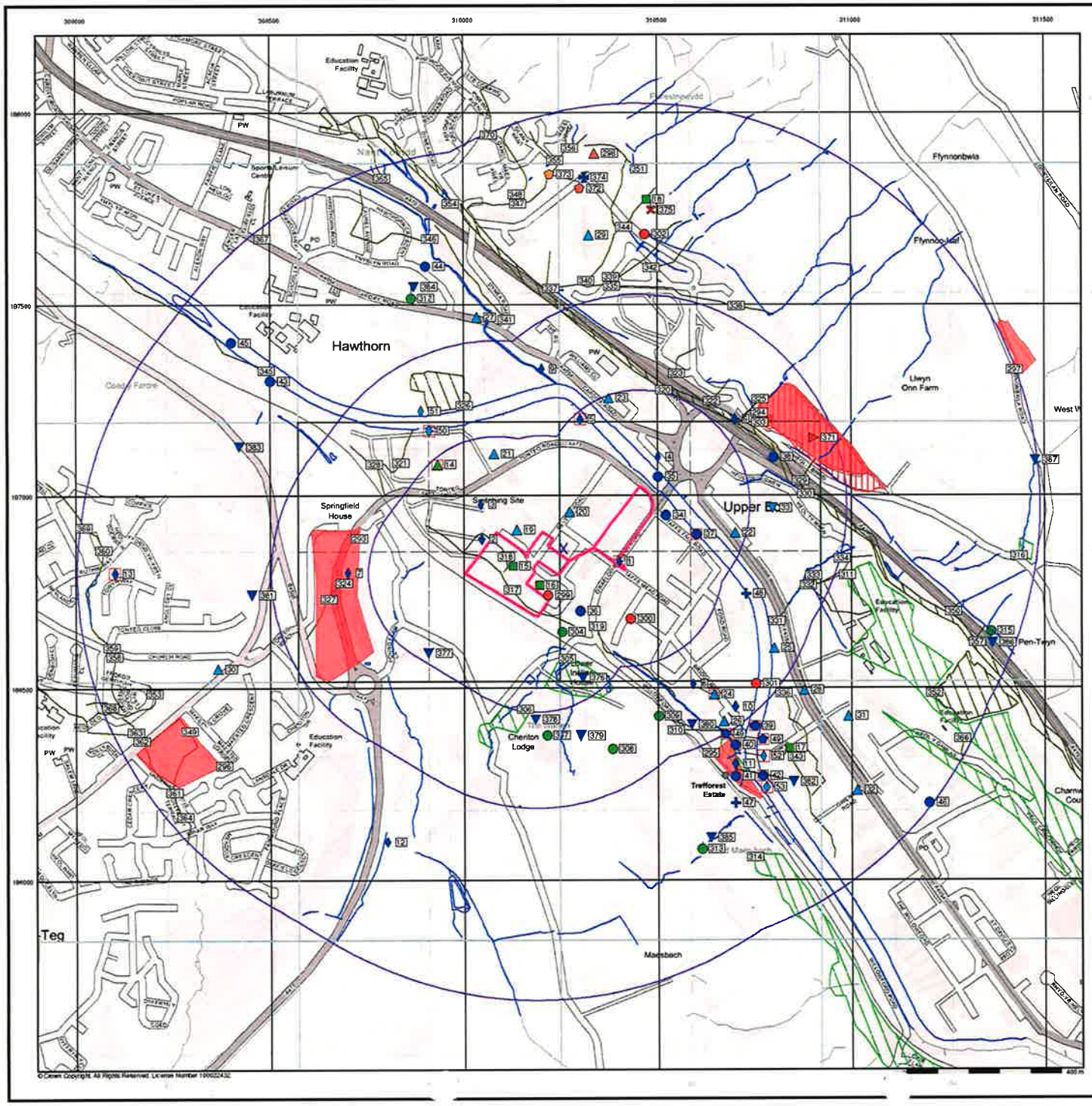
Web: www.envirocheck.co.uk



Intégral
Géotechnique

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

Agency and Hydrological
- Contaminated Land Register Entry or Notice (Location)
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- Integrated Pollution Prevention Control
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- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
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- Prosecution Relating to Authorised Processes
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- 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

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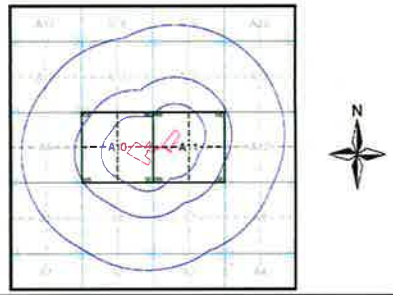
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- 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



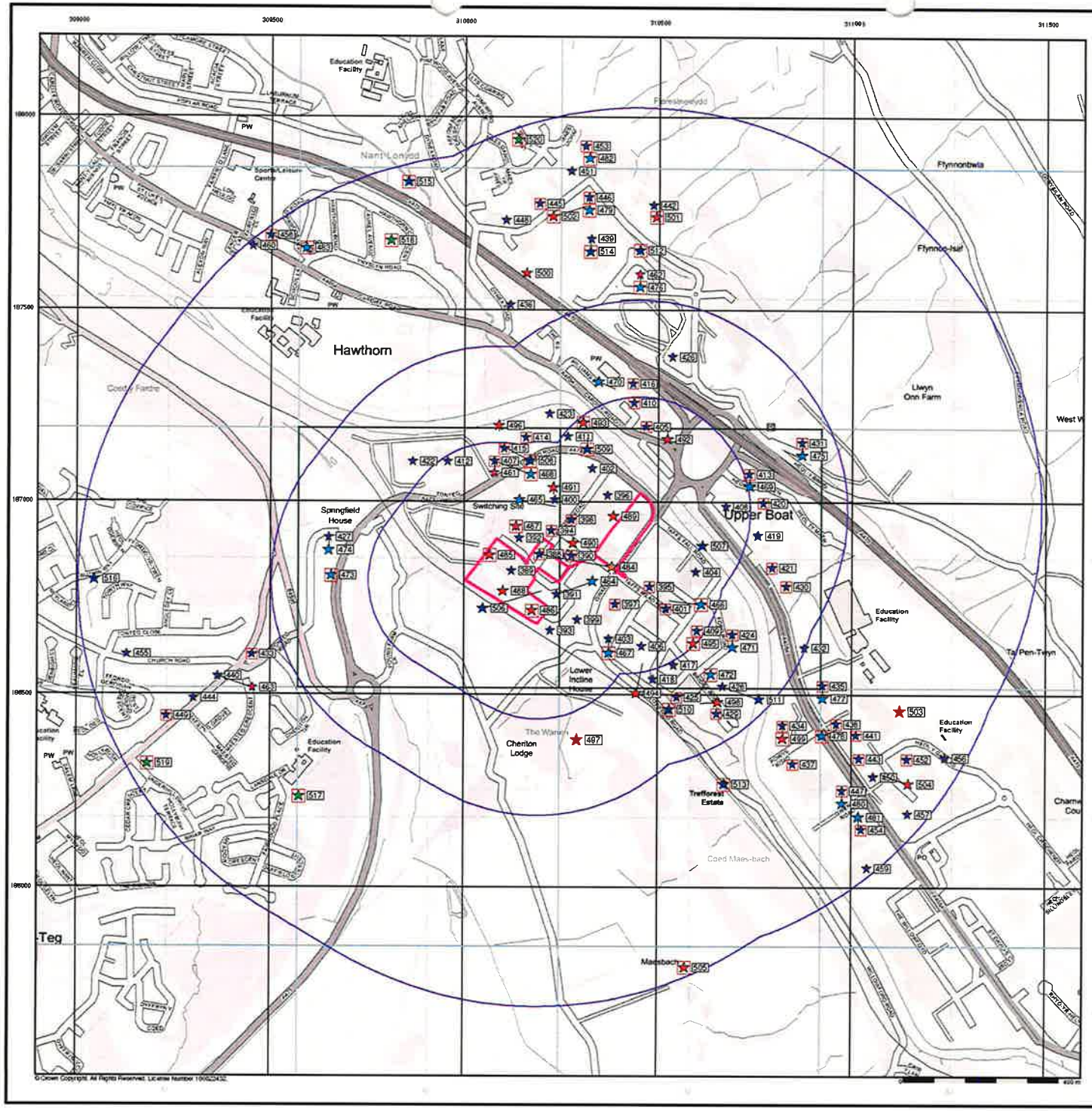
Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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



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Intégral Géotechnique

Industrial Land Use Map

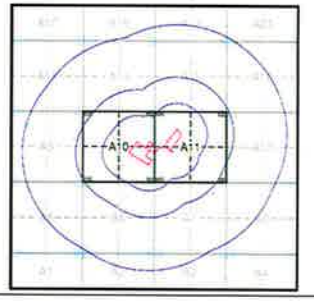
General

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



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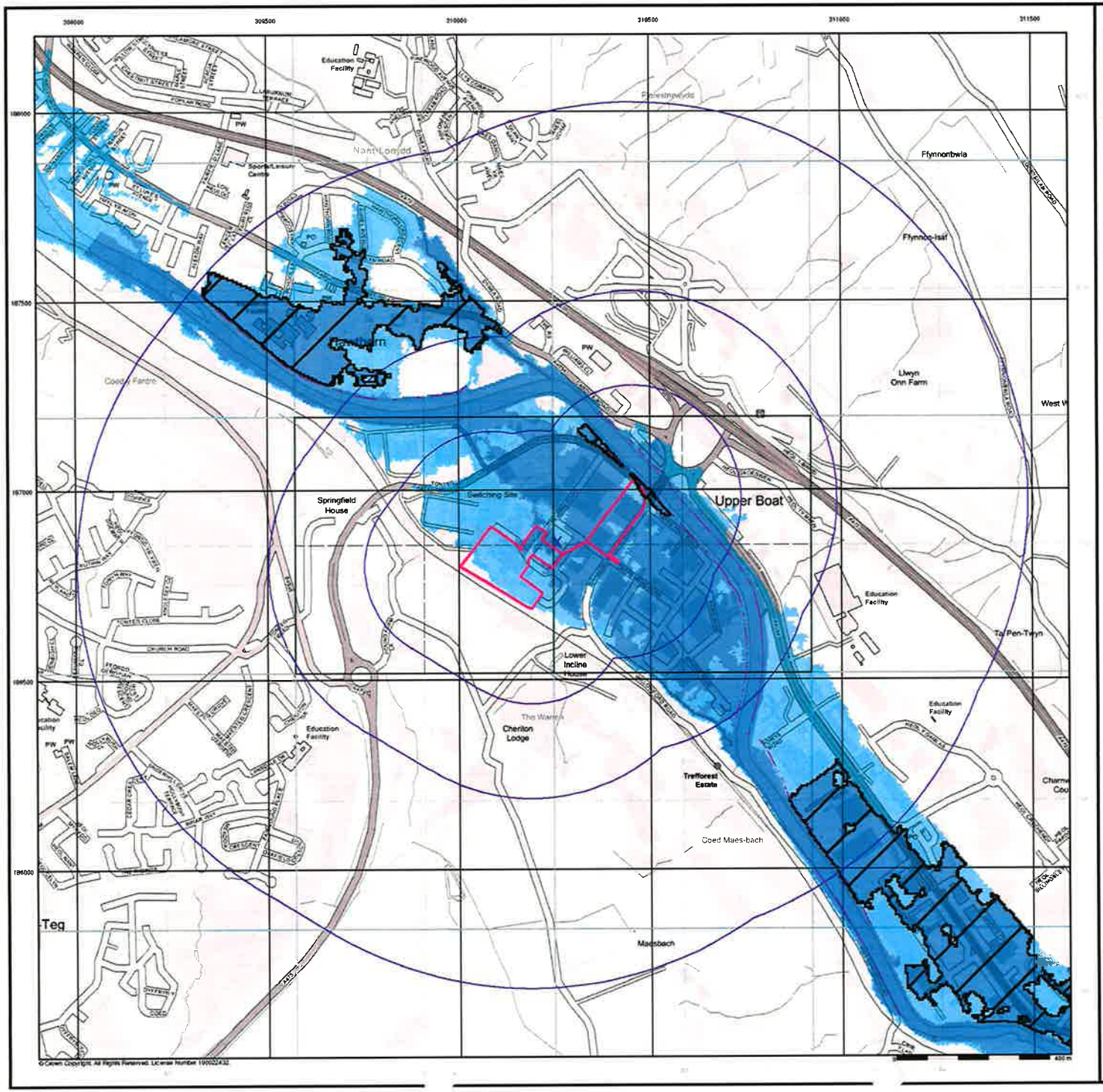
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



Intégral
Géotechnique

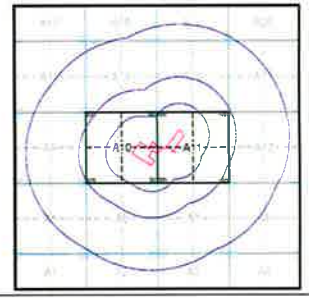
General

- 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



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Site Details

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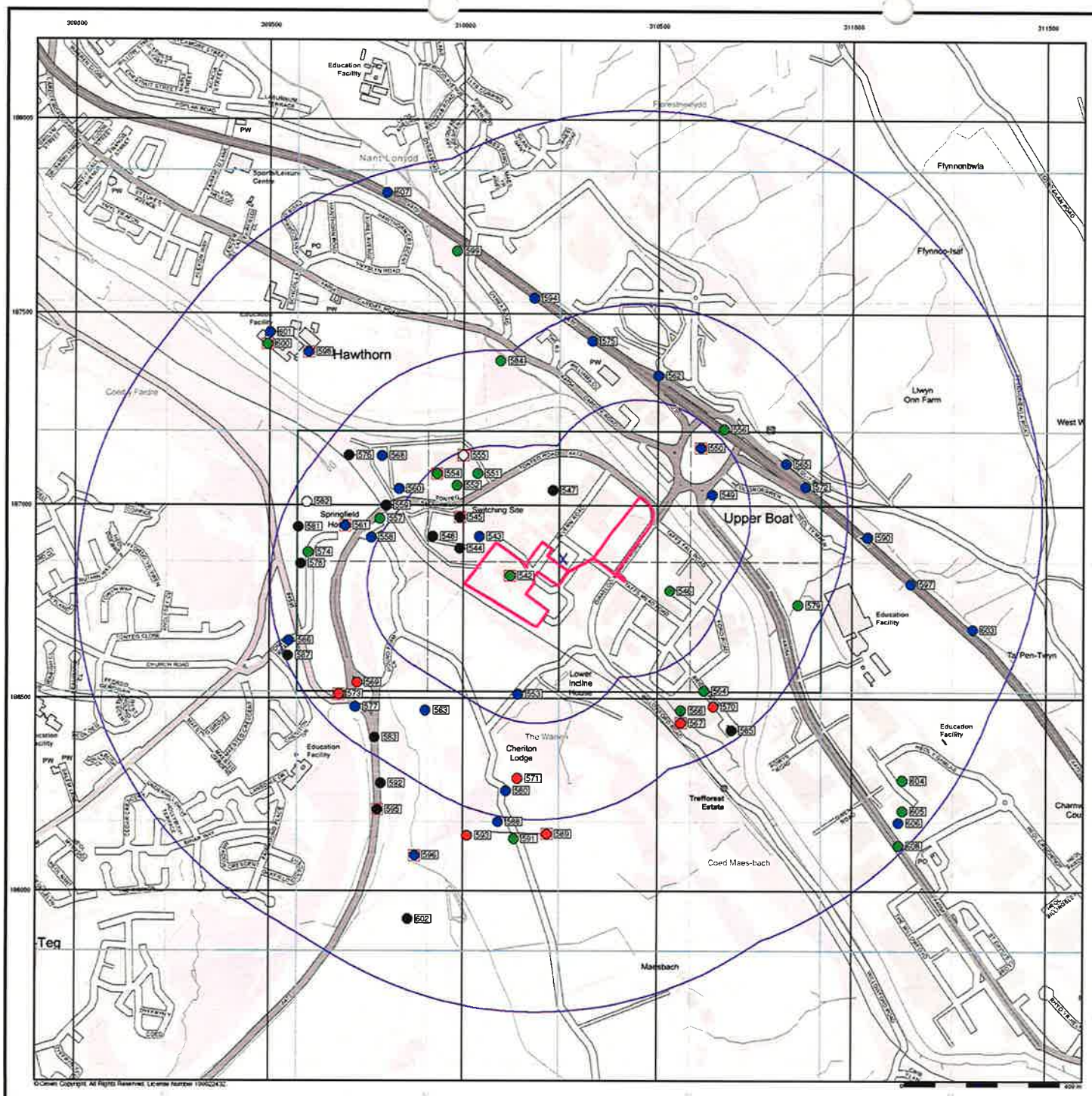


Intégral
Géotechnique

General

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

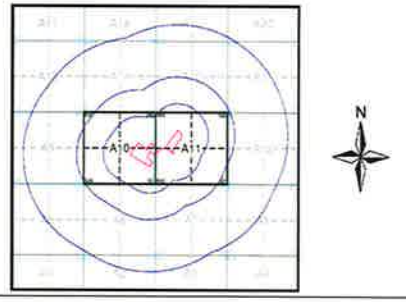
Agency and Hydrological (Boreholes)

- 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



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National Grid Reference:	310260, 186860
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Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

Intégral
Géotechnique

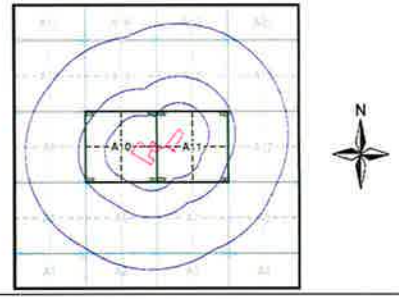
General
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

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
- Master Contour
- Spot Height
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



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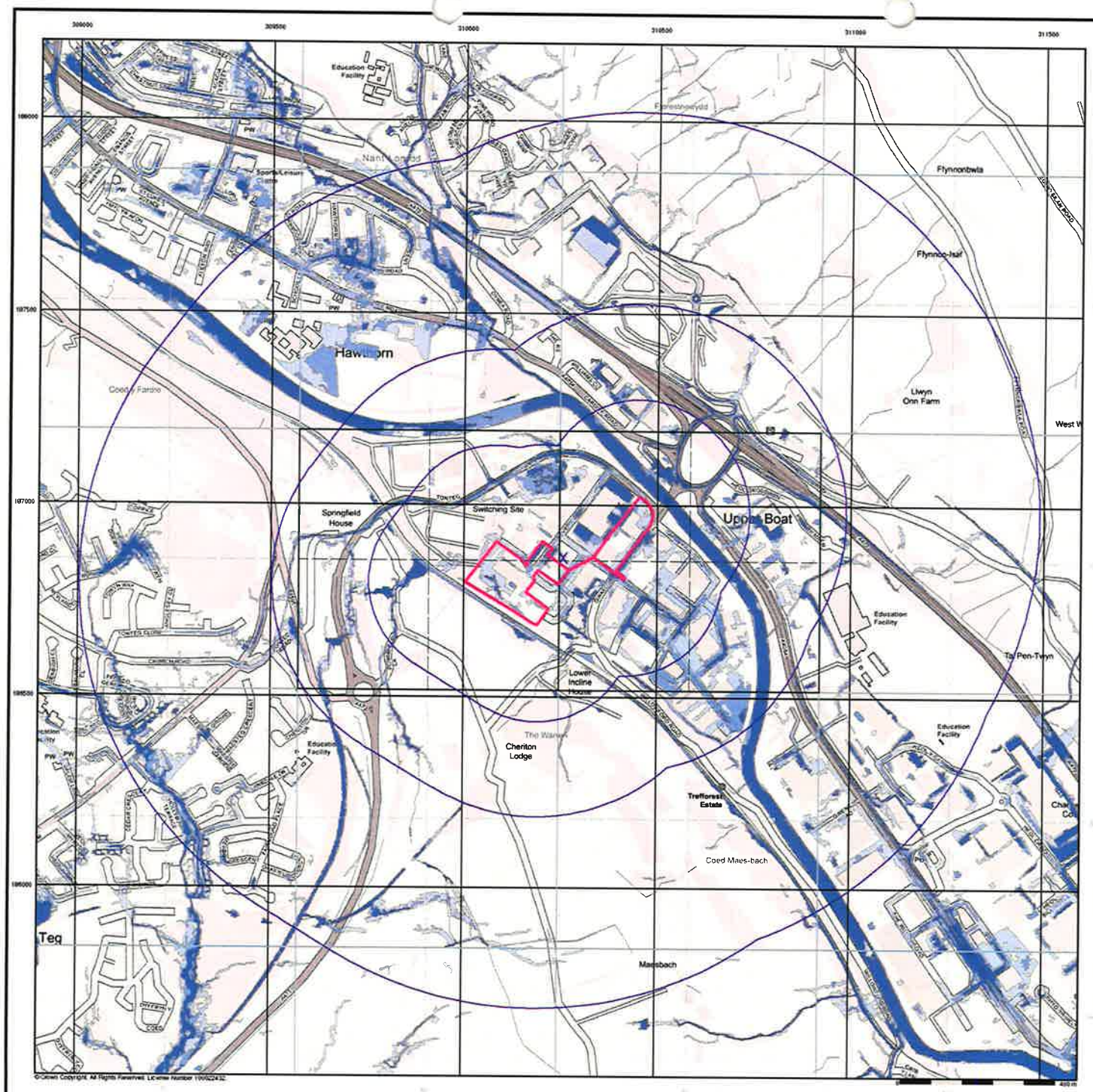

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Intégral
Géotechnique

General

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

Risk of Flooding from Surface Water

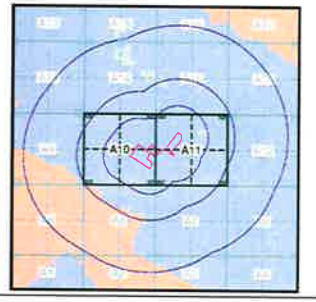
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



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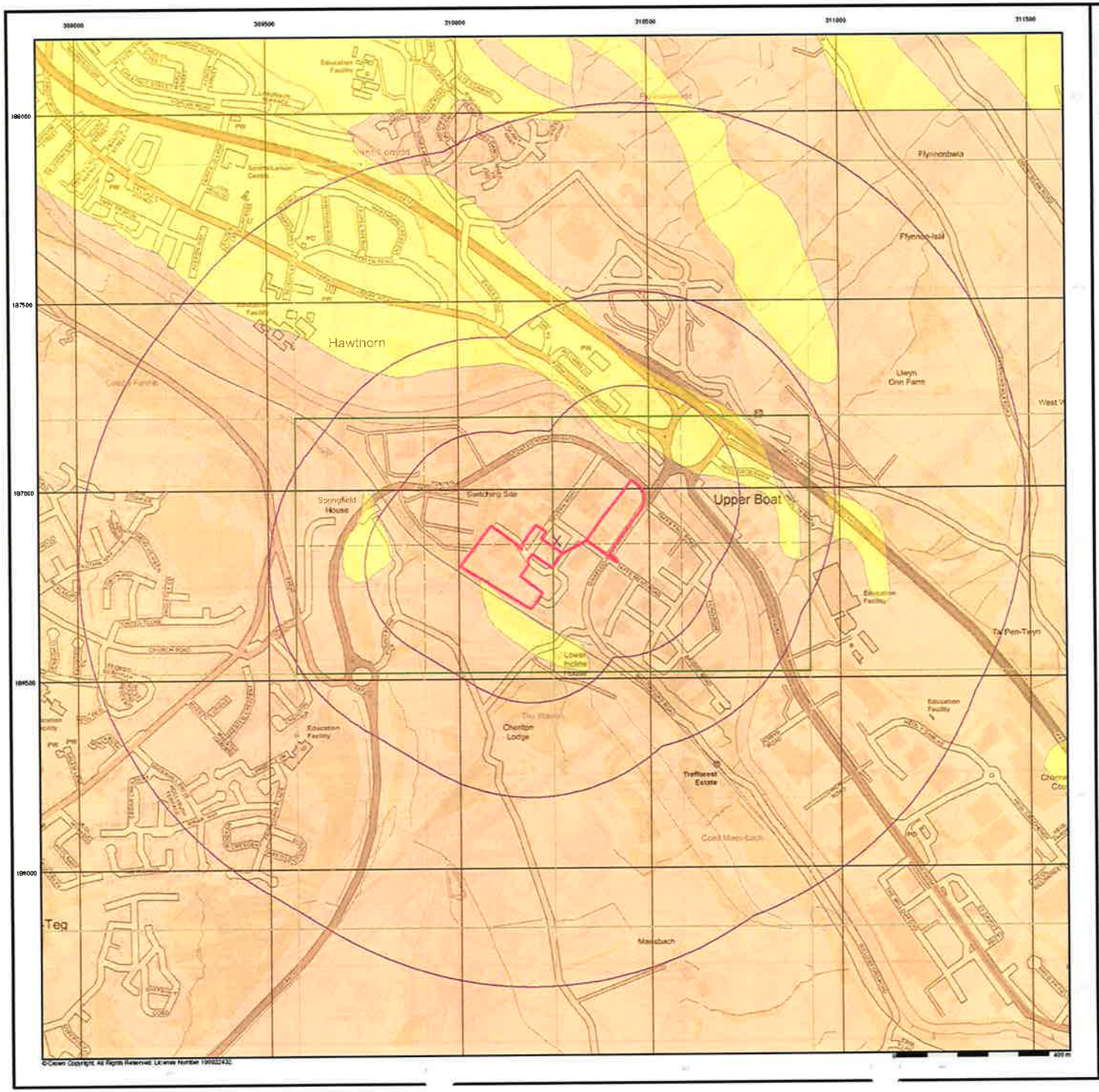

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Intégral Géotechnique

General

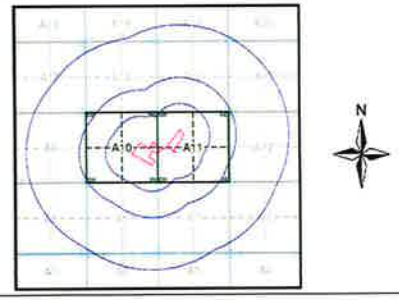
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A



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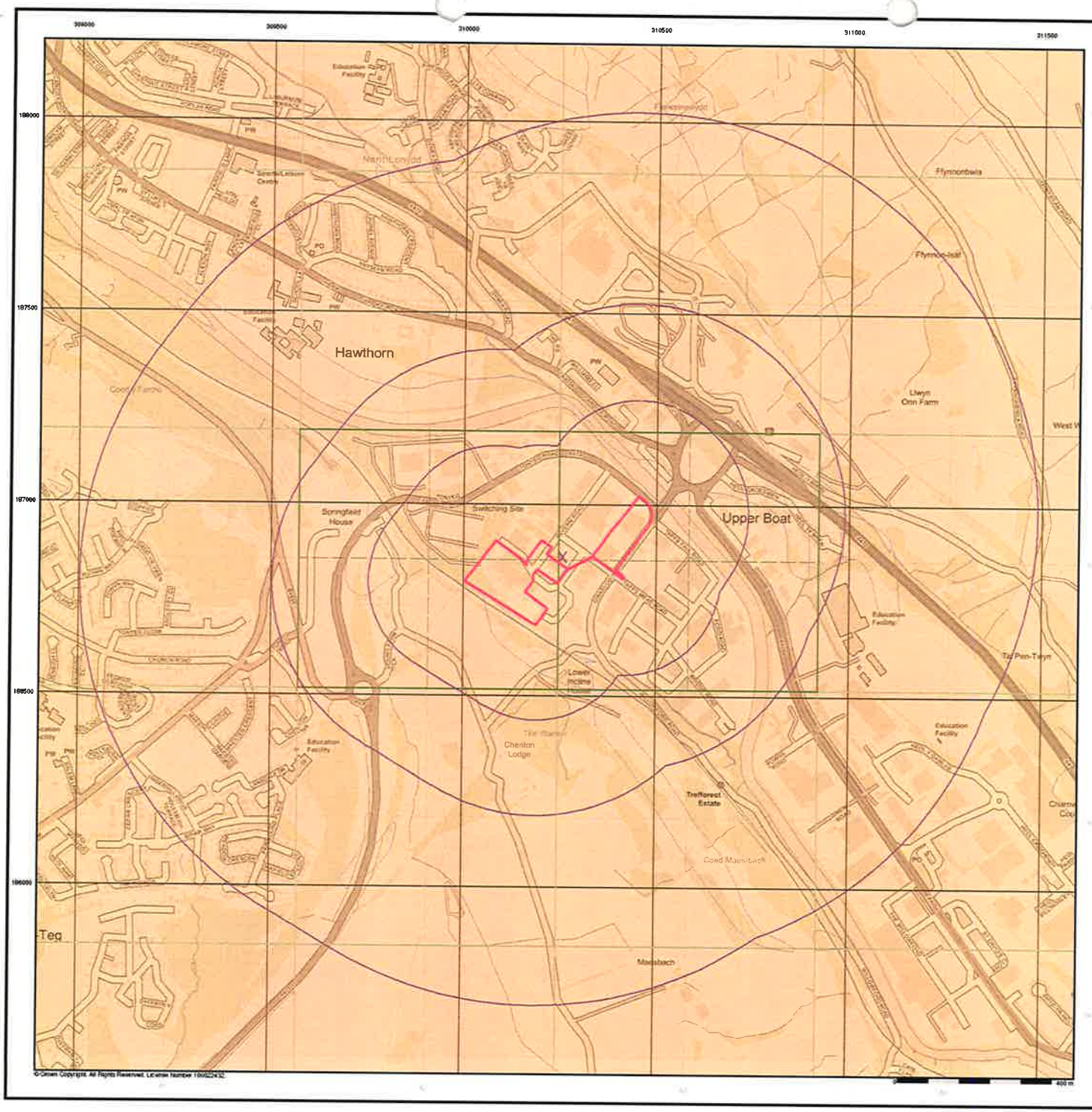


Intégral
Géotechnique

General

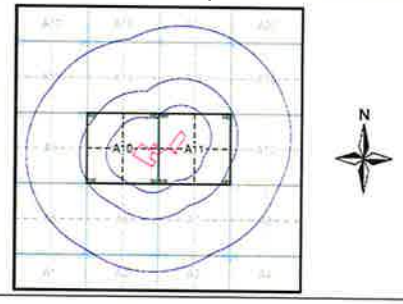
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

< 1.8
1.8 - 2.2
2.2 - 3.0
> 3.0

Estimated Soil Chemistry Cadmium - Slice A



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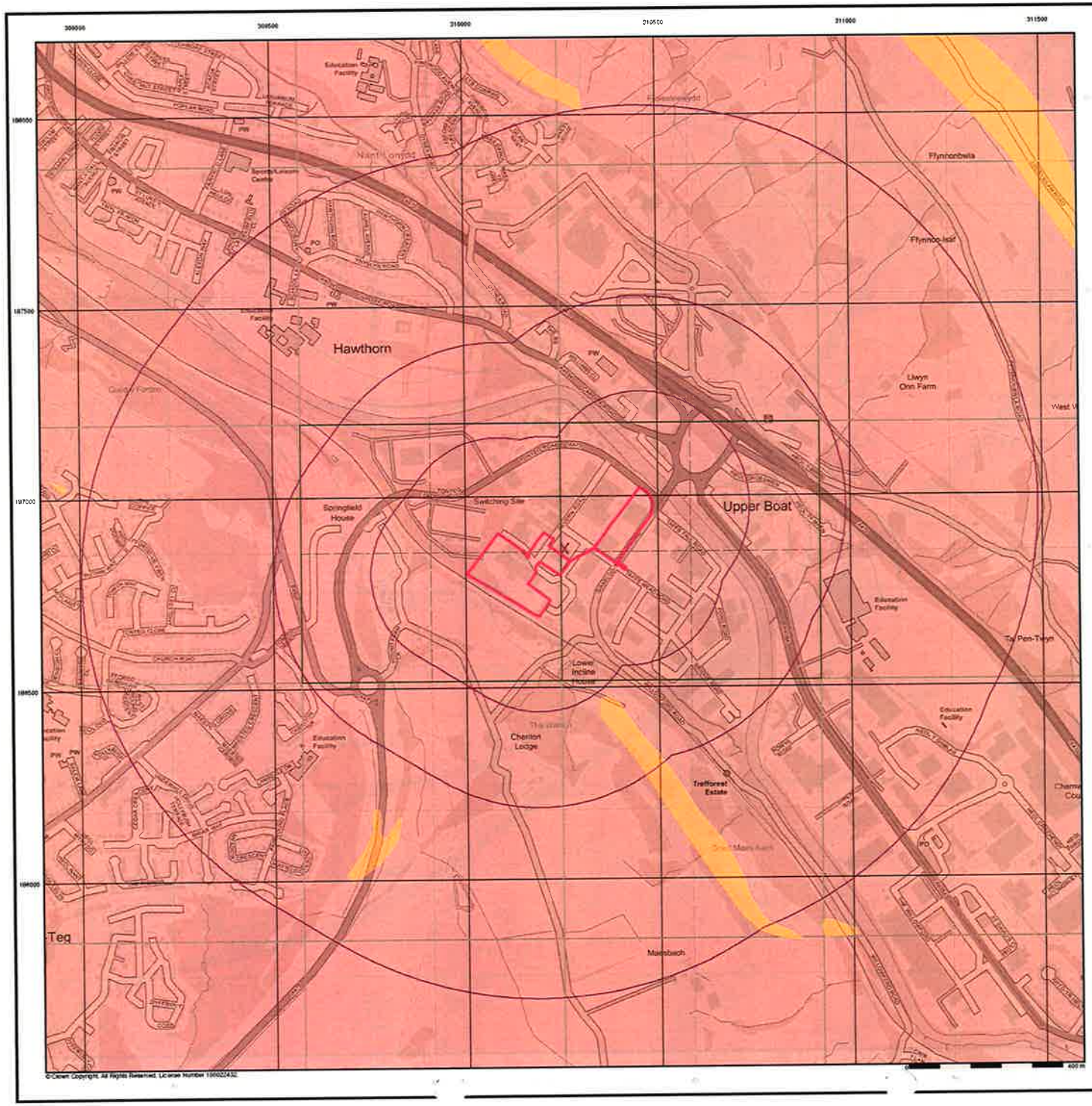
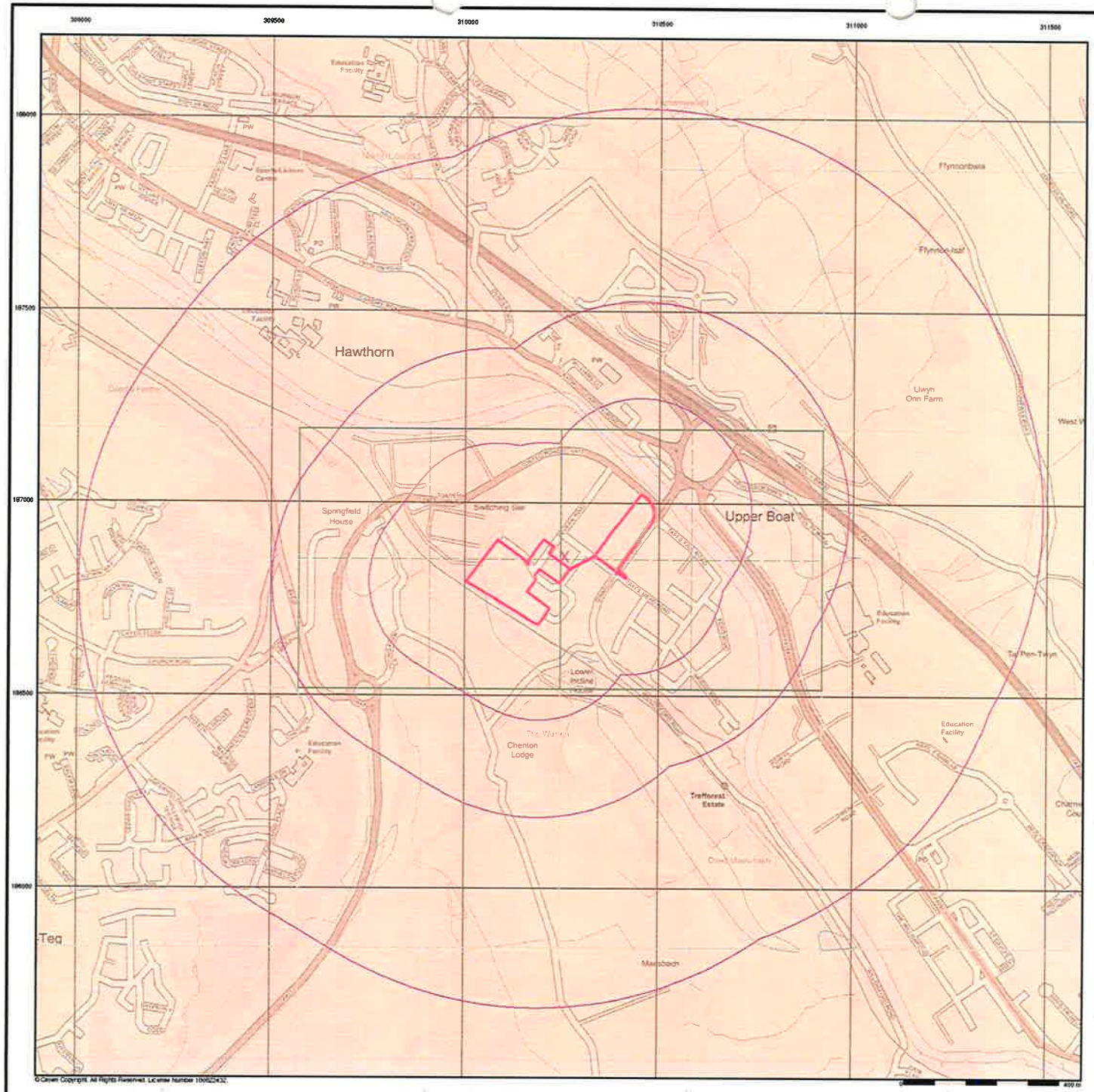

Hawthorn
Upper Boat
Springfield House
Switching Site
Lower Incline
Cherton Lodge
Treforest Estate
Maesbach
Teg
Llwyn Onn Farm
Ty Pen-Twyn
Education Facility
Education Facility
Education Facility
Education Facility
Ffynnonbwla
Ffynnoc-isaf
Nant Lonydd
Quakers Yard
Quakers Yard Comp
Quakers Yard Facility
Facility
Facility



Intégral Géotechnique

General

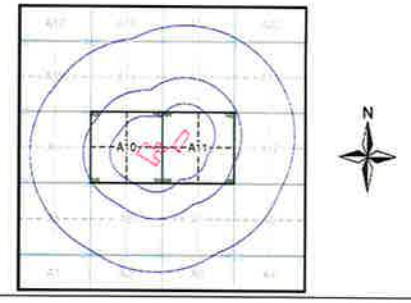
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



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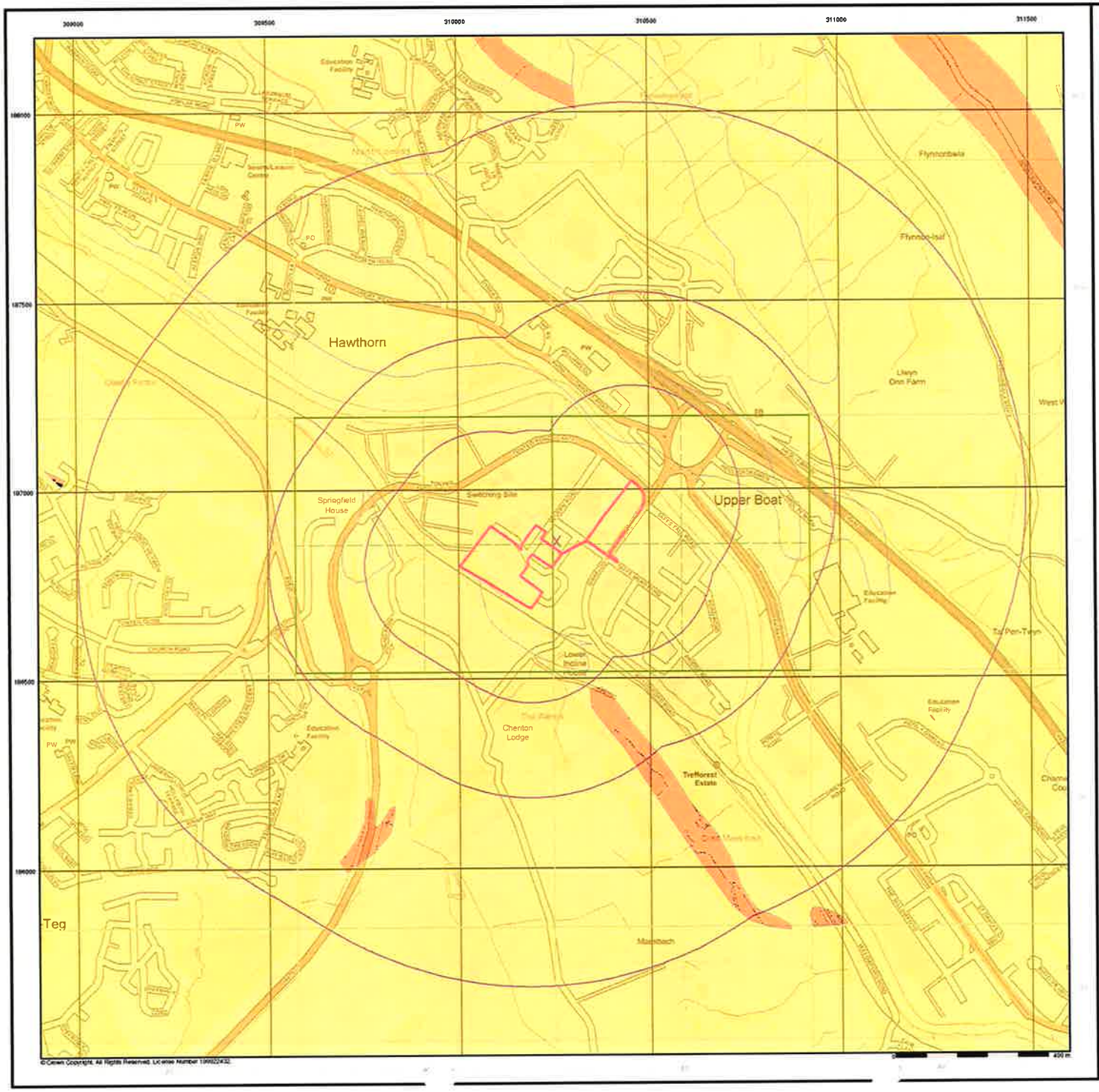

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Intégral Géotechnique

General

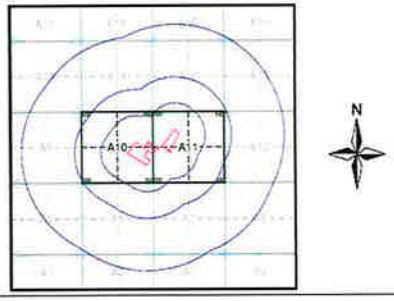
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



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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
·286 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
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
Co. Bore. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. 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
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
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
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

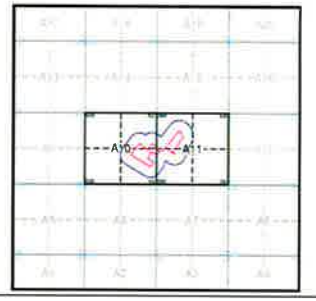
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community 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
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m 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

Intégral Géotechnique

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1885	2
Glamorganshire	1:10,560	1901	3
Glamorganshire	1:10,560	1921	4
Glamorganshire	1:10,560	1947	5
Historical Aerial Photography	1:10,560	1947 - 1949	6
Glamorganshire	1:10,560	1953	7
Ordnance Survey Plan	1:10,000	1965	8
Ordnance Survey Plan	1:10,000	1970 - 1976	9
Ordnance Survey Plan	1:10,000	1981 - 1984	10
Ordnance Survey Plan	1:10,000	1993	11
10K Raster Mapping	1:10,000	1999	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2019	14

Historical Map - Slice A



Order Details

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Site Area (Ha): 4.09
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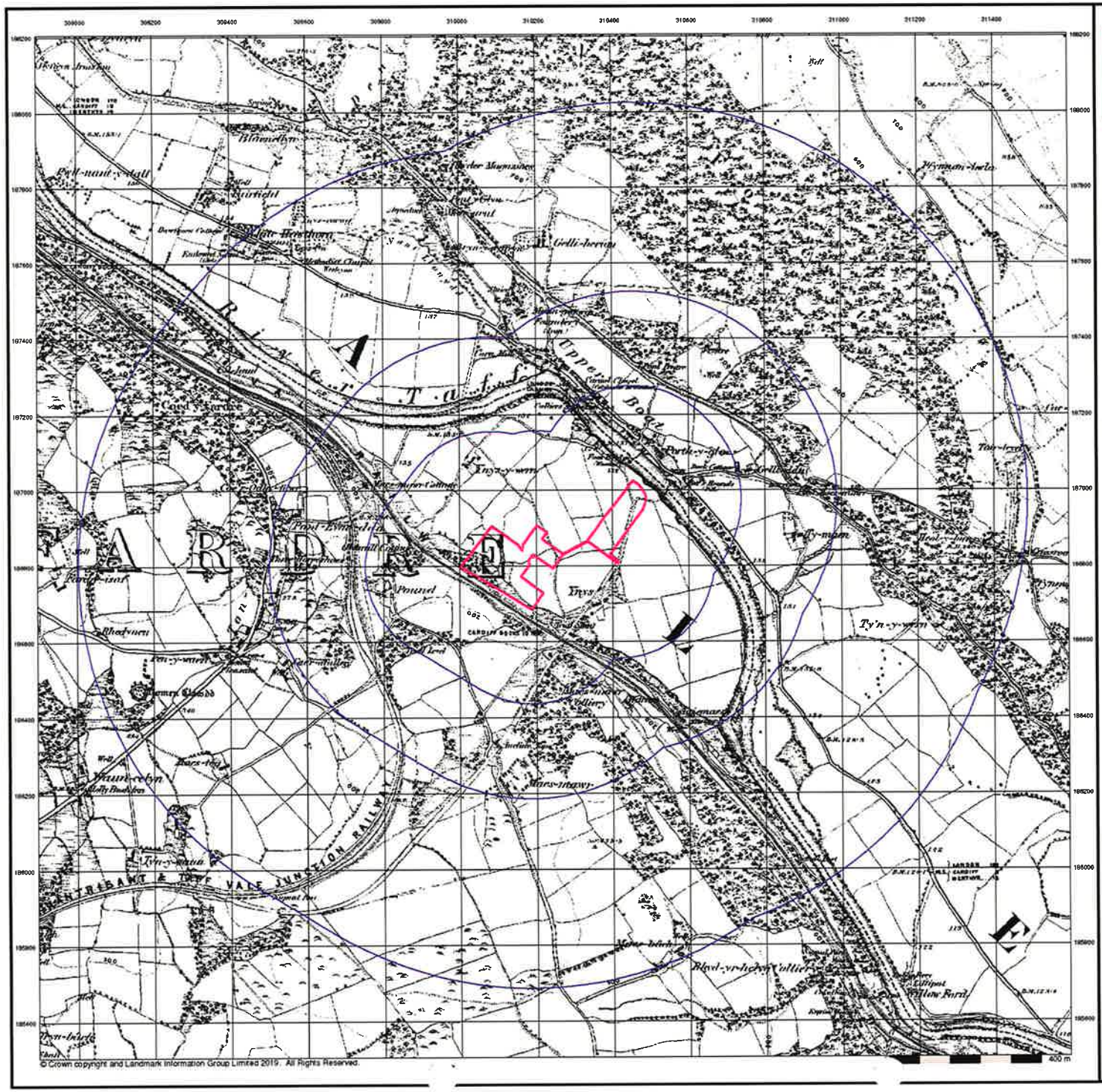

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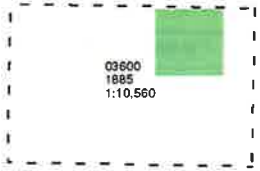
Intégral Géotechnique

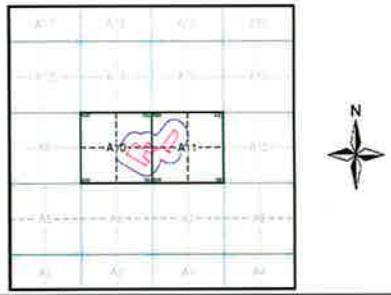
Glamorganshire
Published 1885
Source map scale - 1:10,560

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



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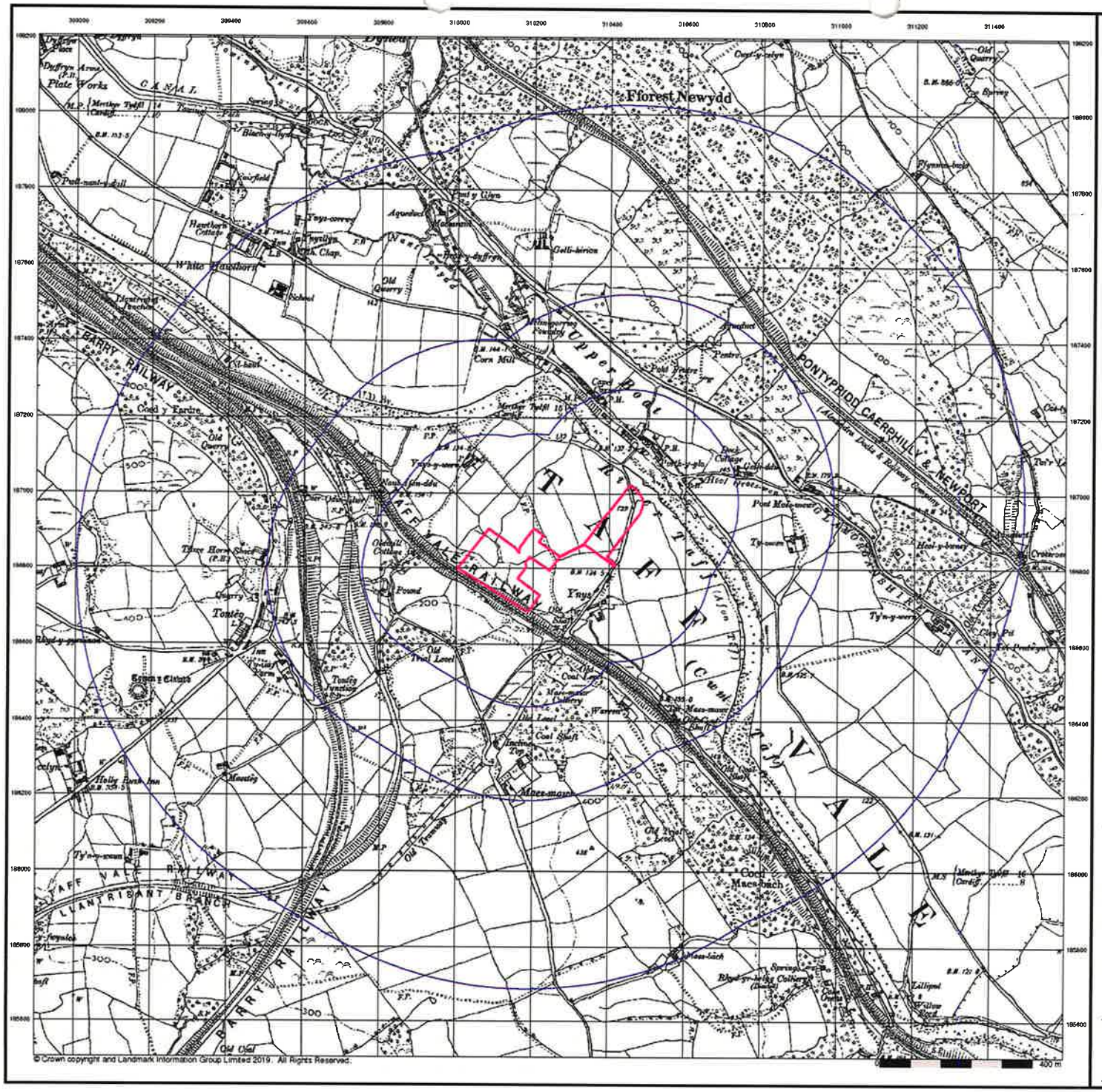


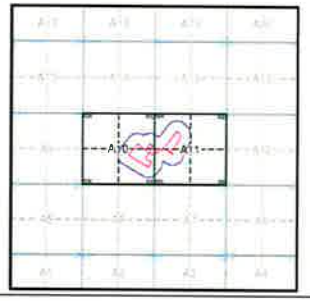
Intégral Géotechnique

Glamorganshire
Published 1901
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

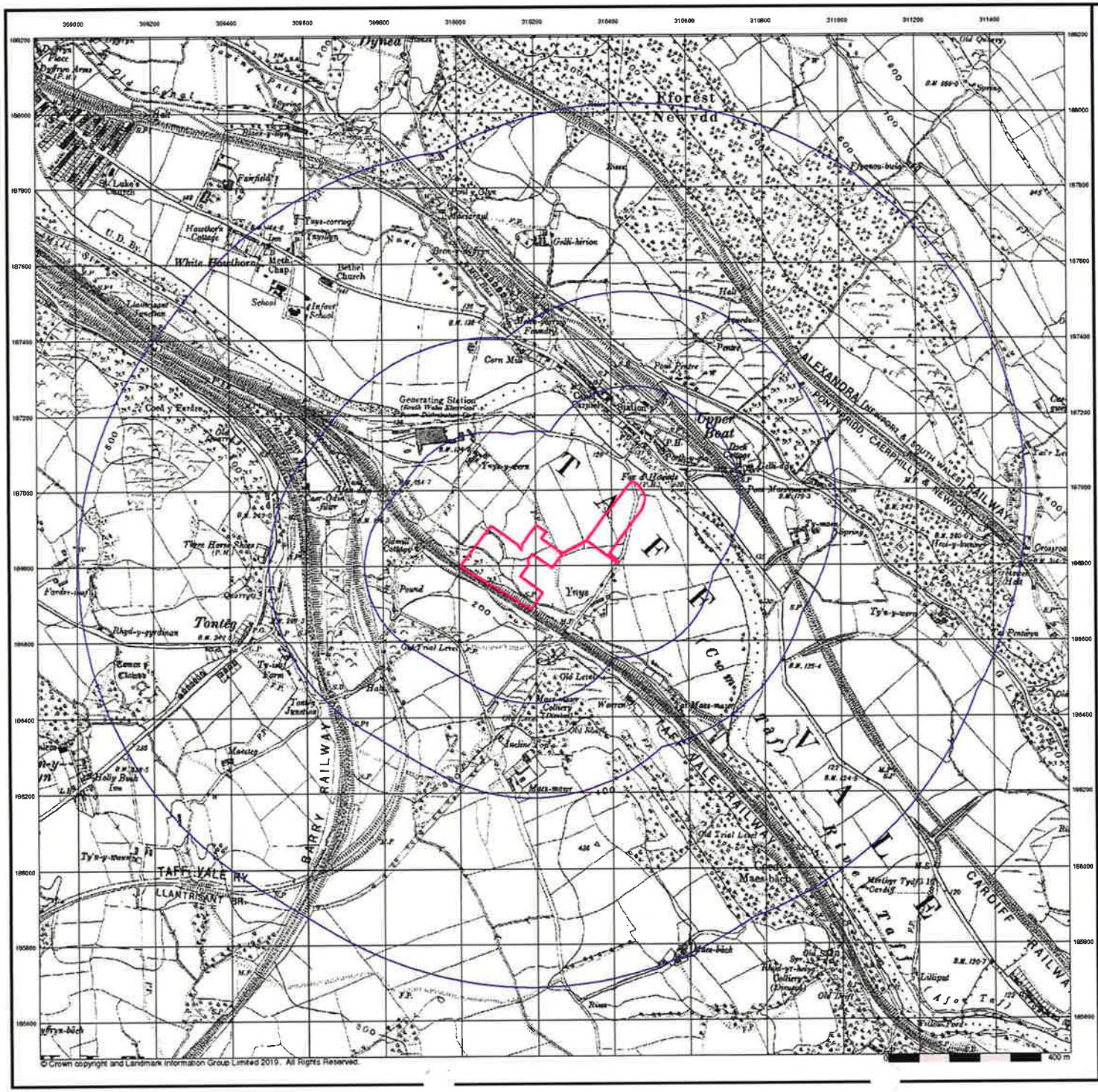


Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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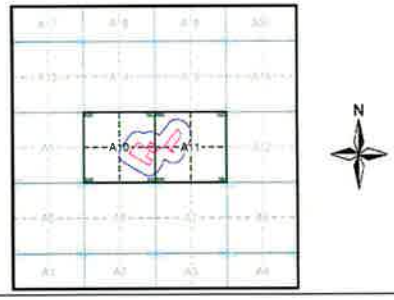
Intégral Géotechnique

Glamorganshire
Published 1921
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:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
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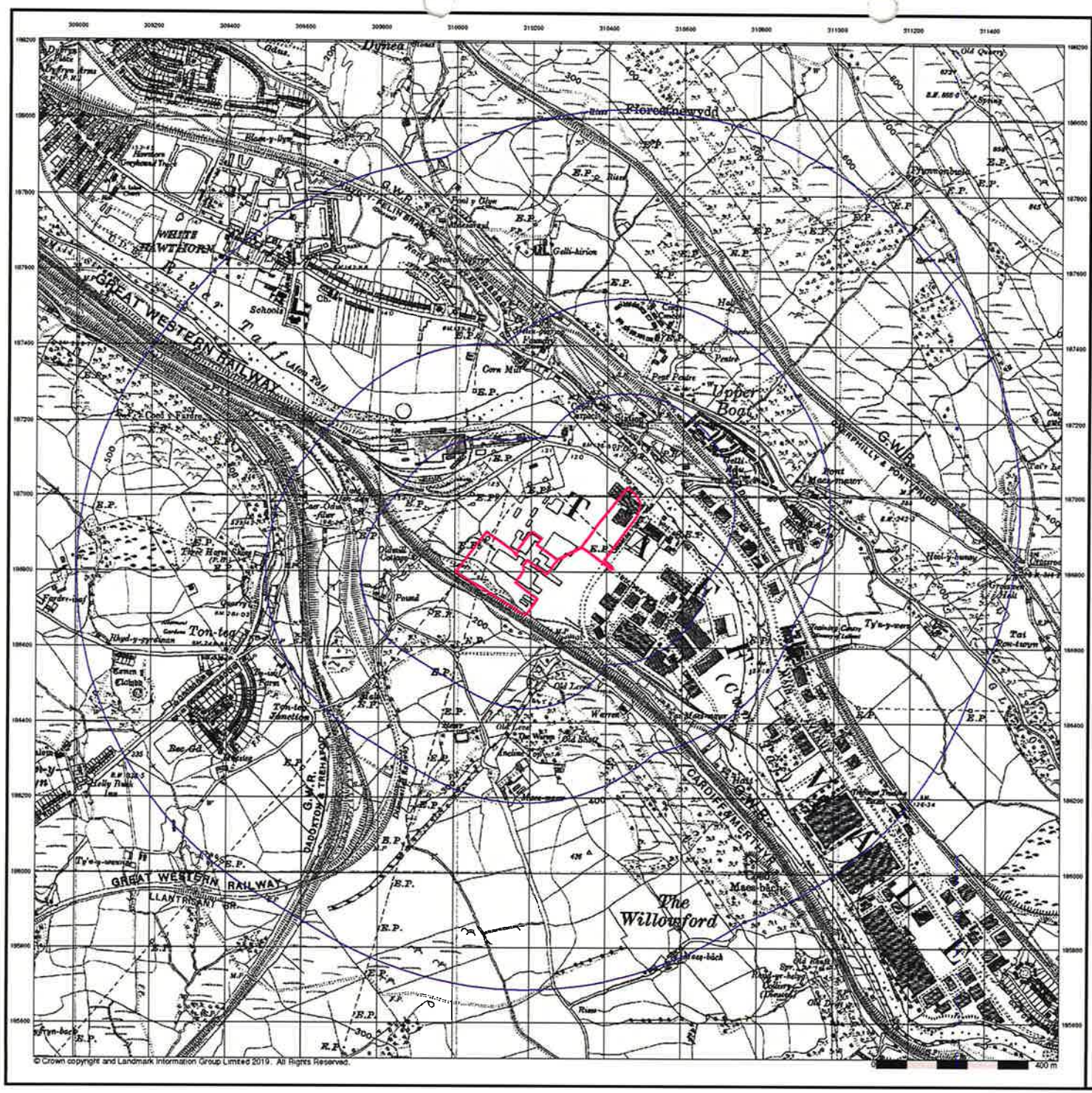
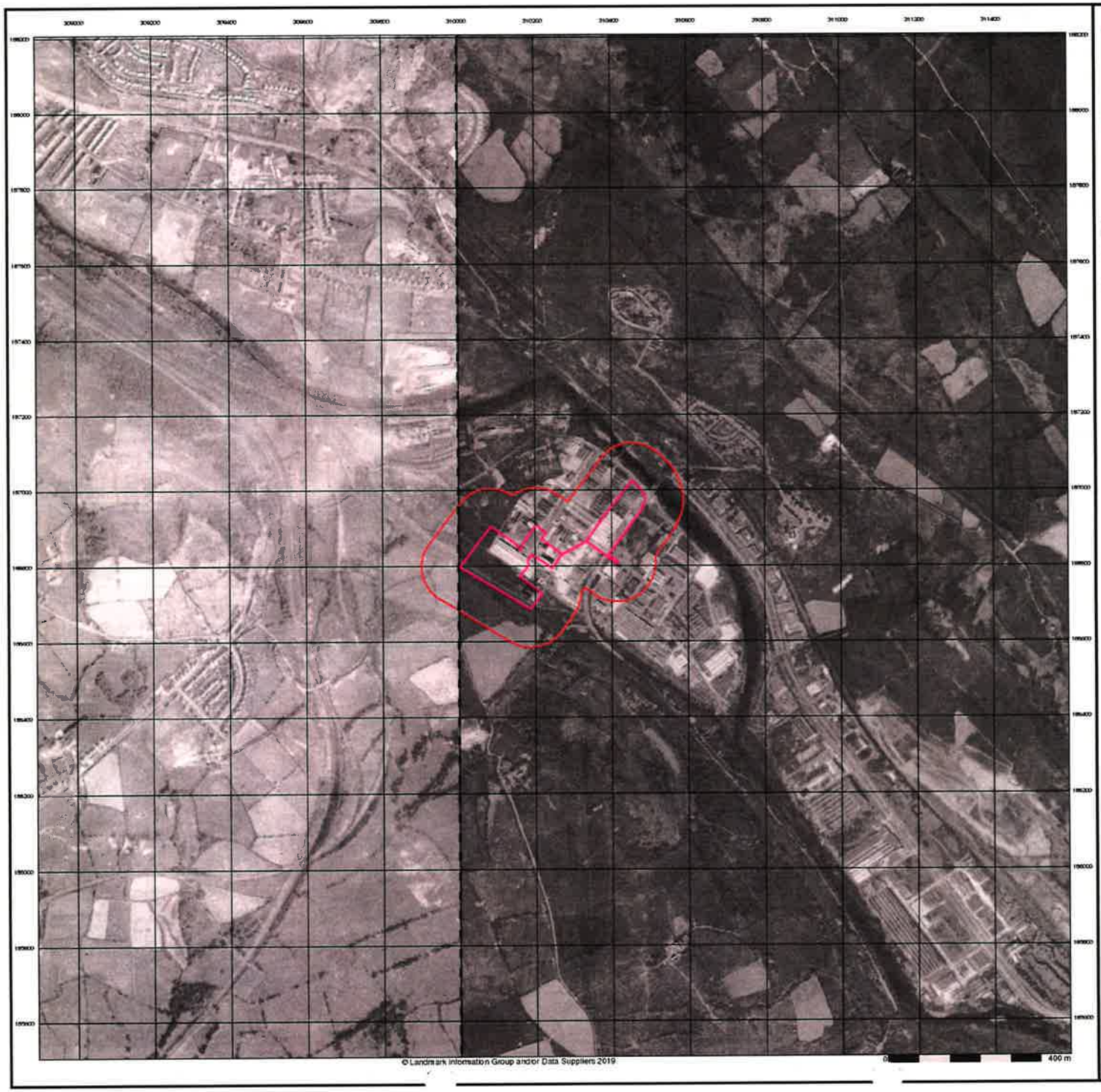
Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ


Dynea
Fforestnewydd
WELFIT HAWTHORN
GREAT WESTERN RAILWAY
Upper Boat
G.W.R.
Ton-teg
Tyle-gwyn
Tai Ton-teg
Tyle-gwyn
Old Quarry
Old Shaft
Warren
Mast
Pound
Corn Mill
Schools
Chy
Hall
Inclined Plane
Tramway
Rec. Gd.
Tyle-gwyn
GREAT WESTERN RAILWAY
LLANTRISANT BR.
G.W.R.
BARRY DOCK & TREHAFOD
CARDIFF & MERTHYR
The Willowford
Mass-bach
Ffynon-bach
Rhyd-y-gyrdinau
Tyle-gwyn
Tyle-gwyn
Tyle-gwyn



Intégral
Géotechnique

Historical Aerial Photography
Published 1947 - 1949
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.

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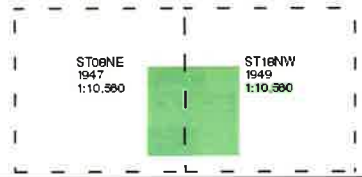
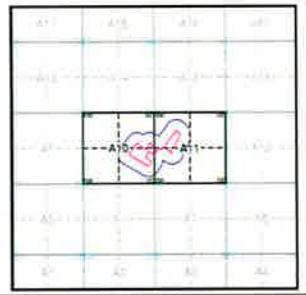
Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



BRITISH LIBRARY

Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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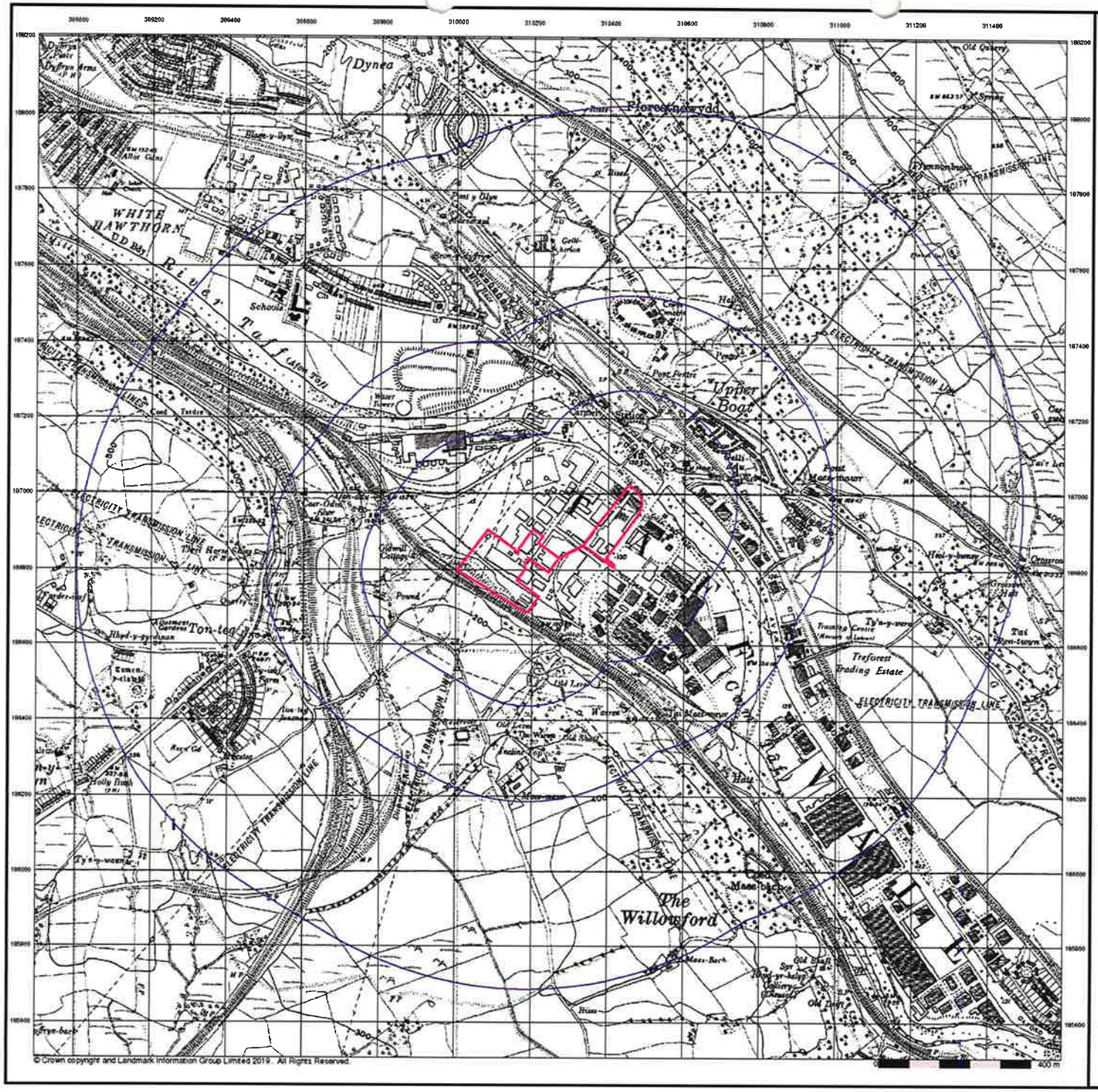
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Intégral Géotechnique

Glamorganshire
Published 1953
Source map scale - 1:10,560

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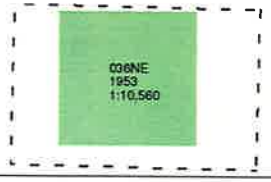
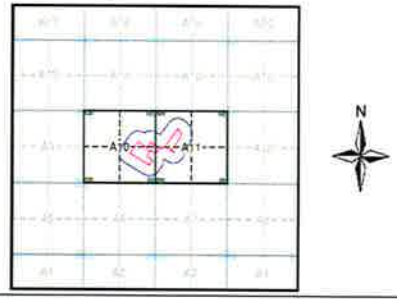
Map Name(s) and Date(s)



Historical Map - Slice A



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National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
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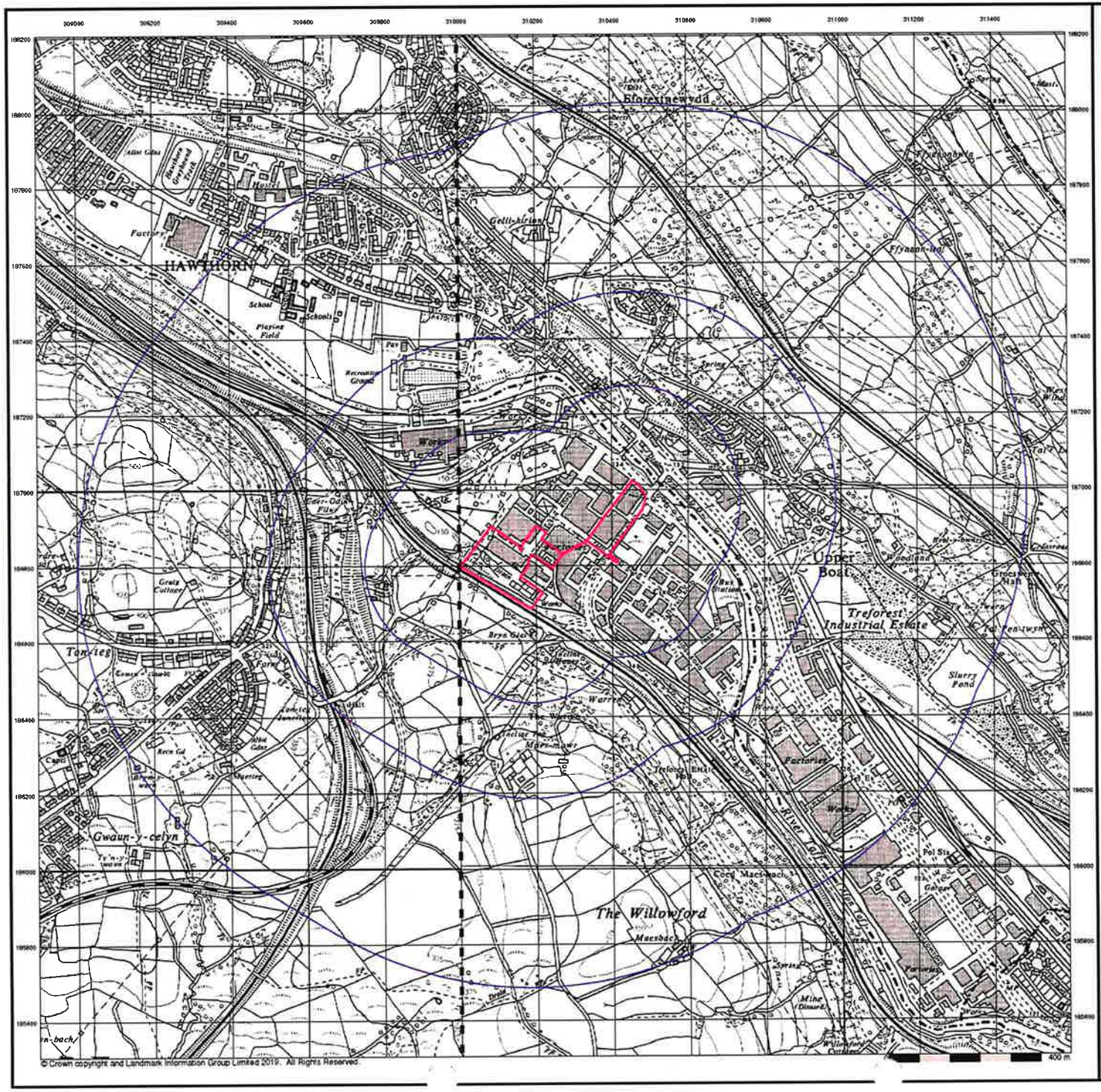

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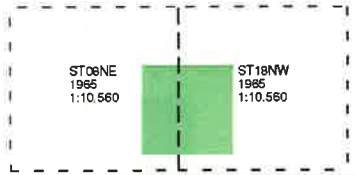
Intégral Géotechnique

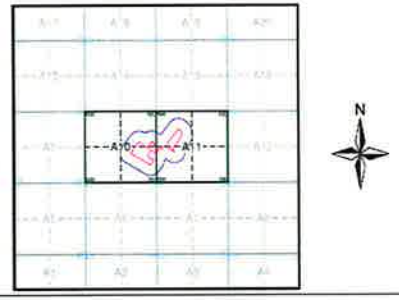
Ordnance Survey Plan
Published 1965
Source map scale - 1:10,000

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



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Slice:	A
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Site Details

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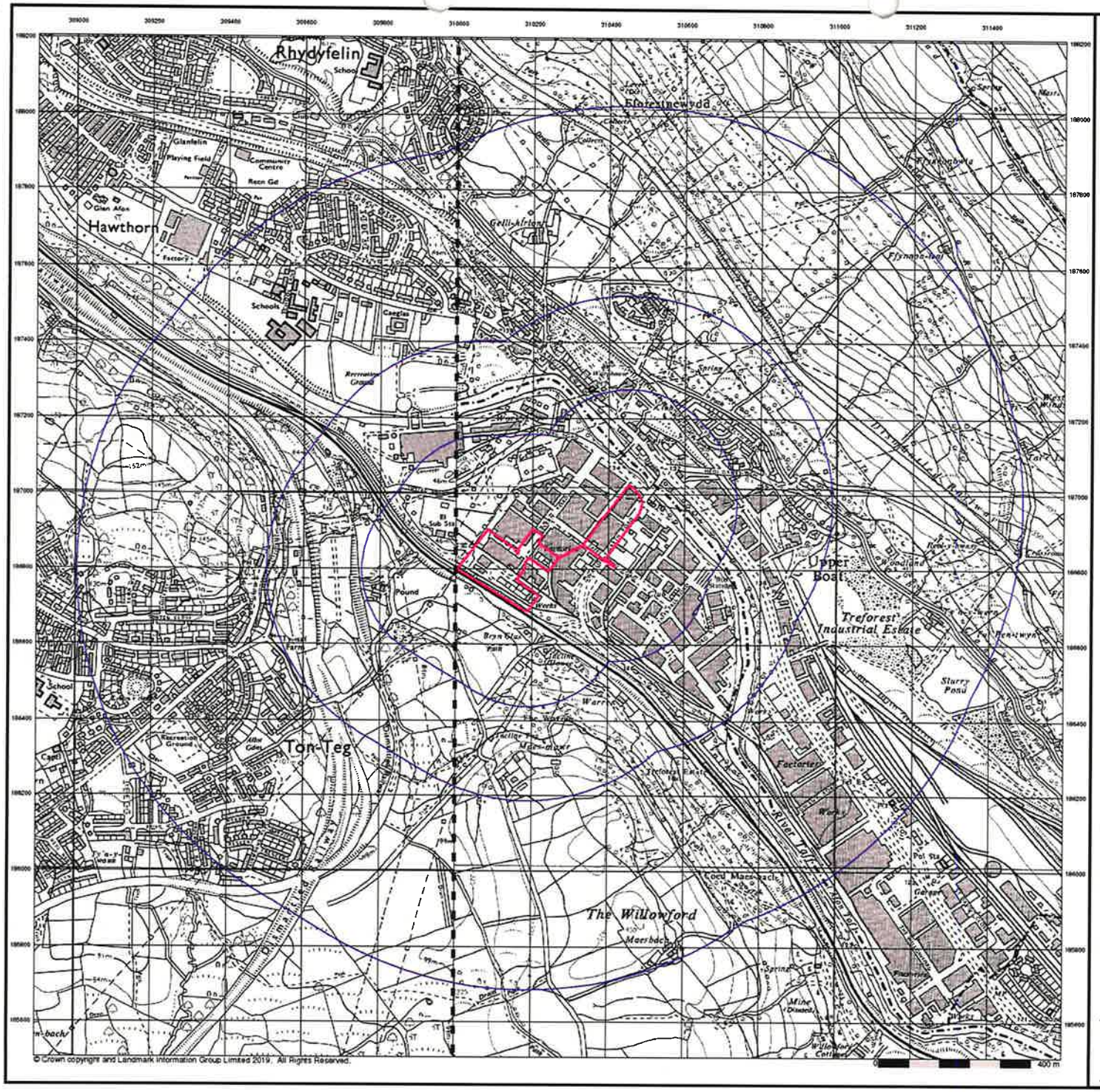
Rhydyfelin
Hawthorn
Ton-Teg
Upper Boat
Treforest Industrial Estate
The Willowford
Factories
Schools
Sub Sta
Pound
Pol Sta
Recreation Ground
Playing Field
Community Centre
Sewage Works
Factory
Mast
Spring
Mine (Dismtd)
Quarry
Woodland
Allot Gdns
Sch
Ch
Fm
Ho
Cott
Caravan
Gdns
Pond
Tank
Warren
Slurry Pond
Fishponds
Flynnon-Ieuan
Gelli-Ifrion
Ffynnon-Wen
Maesbach
Locd Maesbach
Nant Tolf
River Taff
Glantelin
Glen Afon
Recn Gd
Bryn Glas Farm
Trefforest Estate
Ffordd-Las
Ffordd-Wen
Ffordd-Wyn
Rhos-Y-Gwaun
Ffordd-Y-Parc
Ffordd-Yr-Eglwys
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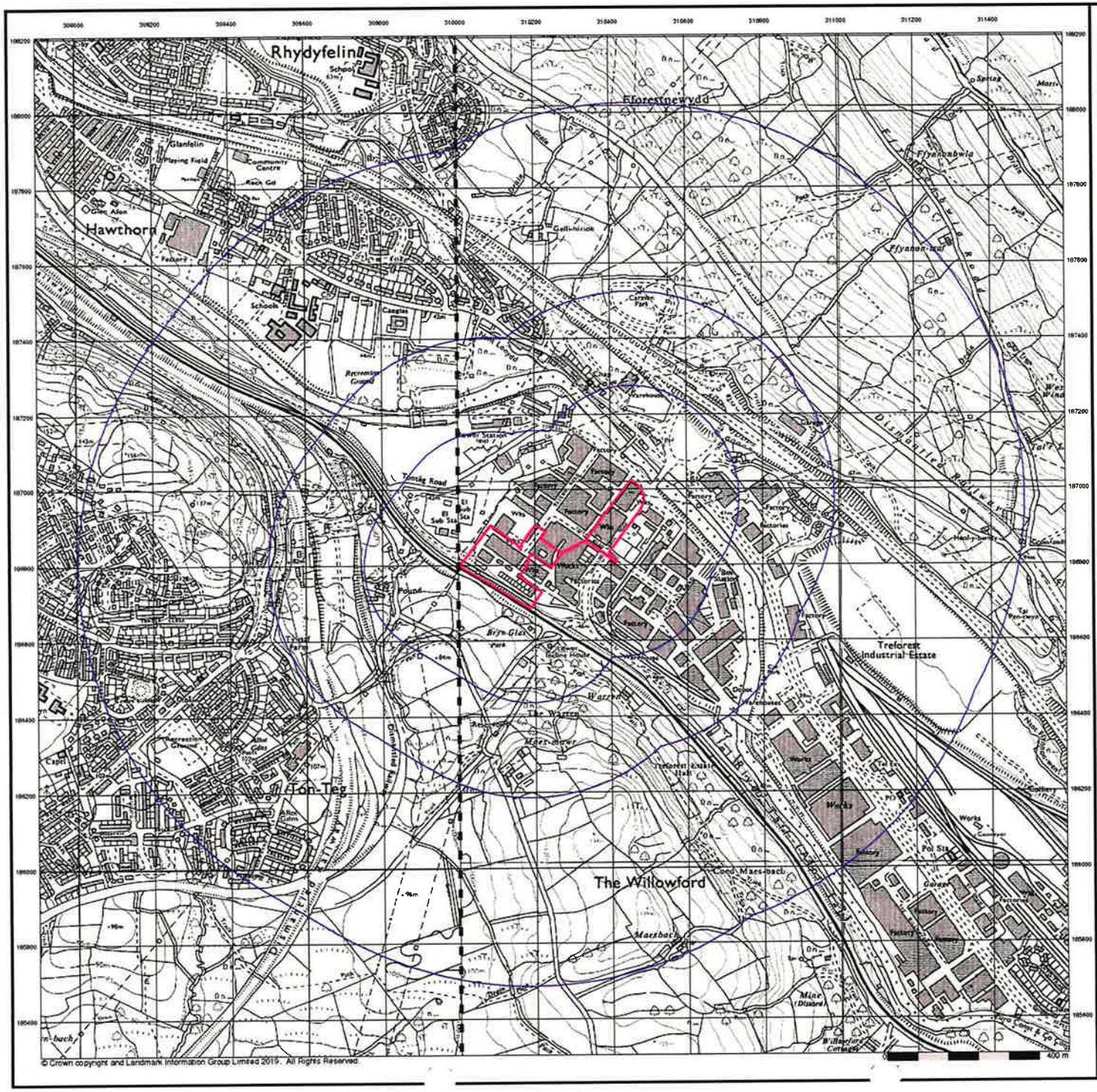

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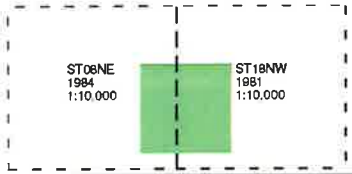
Intégral
Géotechnique

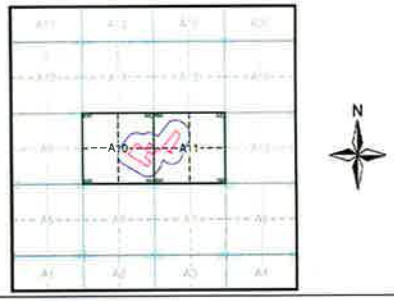
Ordnance Survey Plan
Published 1981 - 1984
Source map scale - 1:10,000

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:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

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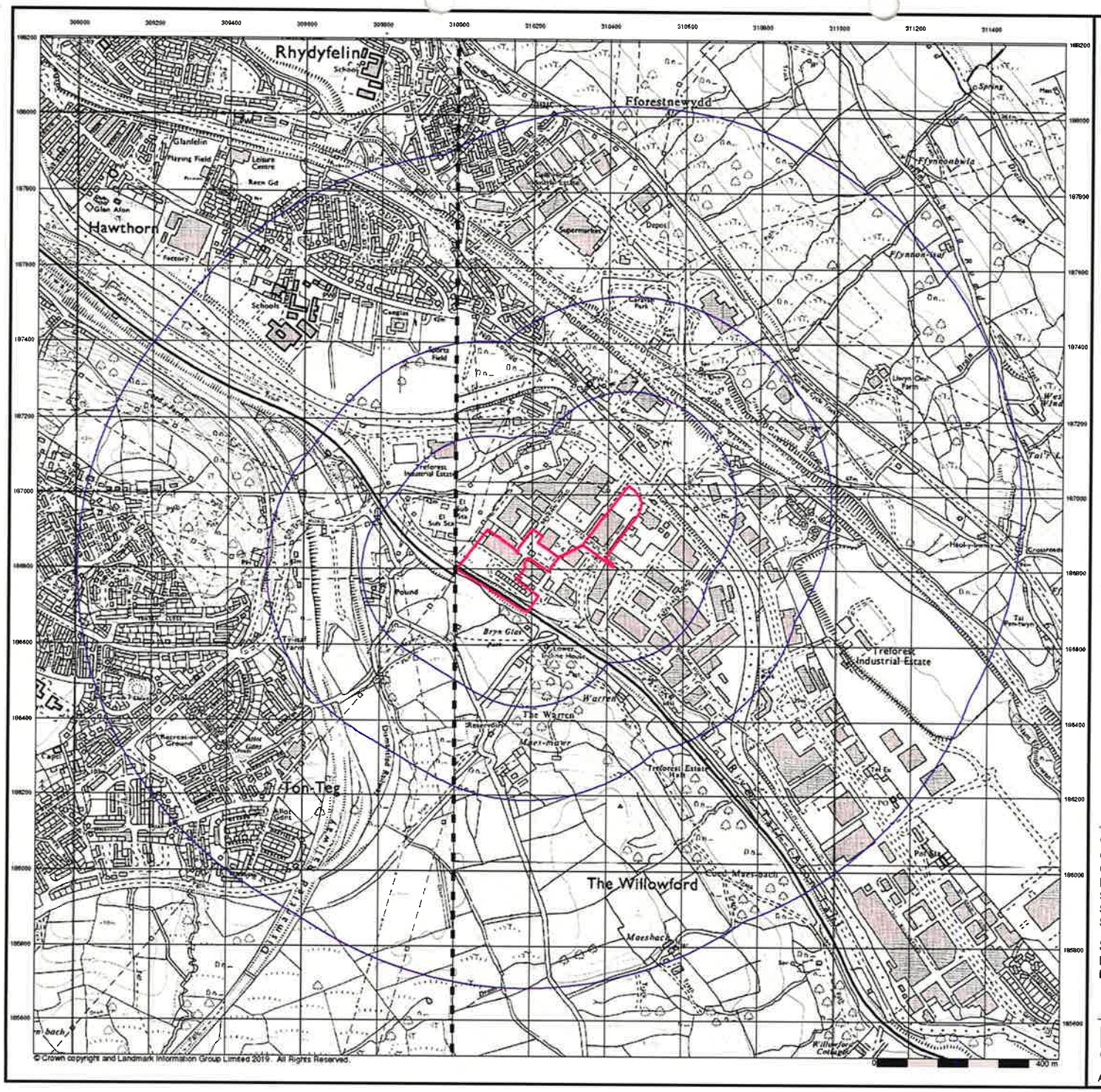

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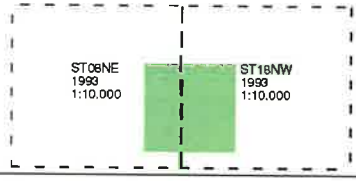
Intégral Géotechnique

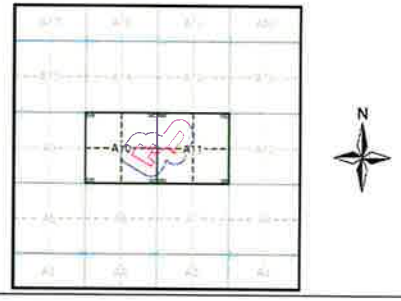
Ordnance Survey Plan
Published 1993
Source map scale - 1:10,000

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 1:1,250 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



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Search Buffer (m):	1000

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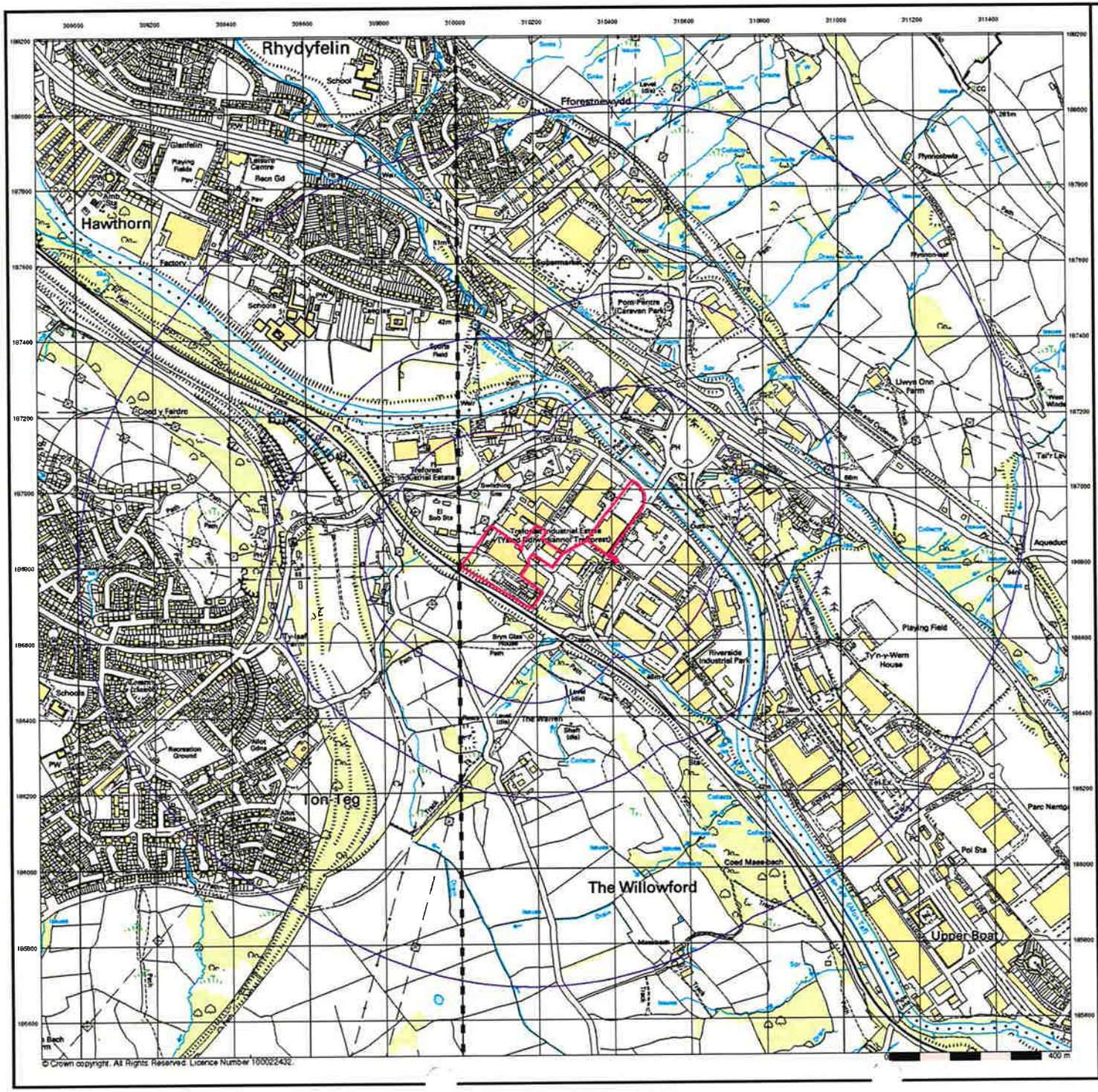
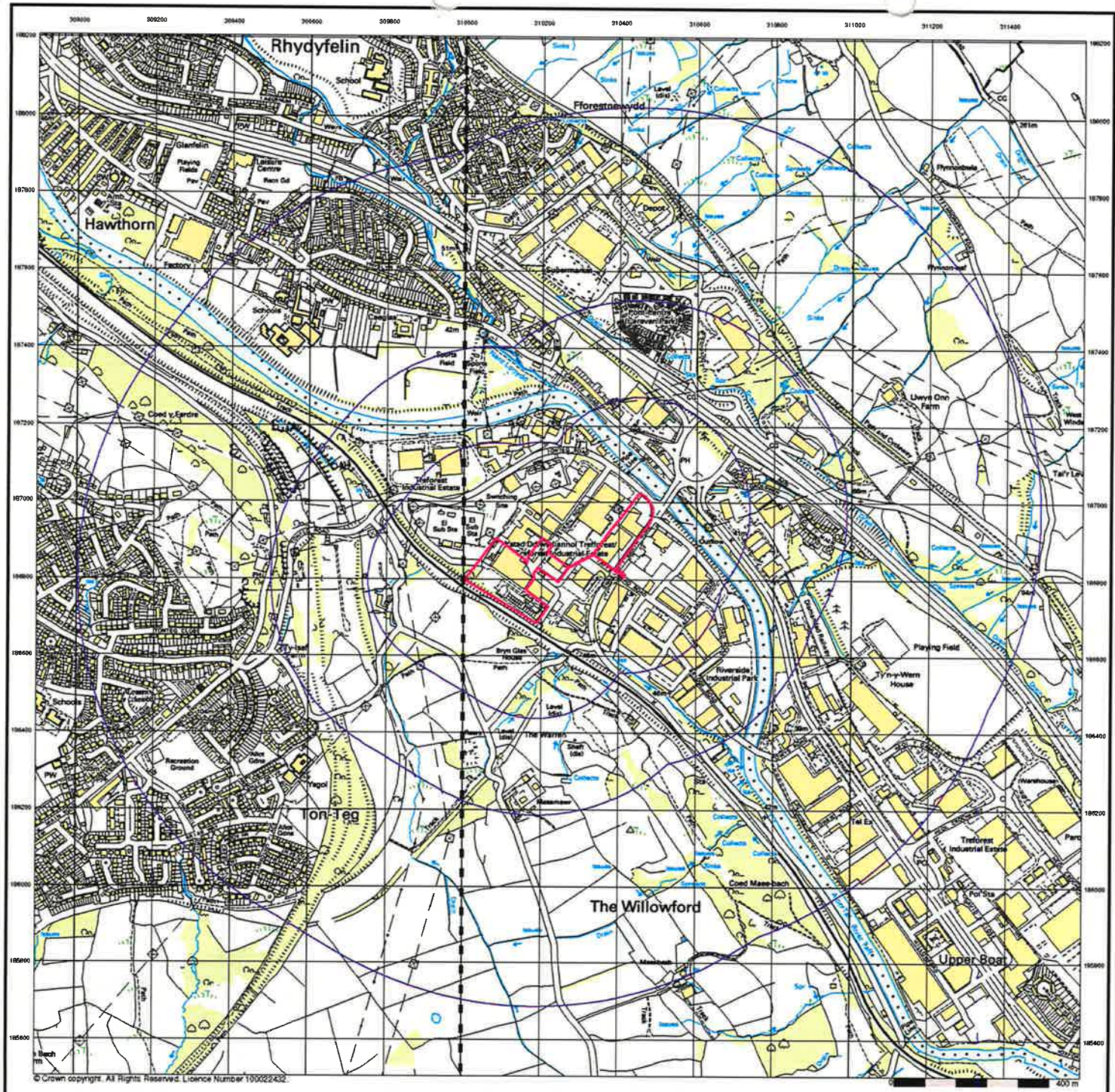

Rhydyfelin
Hawthorn
Ton-Teg
The Willowford
Upper Boat
Glanfelin
Coed y Fardre
Riverside Industrial Park
Playing Field
Tŷ'n-y-Wern House
Pont-Pantre Caravan Park
Llwyn Onn Farm
Coed Maes-bach
Parc Nantgo
Pol Sta
Aqueduct
Schools
Recreation Ground
Sports Field
Factory
Depot
Leisure Centre
Rhyn-onnen
Rhyn-onnen-isaf
Tal'r Lw
Yew Woods
Sub-station
Tyle-garw
Sewage Works
Level (disused)
Shaft (disused)
Tunnel
Culverts
Weir
Pond
Trees
Scrub
Rough Grass
Marsh
Boundary Stone
Milestone
Public Rights of Way
Path
Track
Road
Railway
Contours
Spot Heights
Buildings
Public Open Space
Woodland
Water Features
Natural Features
Boundaries
Roads
Rights of Way
Man-made Features
Antiquities
Landform
Vegetation
Administrative Boundaries
Overhead Electricity Transmission Line
Pylon
Electricity Substation
Pole
Telephone Line
Telephone Kiosk
Post Box
Post Office
Public Telephone
Public House
Bus Stop
Bus Station
Cattle Grid
Gate
Guide Post
Level Crossing
Milepost
Milestone
Pillar Box
Slope
Tank
Tower
Viaduct
Wall
Well
Works
Youth Hostel
Caravan Park
Camping Site
Golf Course
Golf Club
Golf Tee
Golf Green
Golf Bunker
Golf Hole
Golf Fairway
Golf Rough
Golf Water Hazard
Golf Trees
Golf Buildings
Golf Boundaries
Golf Roads
Golf Rights of Way
Golf Man-made Features
Golf Antiquities
Golf Landform
Golf Vegetation
Golf Administrative Boundaries
Golf Overhead Electricity Transmission Line
Golf Pylon
Golf Electricity Substation
Golf Pole
Golf Telephone Line
Golf Telephone Kiosk
Golf Post Box
Golf Post Office
Golf Public Telephone
Golf Public House
Golf Bus Stop
Golf Bus Station
Golf Cattle Grid
Golf Gate
Golf Guide Post
Golf Level Crossing
Golf Milepost
Golf Milestone
Golf Pillar Box
Golf Slope
Golf Tank
Golf Tower
Golf Viaduct
Golf Wall
Golf Well
Golf Works
Golf Youth Hostel
Golf Caravan Park
Golf

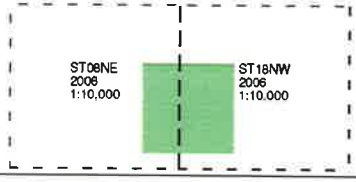


Intégral Géotechnique

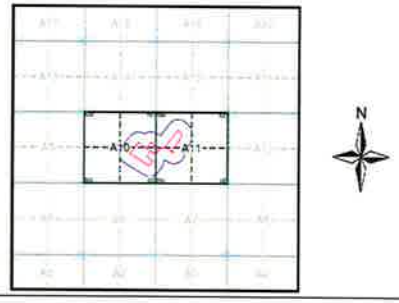
10k Raster Mapping
Published 2006
Source map scale - 1:10,000

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



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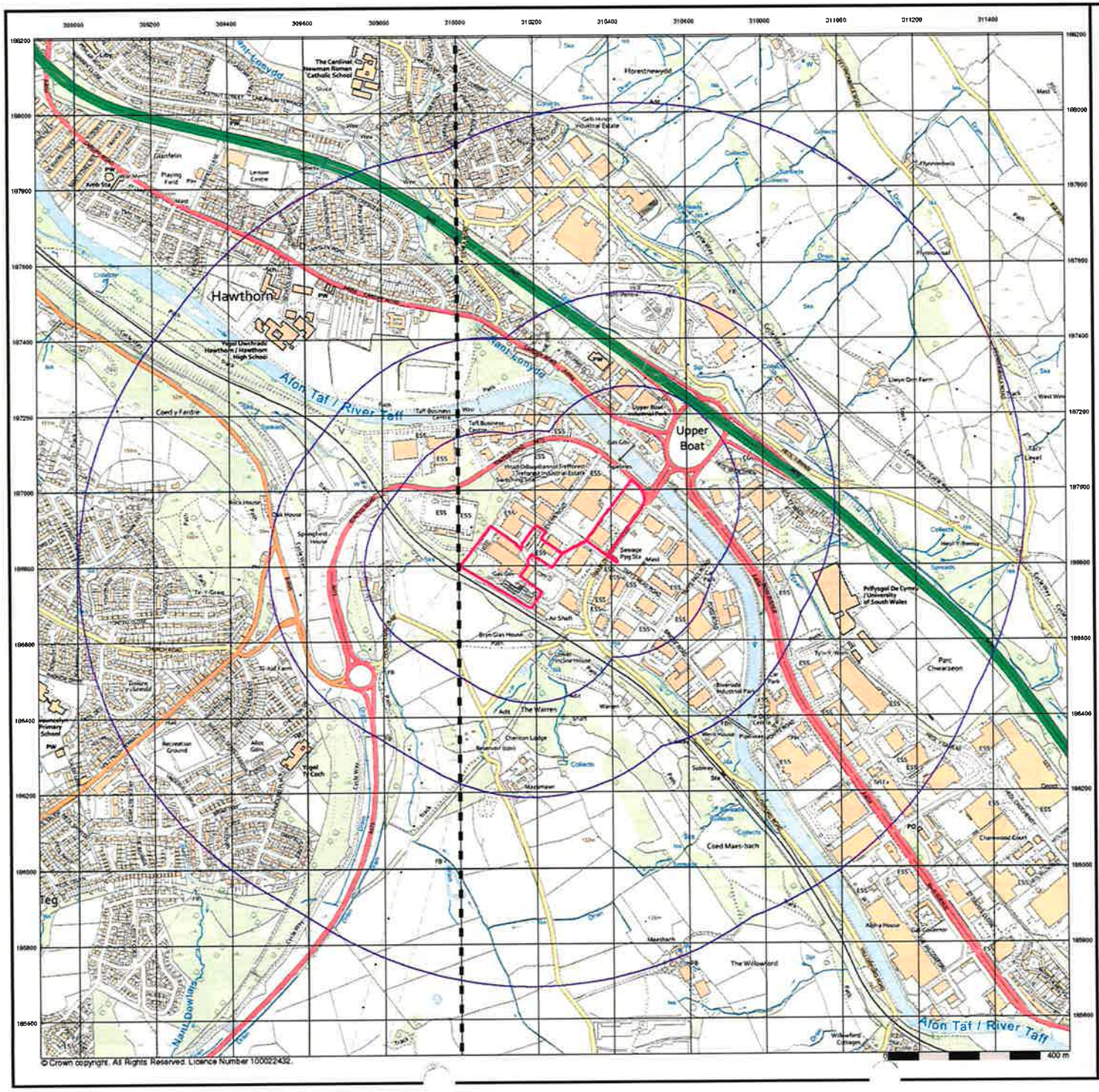

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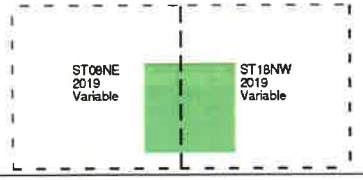
Intégral Géotechnique

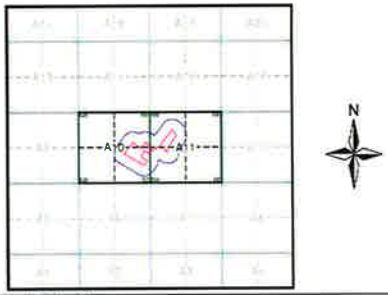
VectorMap Local
Published 2019
Source map scale - 1:10,000

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:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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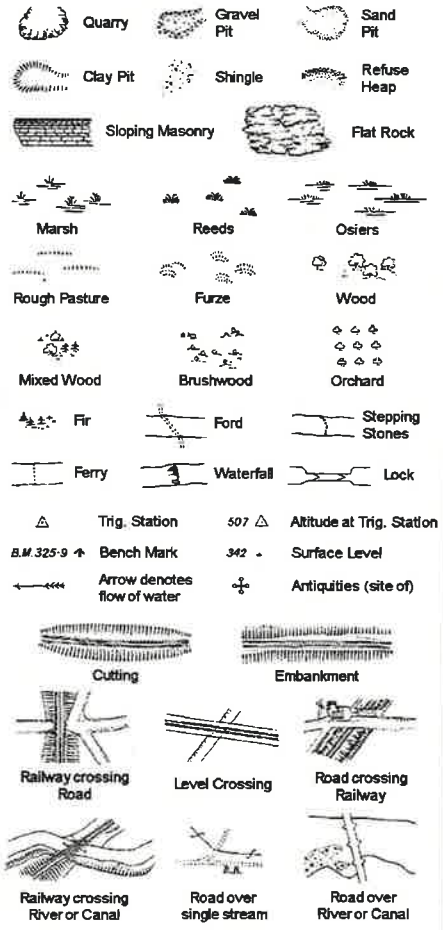
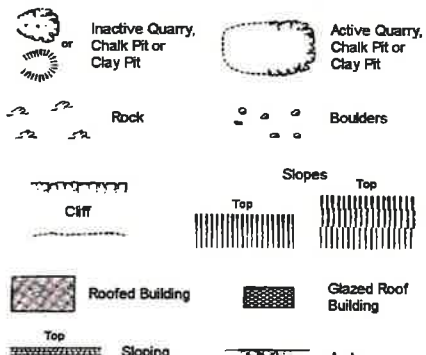
Historical Mapping Legends

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



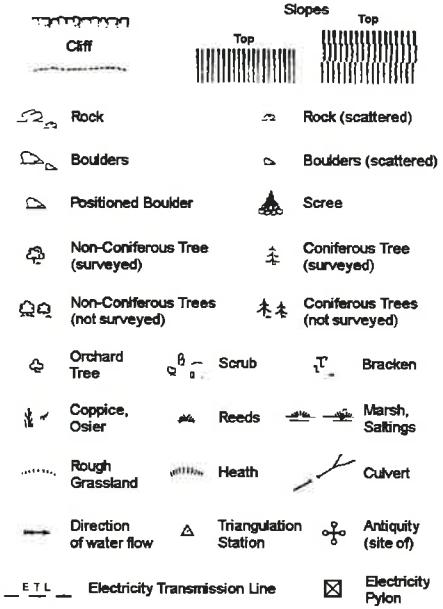
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.B.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Stulce
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



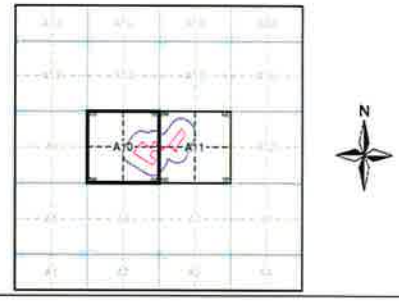
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Intégral Géotechnique

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1875	2
Glamorganshire	1:2,500	1900	3
Glamorganshire	1:2,500	1919 - 1920	4
Glamorganshire	1:2,500	1936 - 1943	5
Ordnance Survey Plan	1:1,250	1958 - 1959	6
Ordnance Survey Plan	1:2,500	1960 - 1962	7
Ordnance Survey Plan	1:2,500	1970	8
Ordnance Survey Plan	1:1,250	1973 - 1976	9
Supply of Unpublished Survey Information	1:2,500	1973 - 1974	10
Supply of Unpublished Survey Information	1:1,250	1973 - 1975	11
Supply of Unpublished Survey Information	1:2,500	1974	12
Supply of Unpublished Survey Information	1:1,250	1974	13
Additional SIMs	1:2,500	1977 - 1989	14
Additional SIMs	1:1,250	1978 - 1989	15
Ordnance Survey Plan	1:2,500	1979	16
Additional SIMs	1:1,250	1988 - 1991	17
Additional SIMs	1:1,250	1989	18
Ordnance Survey Plan	1:1,250	1990 - 1992	19
Ordnance Survey Plan	1:2,500	1990	20
Large-Scale National Grid Data	1:2,500	1993	21
Large-Scale National Grid Data	1:1,250	1993	22
Historical Aerial Photography	1:2,500	2000	23

Historical Map - Segment A10



Order Details

Order Number: 228391279_1_1
Customer Ref: 11121/LP
National Grid Reference: 310260, 186860
Slice: A
Site Area (Ha): 4.09
Search Buffer (m): 100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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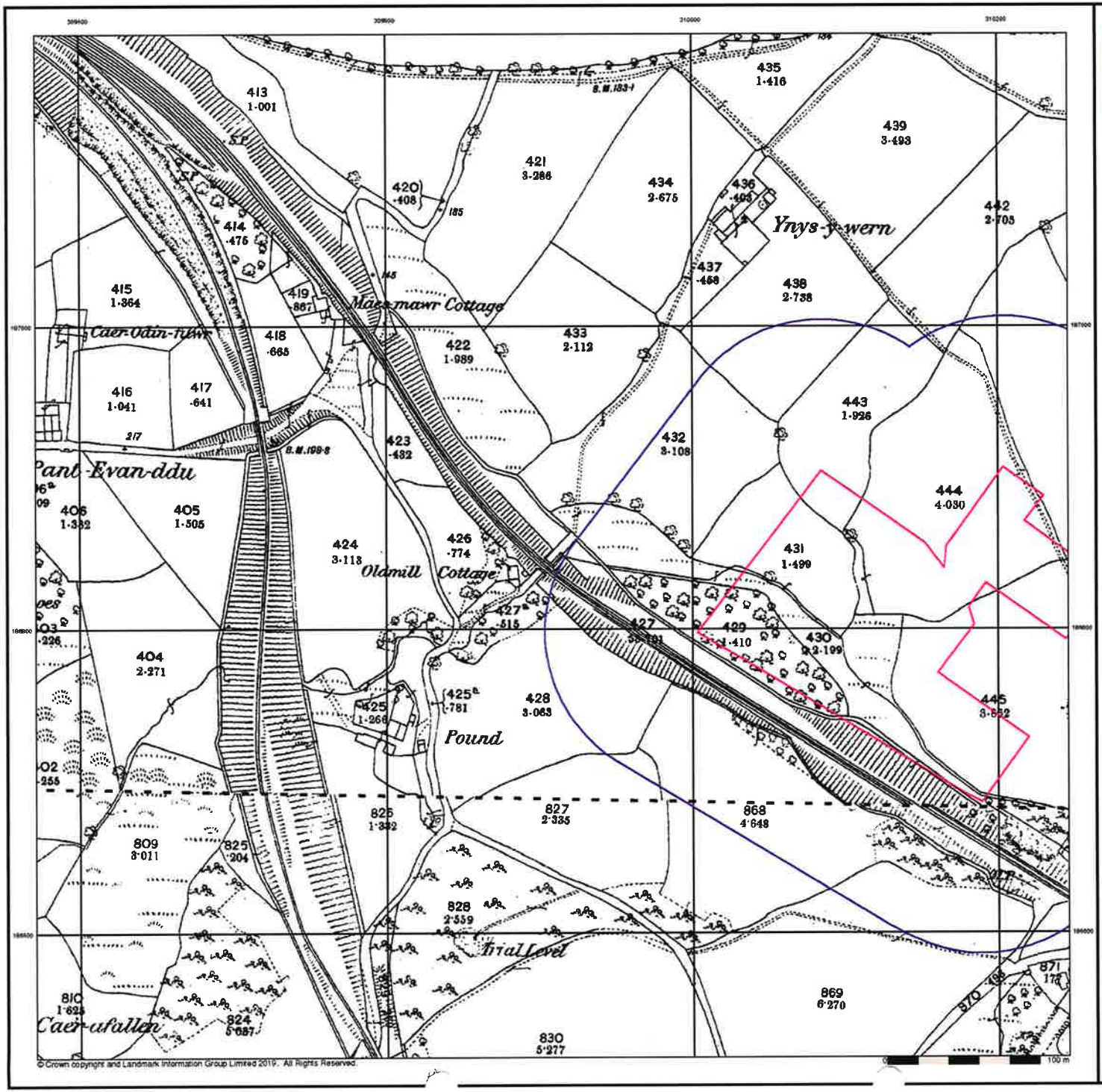

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Intégral Géotechnique

Glamorganshire
Published 1875
Source map scale - 1:2,500

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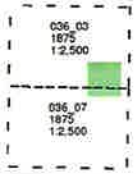
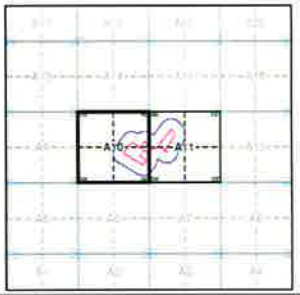
Map Name(s) and Date(s)



Historical Map - Segment A10

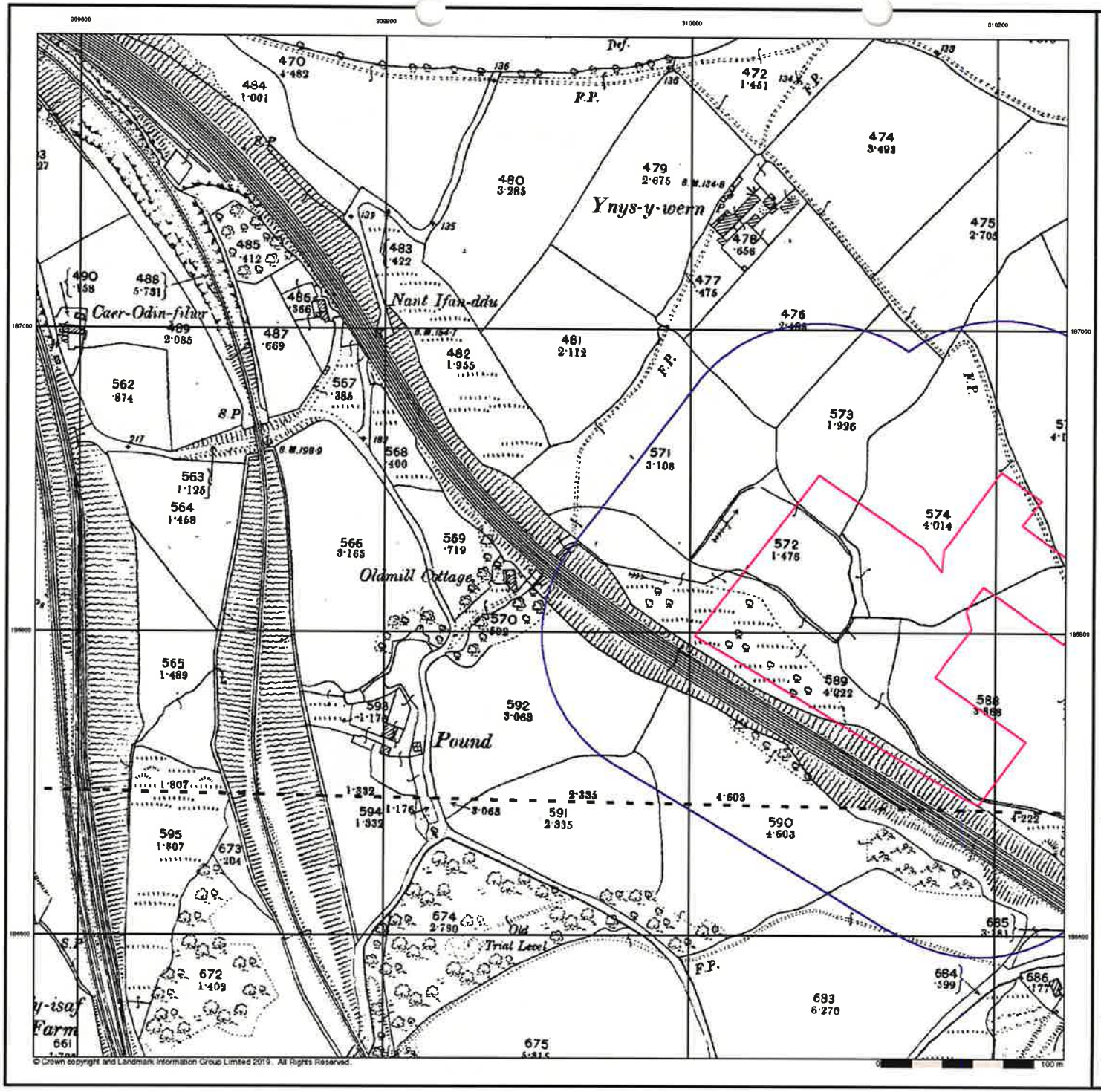


Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

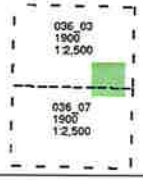


Intégral Géotechnique

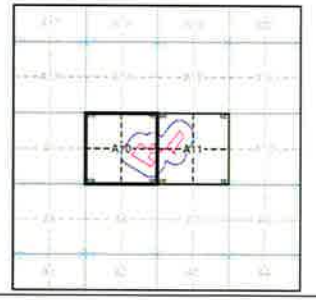
Glamorganshire
Published 1900
Source map scale - 1:2,500

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 A10



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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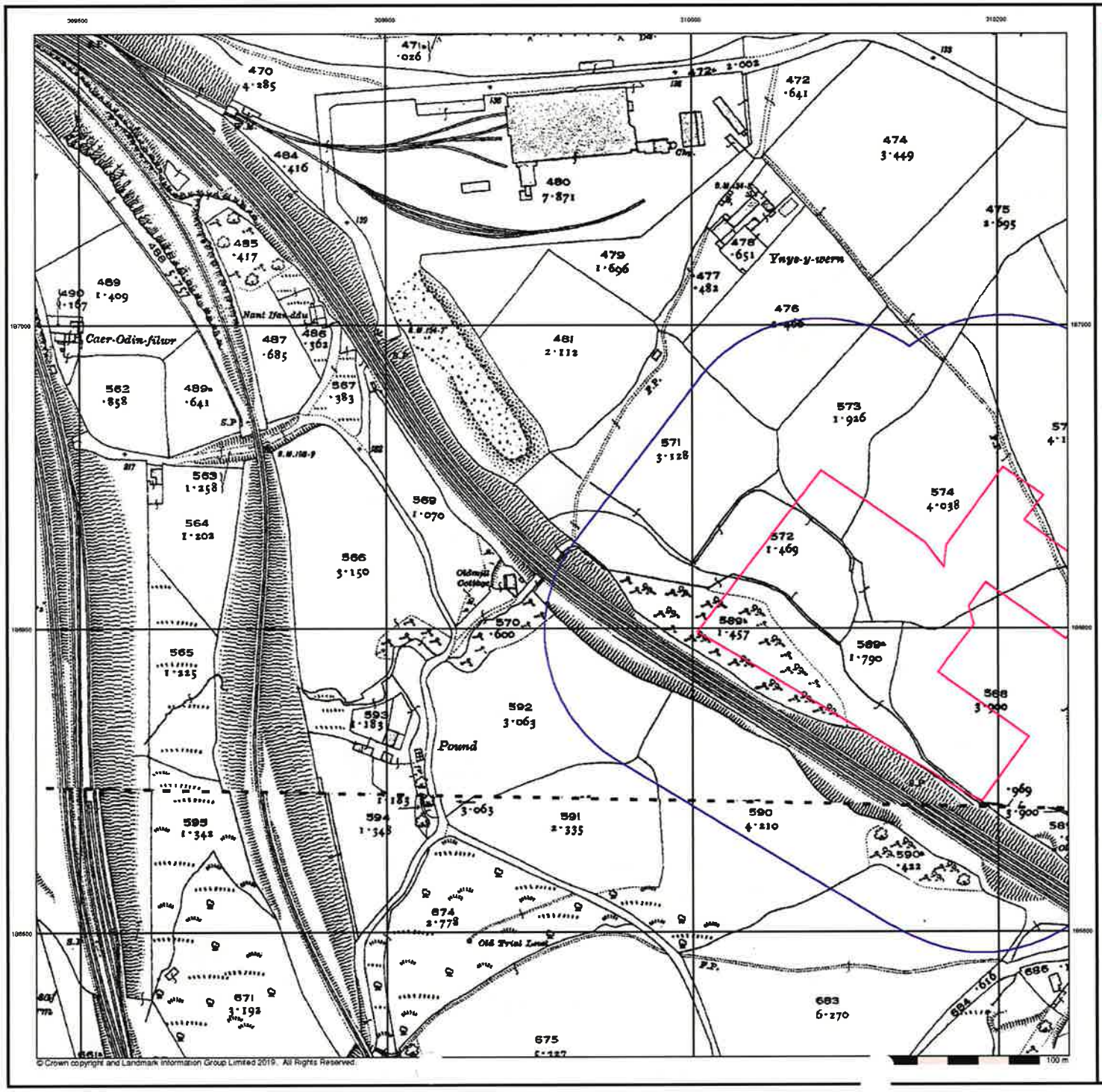

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Intégral Géotechnique

Glamorganshire
Published 1919 - 1920
Source map scale - 1:2,500

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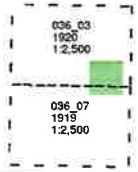
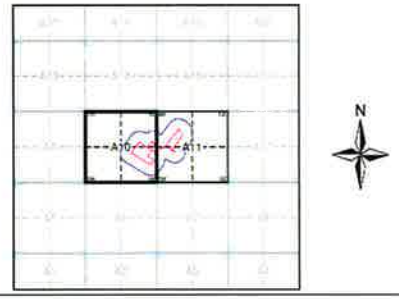
Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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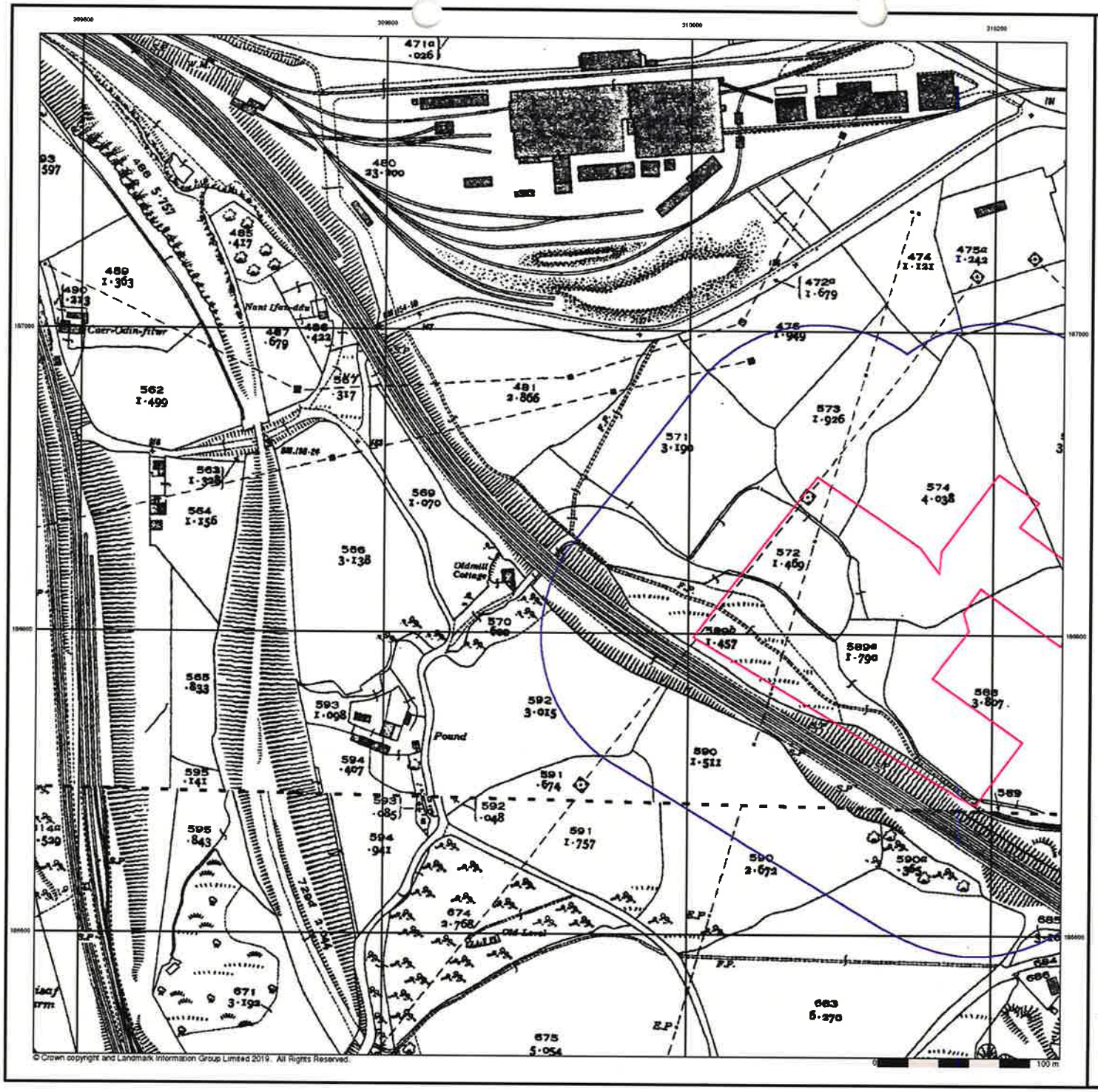

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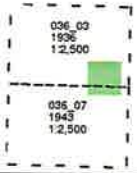
Intégral
Géotechnique

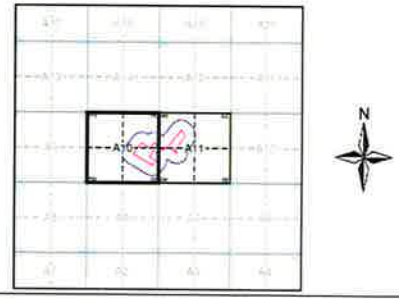
Glamorganshire
Published 1936 - 1943
Source map scale - 1:2,500

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 A10



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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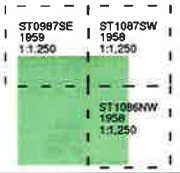
Intégral Géotechnique

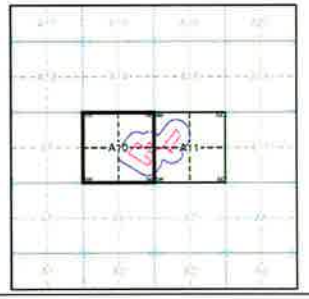
Ordnance Survey Plan
Published 1958 - 1959
Source map scale - 1:1,250

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)



Historical Map - Segment A10

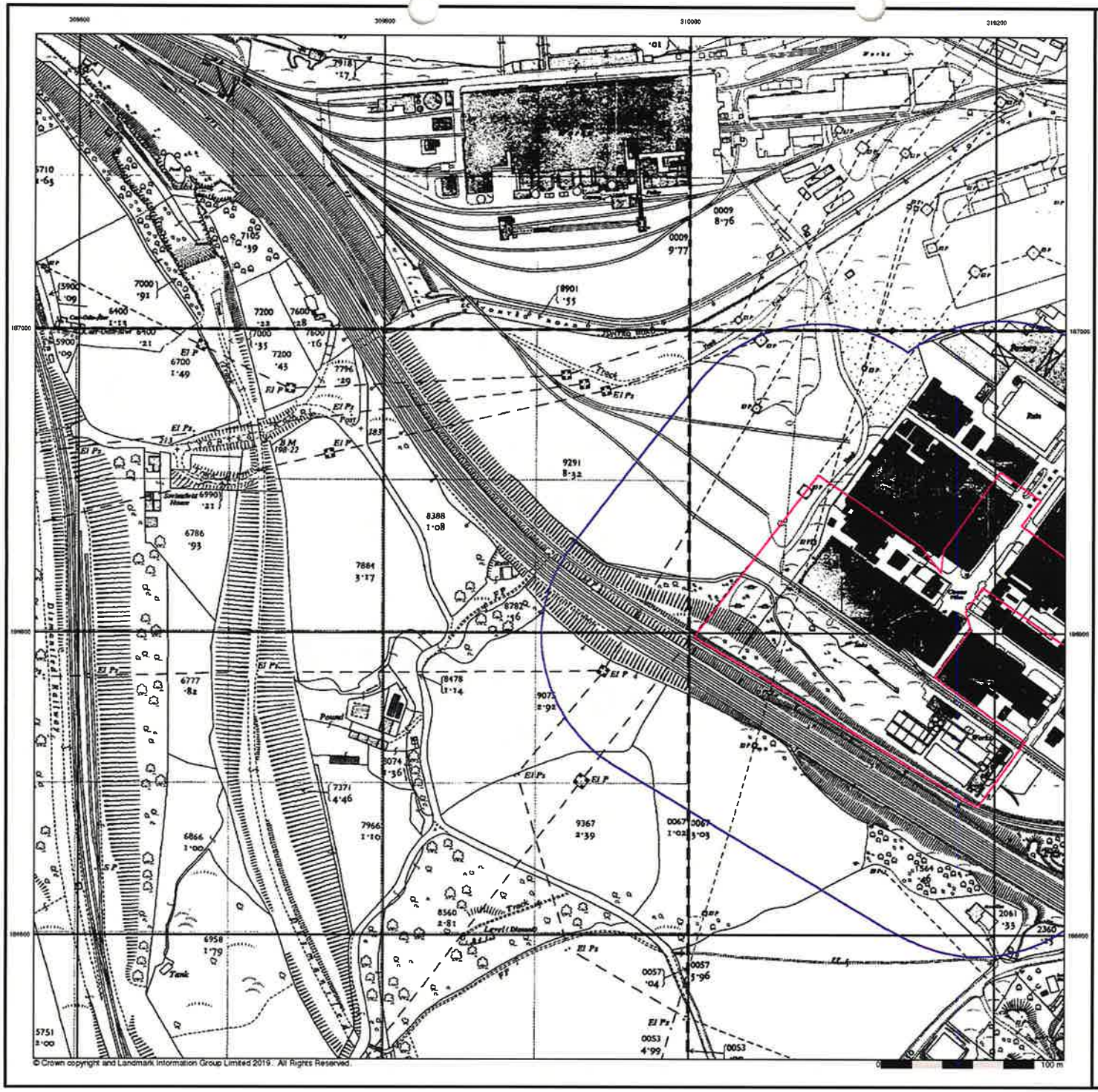


Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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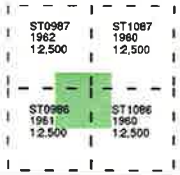
Intégral Géotechnique

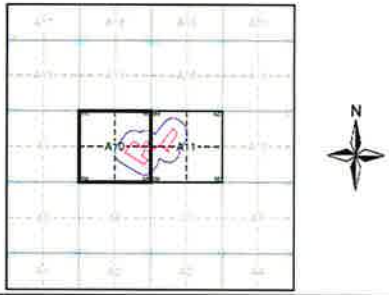
Ordnance Survey Plan
Published 1960 - 1962
Source map scale - 1:2,500

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 1939, 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 A10



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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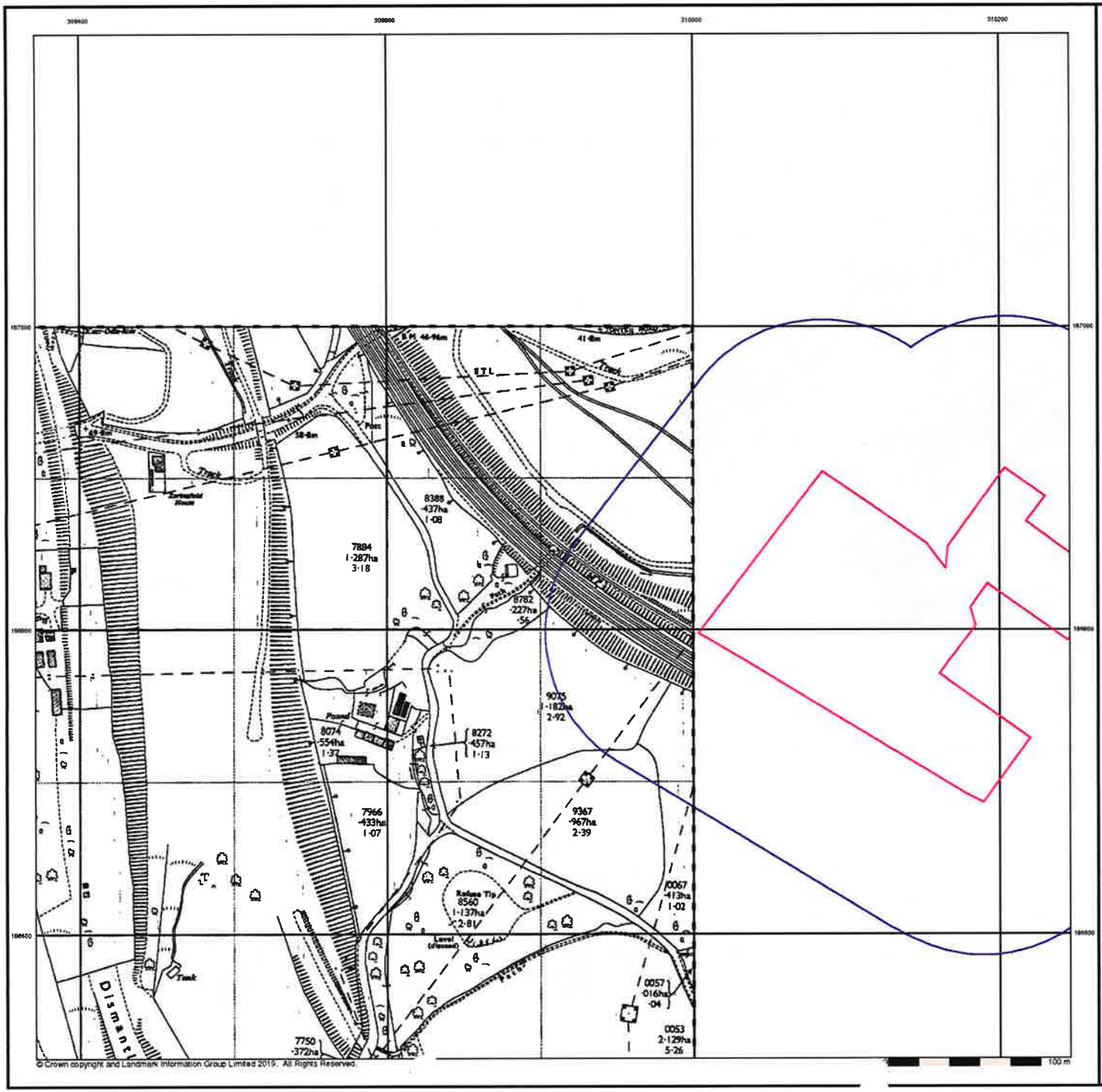

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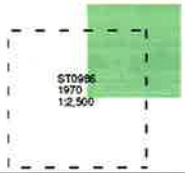
Intégral Géotechnique

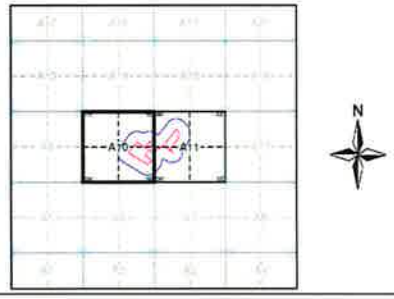
Ordnance Survey Plan
Published 1970
Source map scale - 1:2,500

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 A10

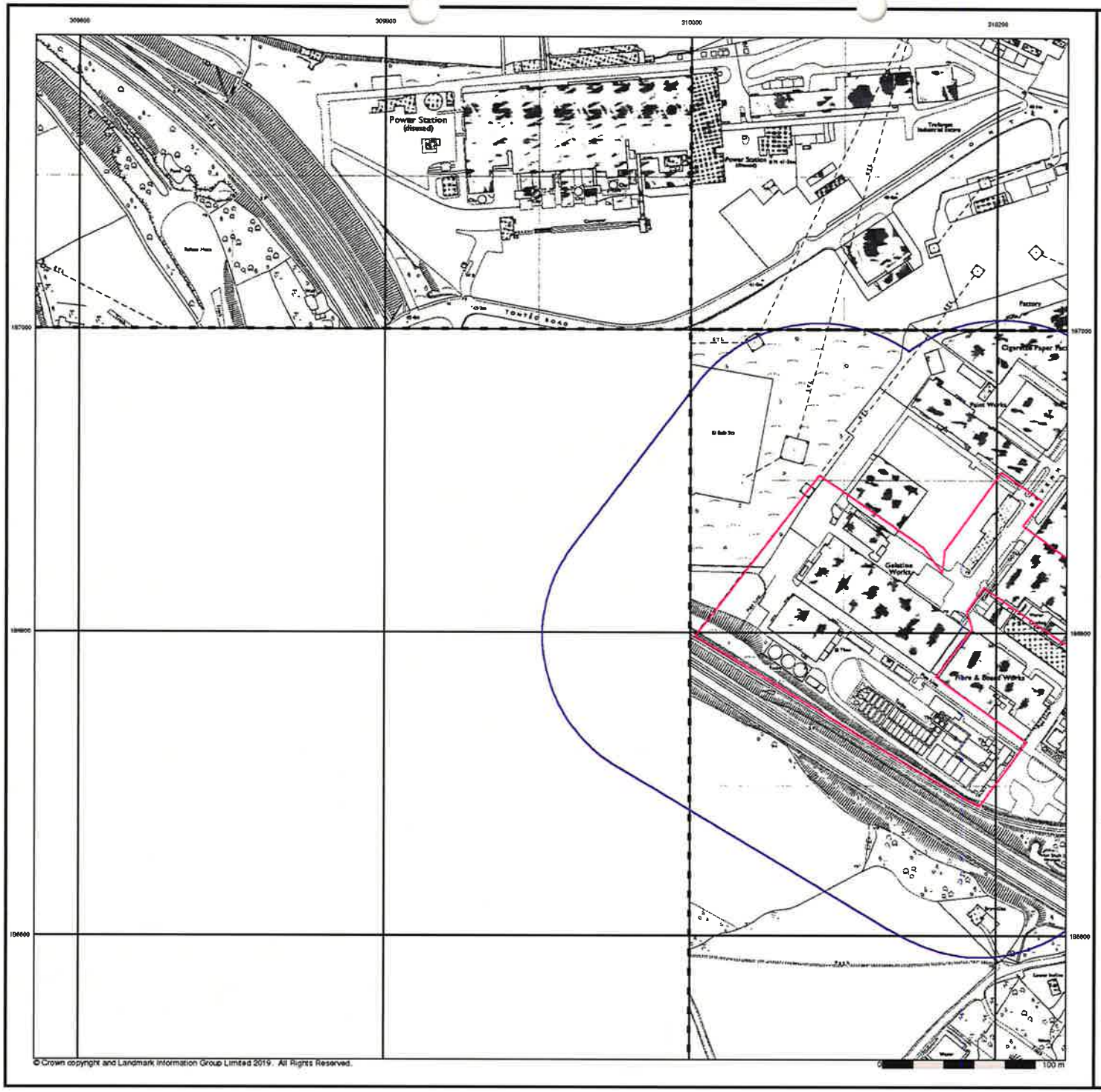


Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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Intégral Géotechnique

Ordnance Survey Plan
Published 1973 - 1976
Source map scale - 1:1,250

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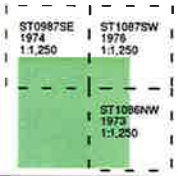
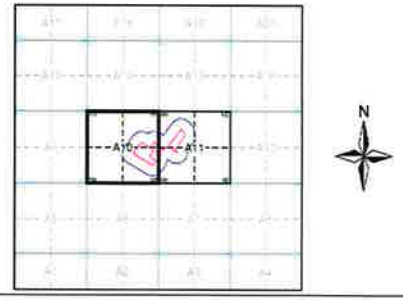
Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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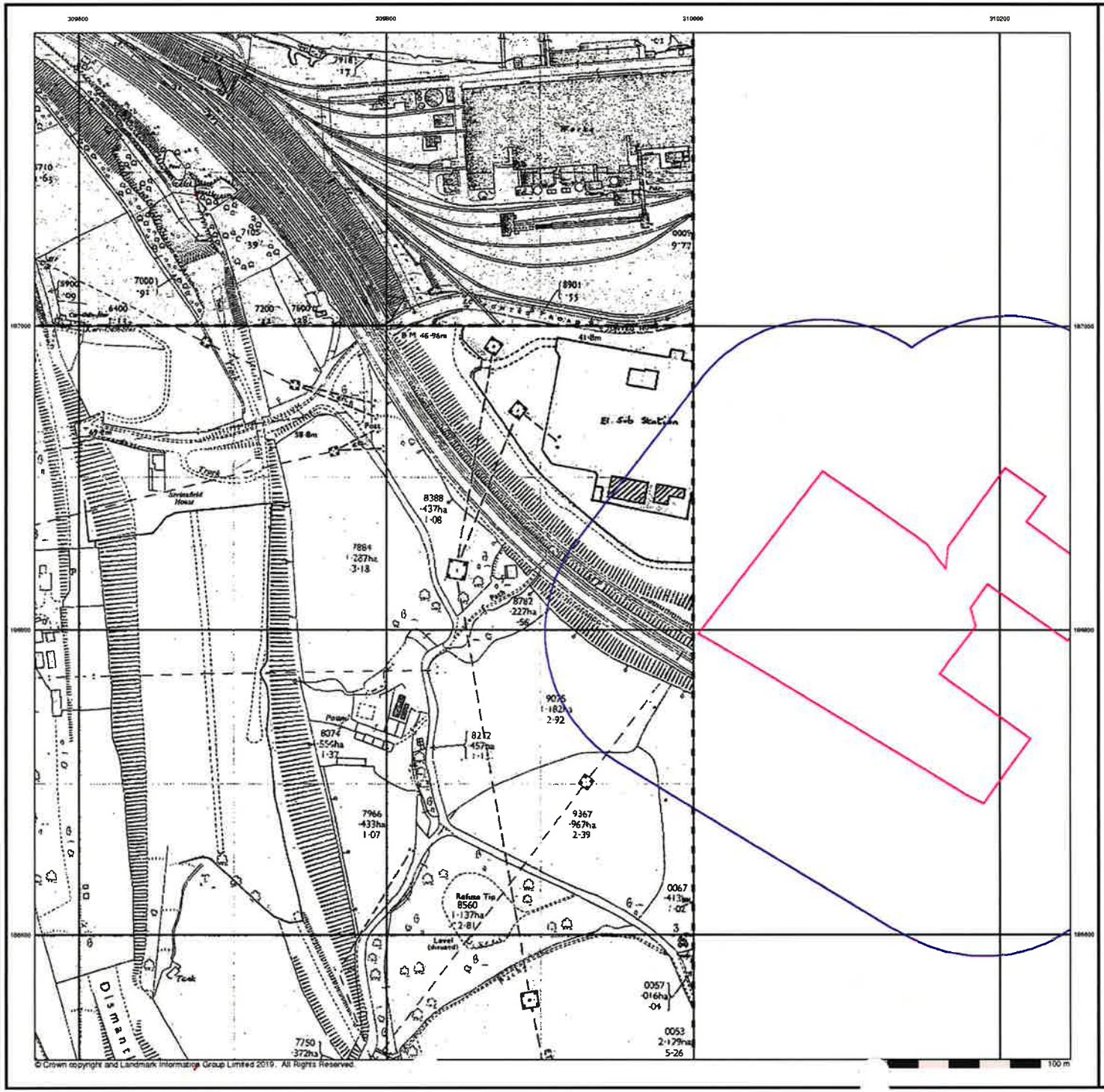

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Intégral
Géotechnique

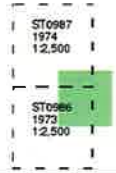
Supply of Unpublished Survey Information

Published 1973 - 1974

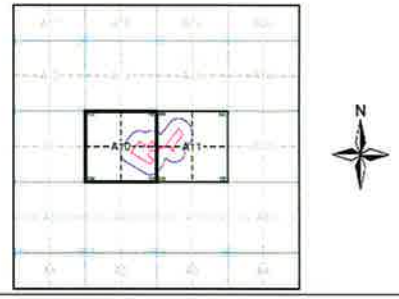
Source map scale - 1:2,500

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 A10

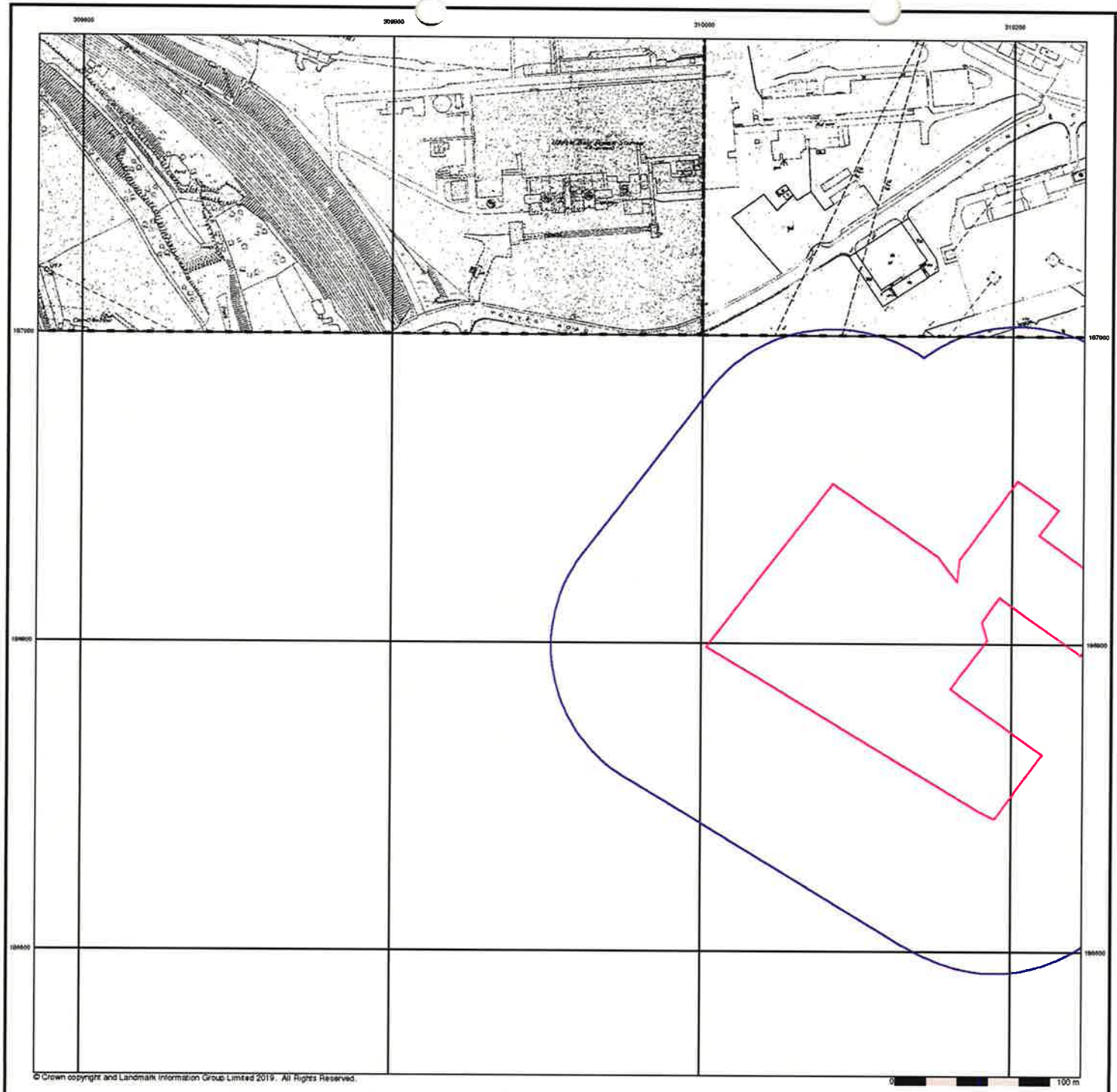


Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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Intégral Géotechnique

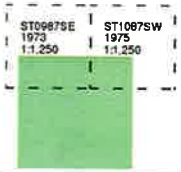
Supply of Unpublished Survey Information

Published 1973 - 1975

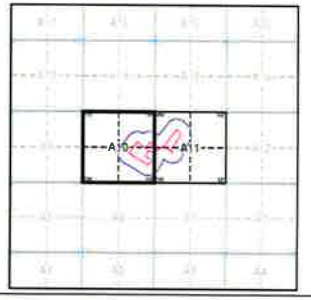
Source map scale - 1:1,250

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 A10



Order Details

Order Number:	228391279_1_1
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Slice:	A
Site Area (Ha):	4.09
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Site Details

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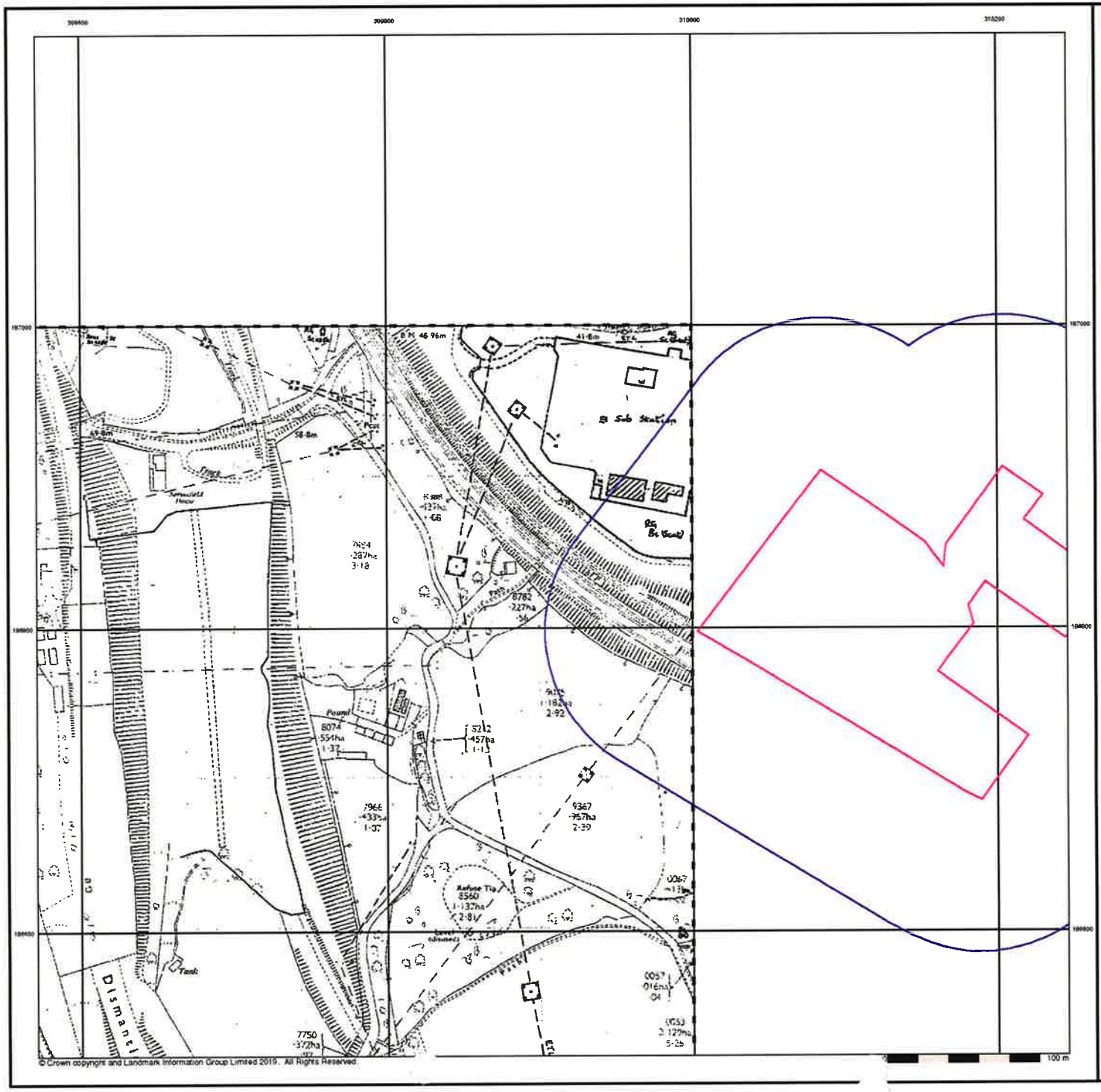

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Intégral Géotechnique

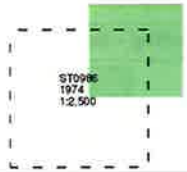
Supply of Unpublished Survey Information

Published 1974

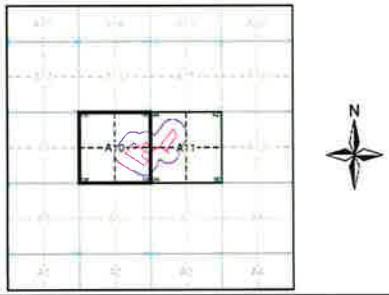
Source map scale - 1:2,500

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 A10



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Order Number:	228391279_1_1
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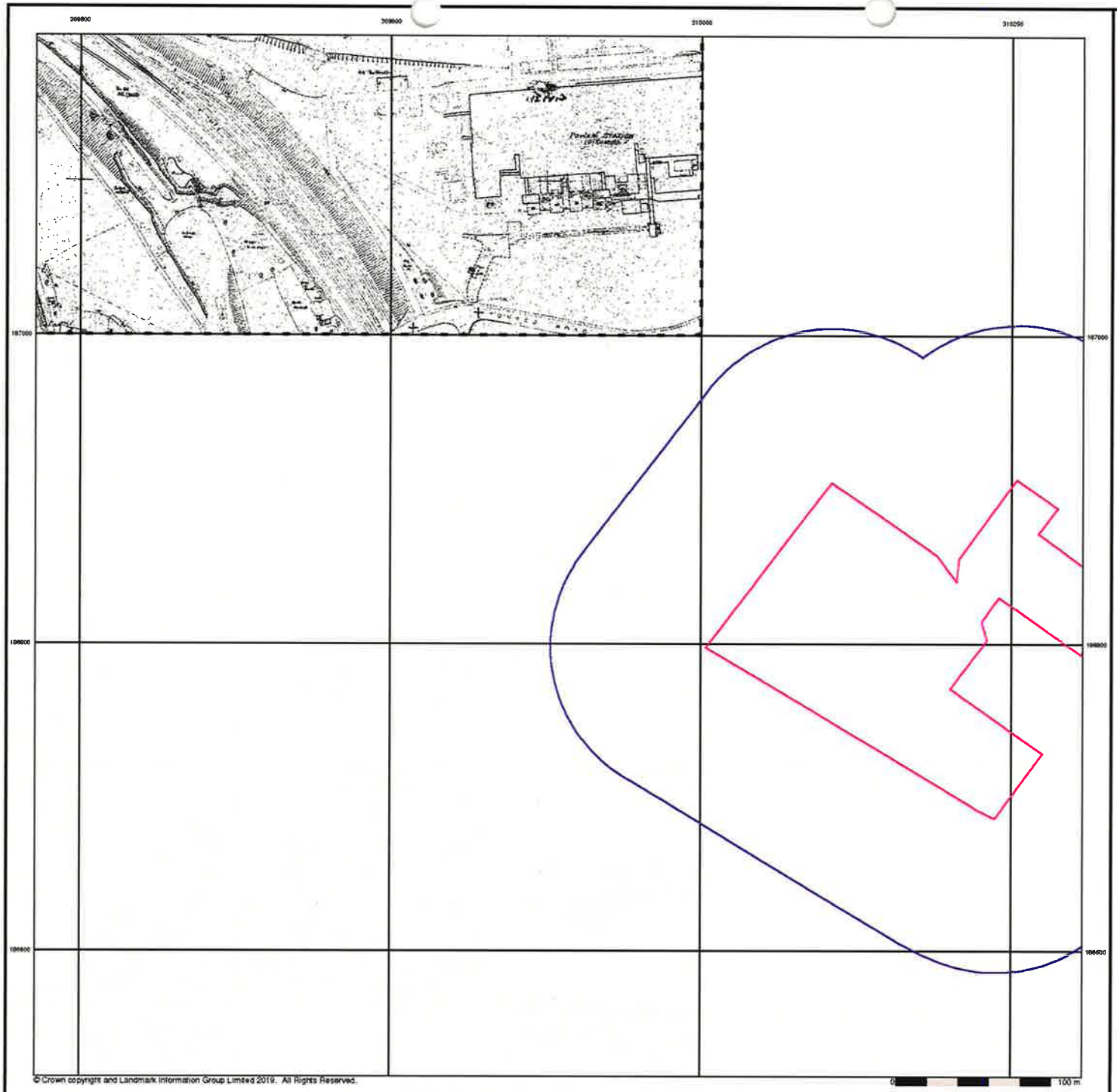

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Intégral Géotechnique

Supply of Unpublished Survey Information

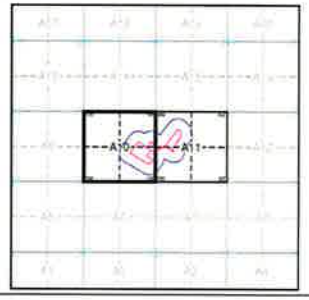
Published 1974

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 A10



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
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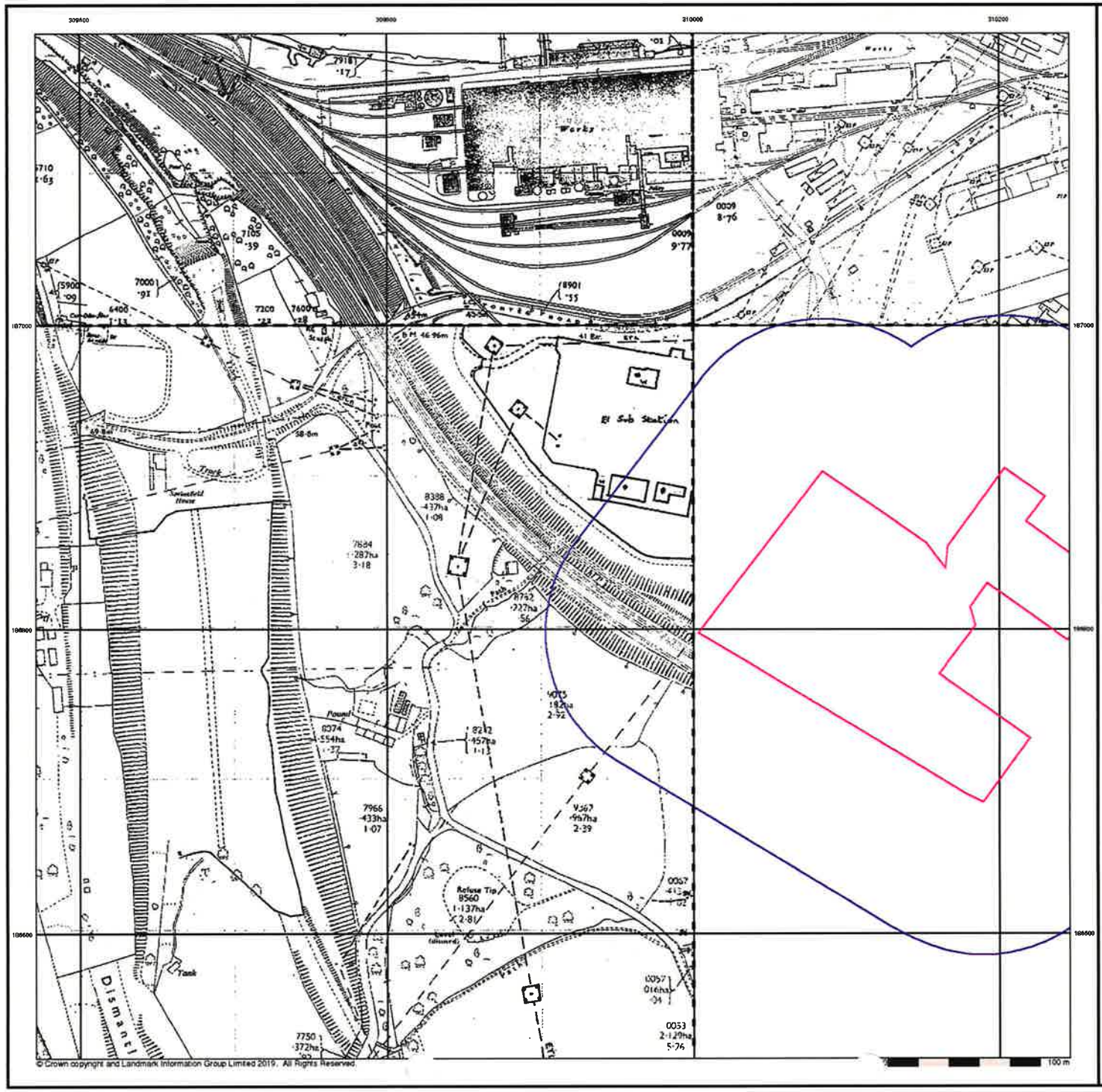

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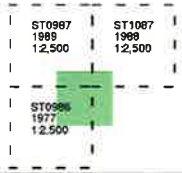
Intégral Géotechnique

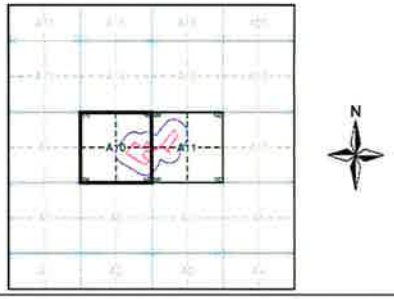
Additional SIMs
Published 1977 - 1989
Source map scale - 1:2,500

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)



Historical Map - Segment A10



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Intégral Géotechnique

Additional SIMs
Published 1978 - 1989
Source map scale - 1:1,250

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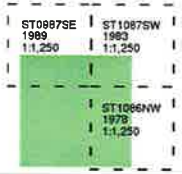
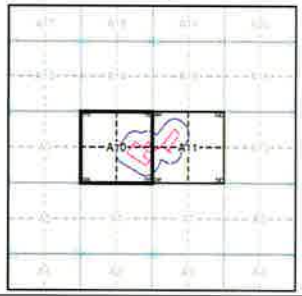


Historical Map - Segment A10



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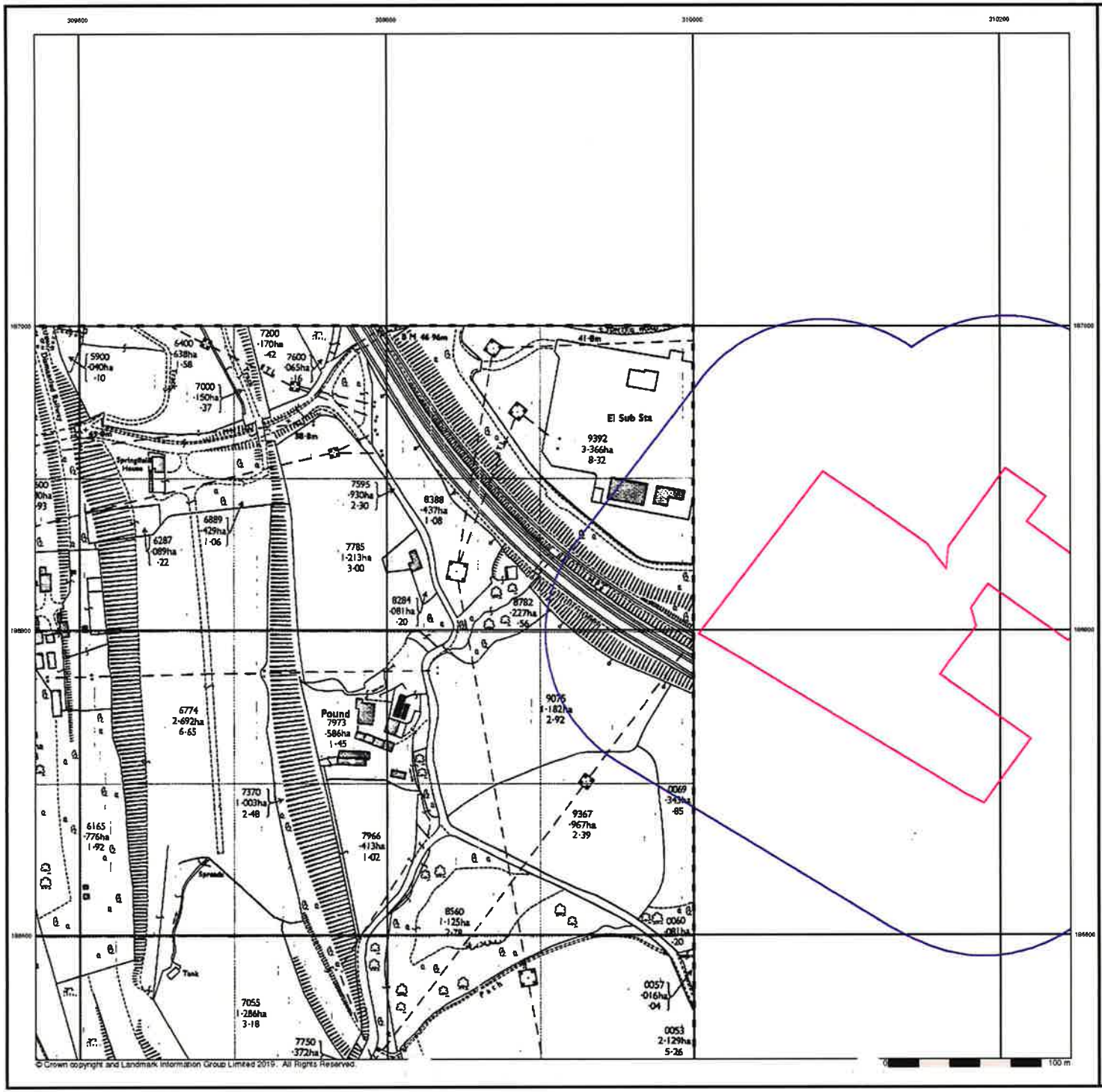

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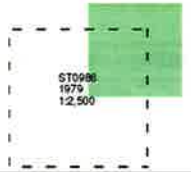
Intégral Géotechnique

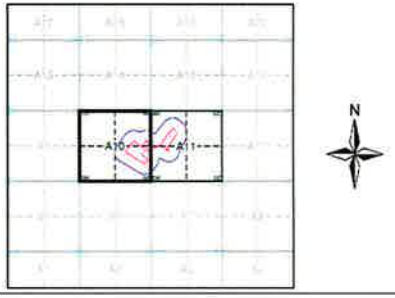
Ordnance Survey Plan
Published 1979
Source map scale - 1:2,500

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 A10



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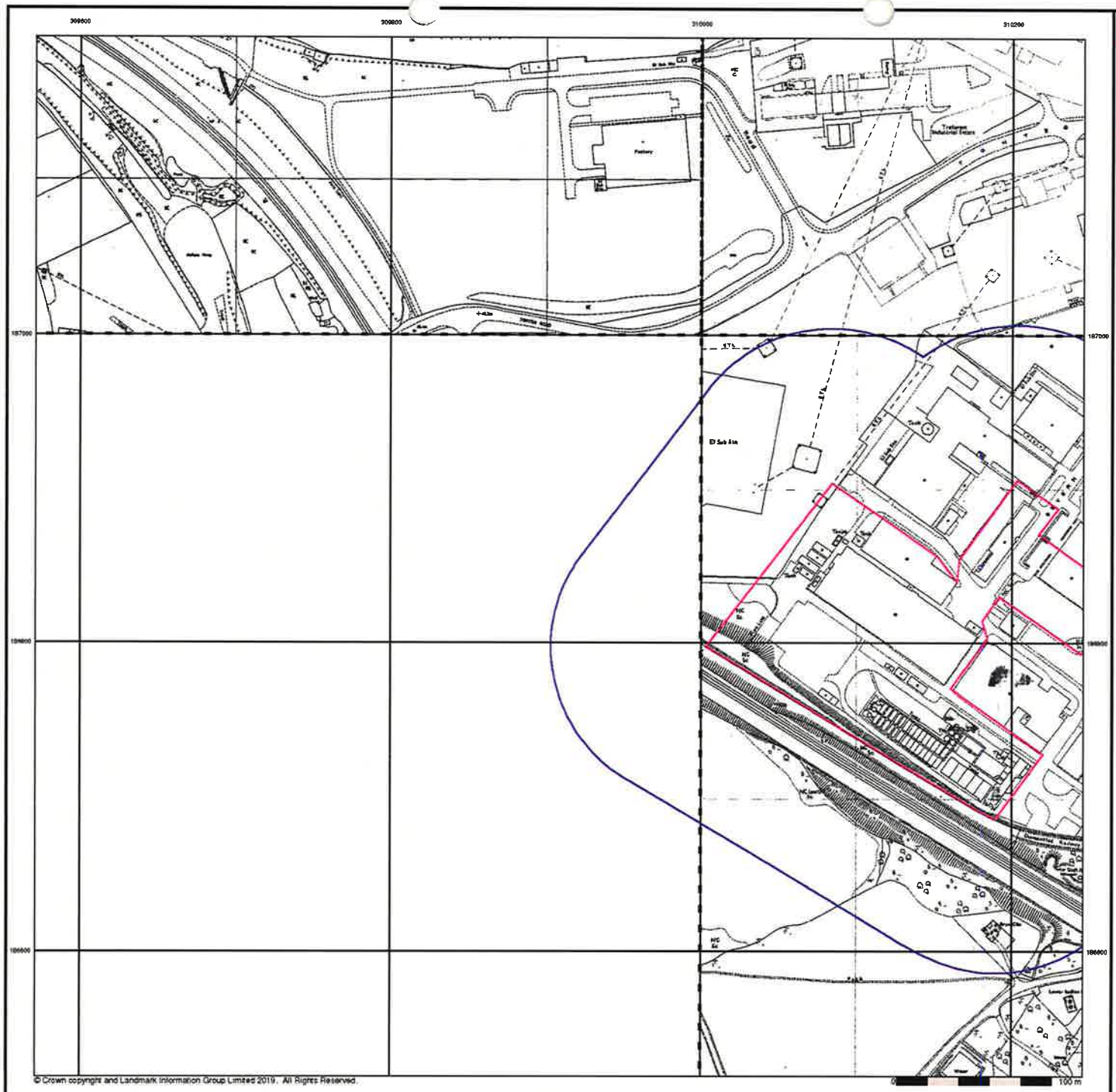

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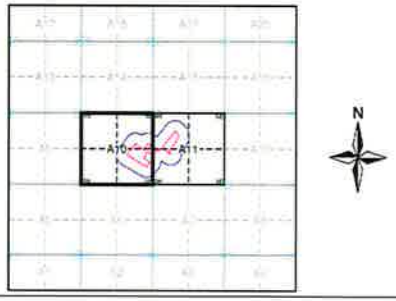
Intégral Géotechnique

Additional SIMs
Published 1988 - 1991
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)

Historical Map - Segment A10



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Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
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Site Details

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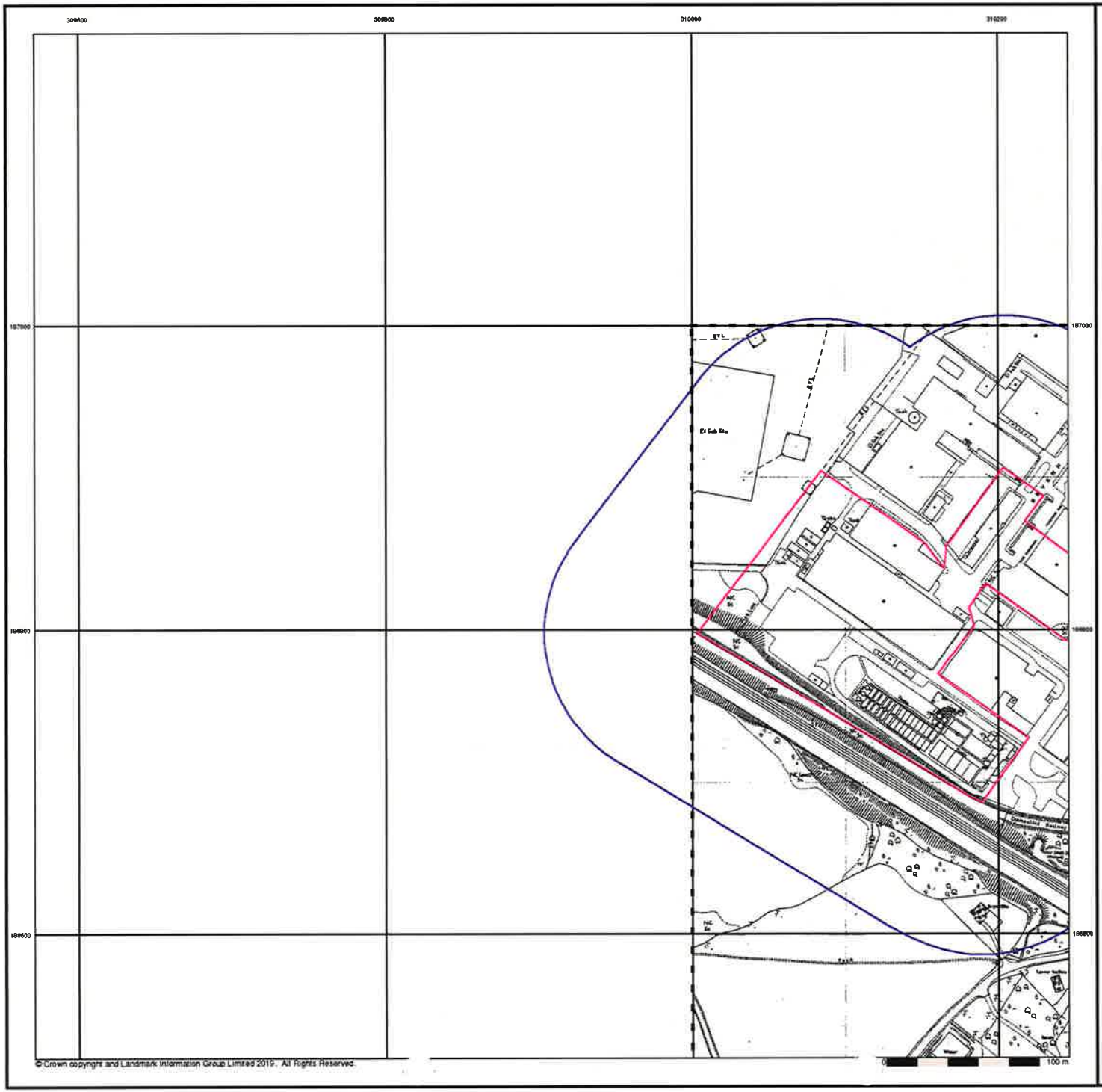

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Intégral Géotechnique

Additional SIMs
Published 1989
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.

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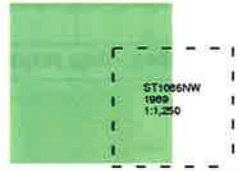
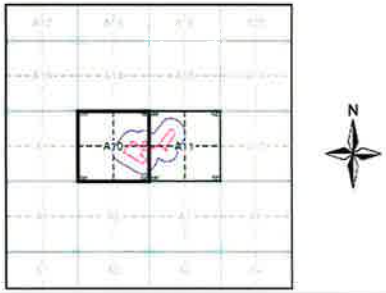


Historical Map - Segment A10



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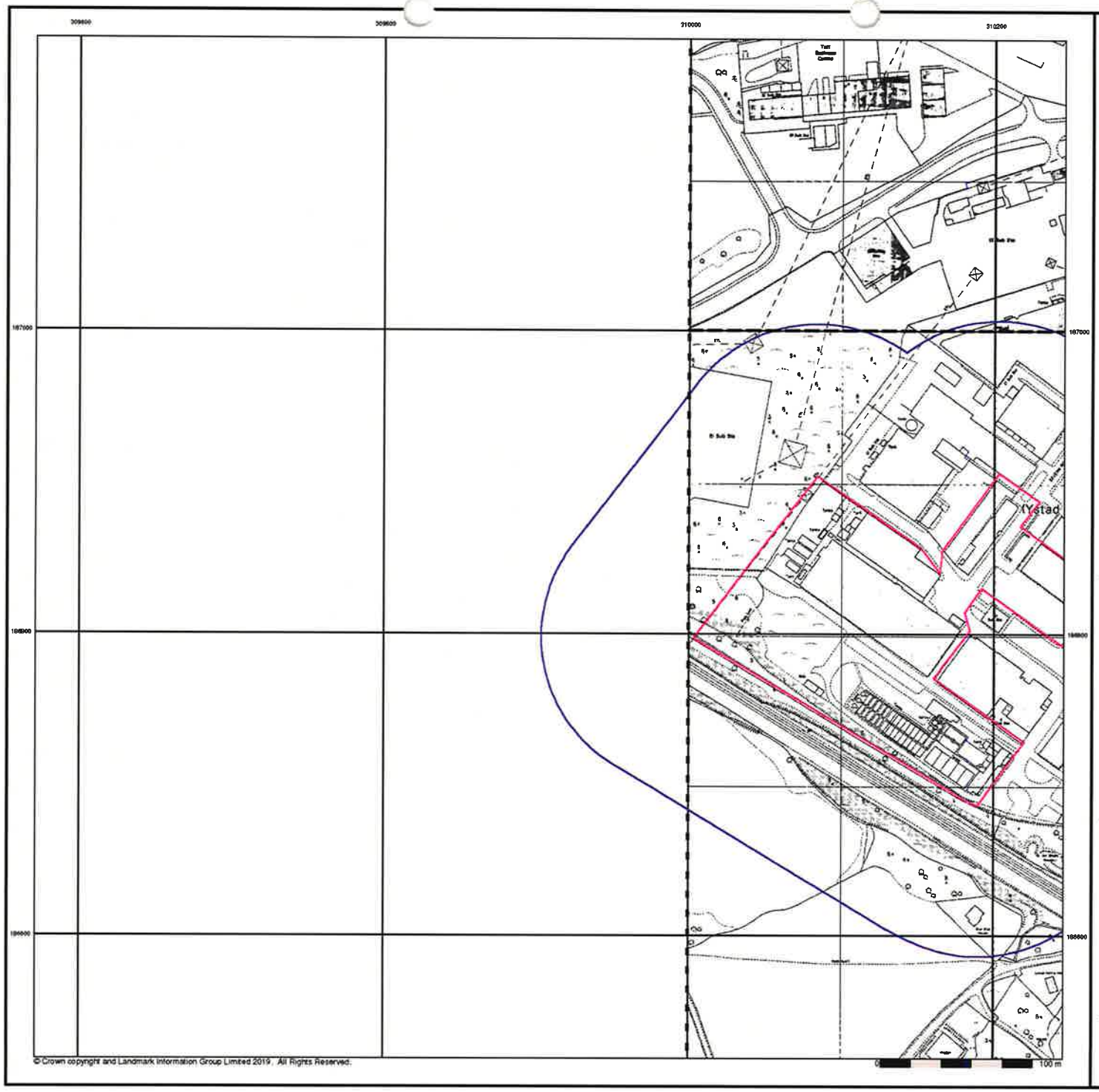

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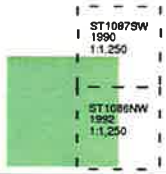
Intégral Géotechnique

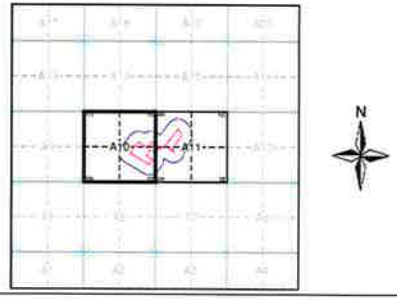
Ordnance Survey Plan
Published 1990 - 1992
Source map scale - 1:1,250

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)



Historical Map - Segment A10



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Site Details

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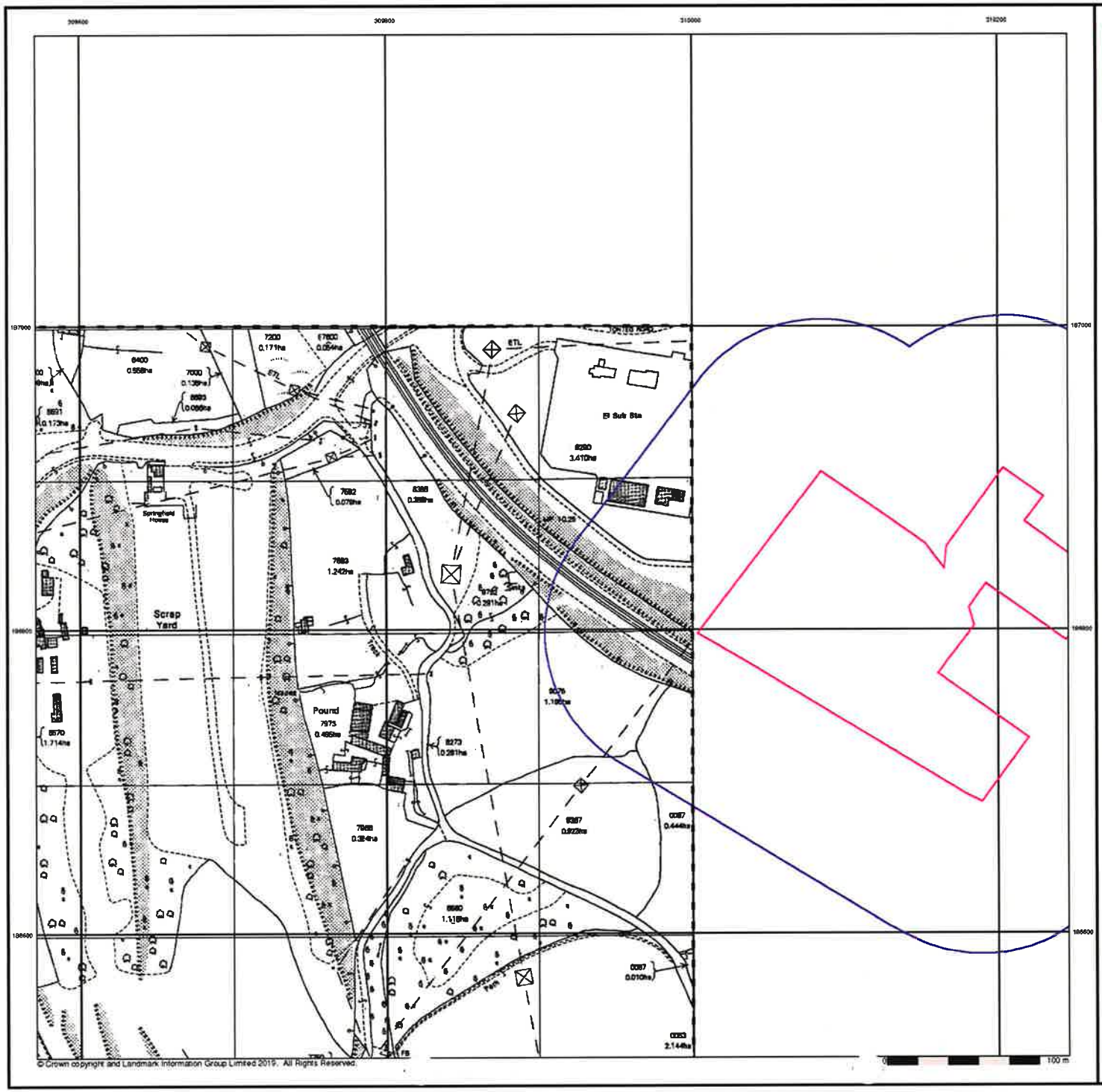

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Intégral Géotechnique

Ordnance Survey Plan
Published 1990
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.

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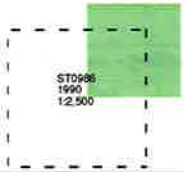
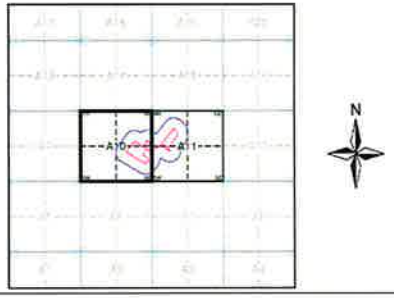


Historical Map - Segment A10



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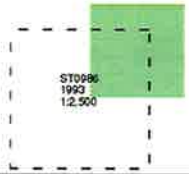
Intégral
Géotechnique

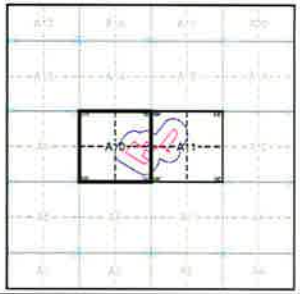
Large-Scale National Grid Data
Published 1993
Source map scale - 1:2,500

'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)



Historical Map - Segment A10



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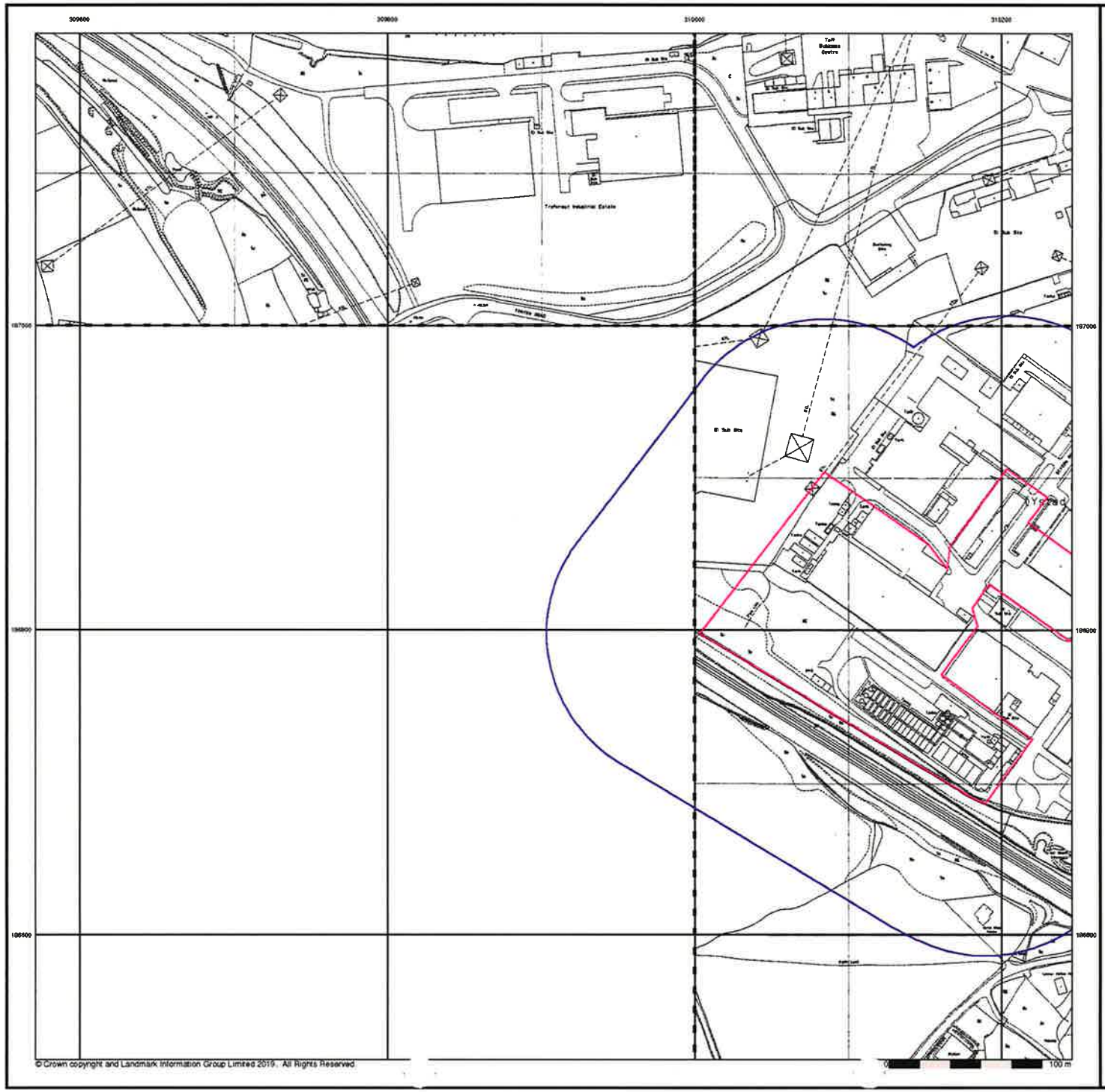

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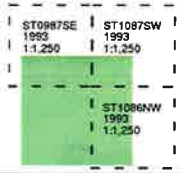
Intégral Géotechnique

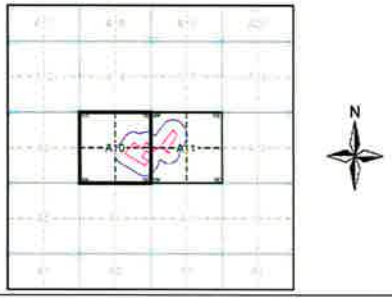
Large-Scale National Grid Data
Published 1993
Source map scale - 1:1,250

'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)



Historical Map - Segment A10



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

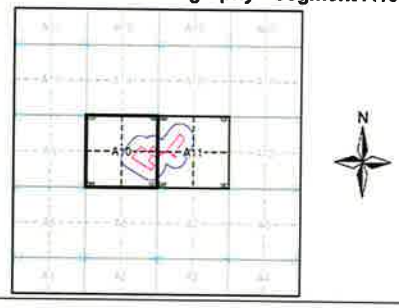
Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Intégral Géotechnique

Historical Aerial Photography
Published 2000

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 A10



Order Details

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Historical Mapping Legends

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

Quarry
Gravel Pit
Sand Pit
Clay Pit
Shingle
Refuse Heap
Sloping Masonry
Flat Rock
Marsh
Reeds
Osiers
Rough Pasture
Furze
Wood
Mixed Wood
Brushwood
Orchard
Fir
Ford
Stepping Stones
Ferry
Waterfall
Lock
Trig. Station
507 Altitude at Trig. Station
B.M.325·9 Bench Mark
342 Surface Level
Arrow denotes flow of water
Antiquities (site of)
Cutting
Embankment
Railway crossing Road
Level Crossing
Road crossing Railway
Railway crossing River or Canal
Road over single stream
Road over River or Canal

County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

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

Inactive Quarry, Chalk Pit or Clay Pit
Active Quarry, Chalk Pit or Clay Pit
Rock
Boulders
Cliff
Slopes
Top
Roofed Building
Glazed Roof Building
Sloping Masonry
Archway
Non-Coniferous Tree (surveyed)
Coniferous Tree (surveyed)
Non-Coniferous Trees (not surveyed)
Coniferous Trees (not surveyed)
Orchard Tree
Scrub
Bracken
Coppice, Osier
Reeds
Marsh, Saltings
Rough Grassland
Heath
Culvert
Direction of water flow
Bench Mark
Antiquity (site of)
Cave Entrance
Triangulation Station
Electricity Pylon
E T L Electricity Transmission Line

County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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

Cliff
Slopes
Top
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Positioned Boulder
Scree
Non-Coniferous Tree (surveyed)
Coniferous Tree (surveyed)
Non-Coniferous Trees (not surveyed)
Coniferous Trees (not surveyed)
Orchard Tree
Scrub
Bracken
Coppice, Osier
Reeds
Marsh, Saltings
Rough Grassland
Heath
Culvert
Direction of water flow
Triangulation Station
Antiquity (site of)
E T L Electricity Transmission Line
Electricity Pylon
BM 23.56m Bench Mark
Buildings with Building Seed
Roofed Building
Glazed Roof Building

Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

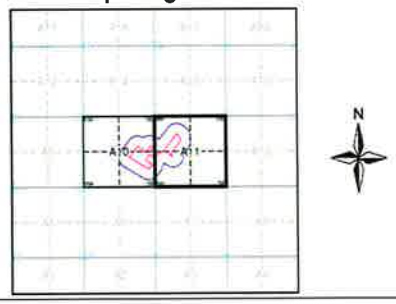
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governor	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Intégral Géotechnique

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1875 - 1877	2
Glamorganshire	1:2,500	1900	3
Glamorganshire	1:2,500	1919 - 1920	4
Glamorganshire	1:2,500	1936 - 1943	5
Ordnance Survey Plan	1:1,250	1958	6
Ordnance Survey Plan	1:2,500	1960	7
Ordnance Survey Plan	1:1,250	1973 - 1976	8
Supply of Unpublished Survey Information	1:1,250	1975	9
Additional SIMs	1:1,250	1978 - 1988	10
Additional SIMs	1:2,500	1988	11
Additional SIMs	1:1,250	1988 - 1989	12
Ordnance Survey Plan	1:1,250	1989 - 1992	13
Additional SIMs	1:1,250	1989	14
Large-Scale National Grid Data	1:1,250	1993	15
Large-Scale National Grid Data	1:1,250	1995	16
Historical Aerial Photography	1:2,500	2000	17

Historical Map - Segment A11



Order Details

Order Number: 228391279_1_1
Customer Ref: 11121/LP
National Grid Reference: 310260, 186860
Slice: A
Site Area (Ha): 4.09
Search Buffer (m): 100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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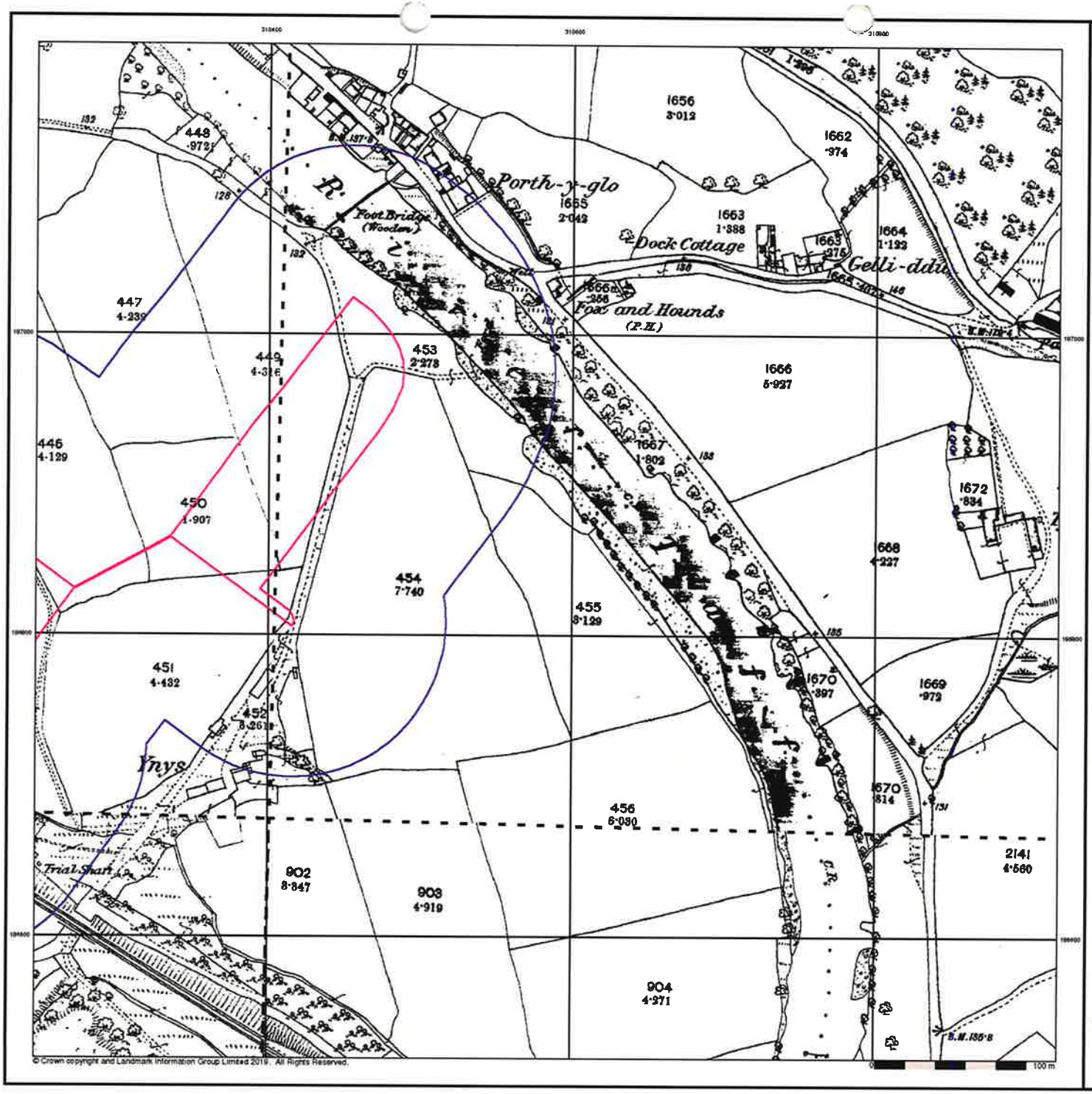

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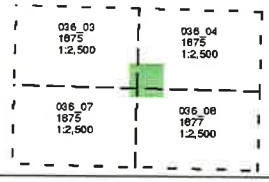
Intégral Géotechnique

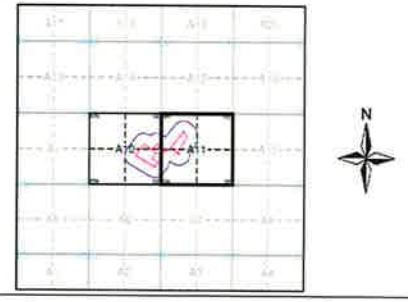
Glamorganshire
Published 1875 - 1877
Source map scale - 1:2,500

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 A11



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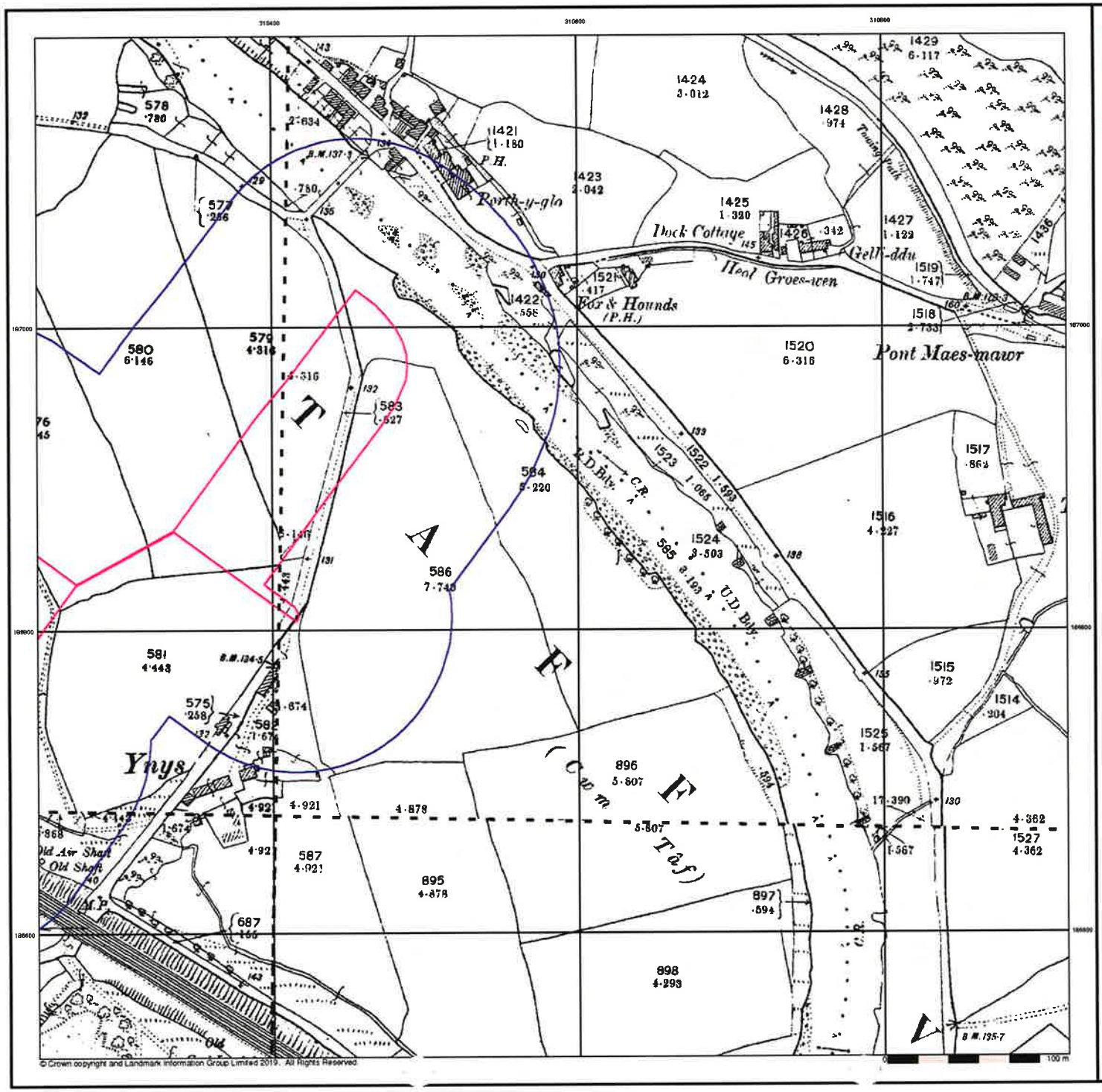

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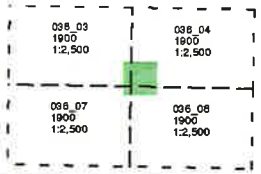
Intégral Géotechnique

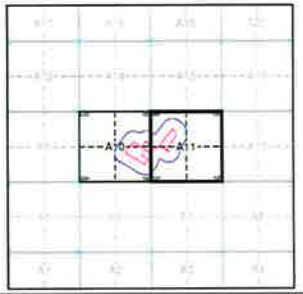
Glamorganshire
Published 1900
Source map scale - 1:2,500

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 A11



Order Details

Order Number:	228391279_1_1
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National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
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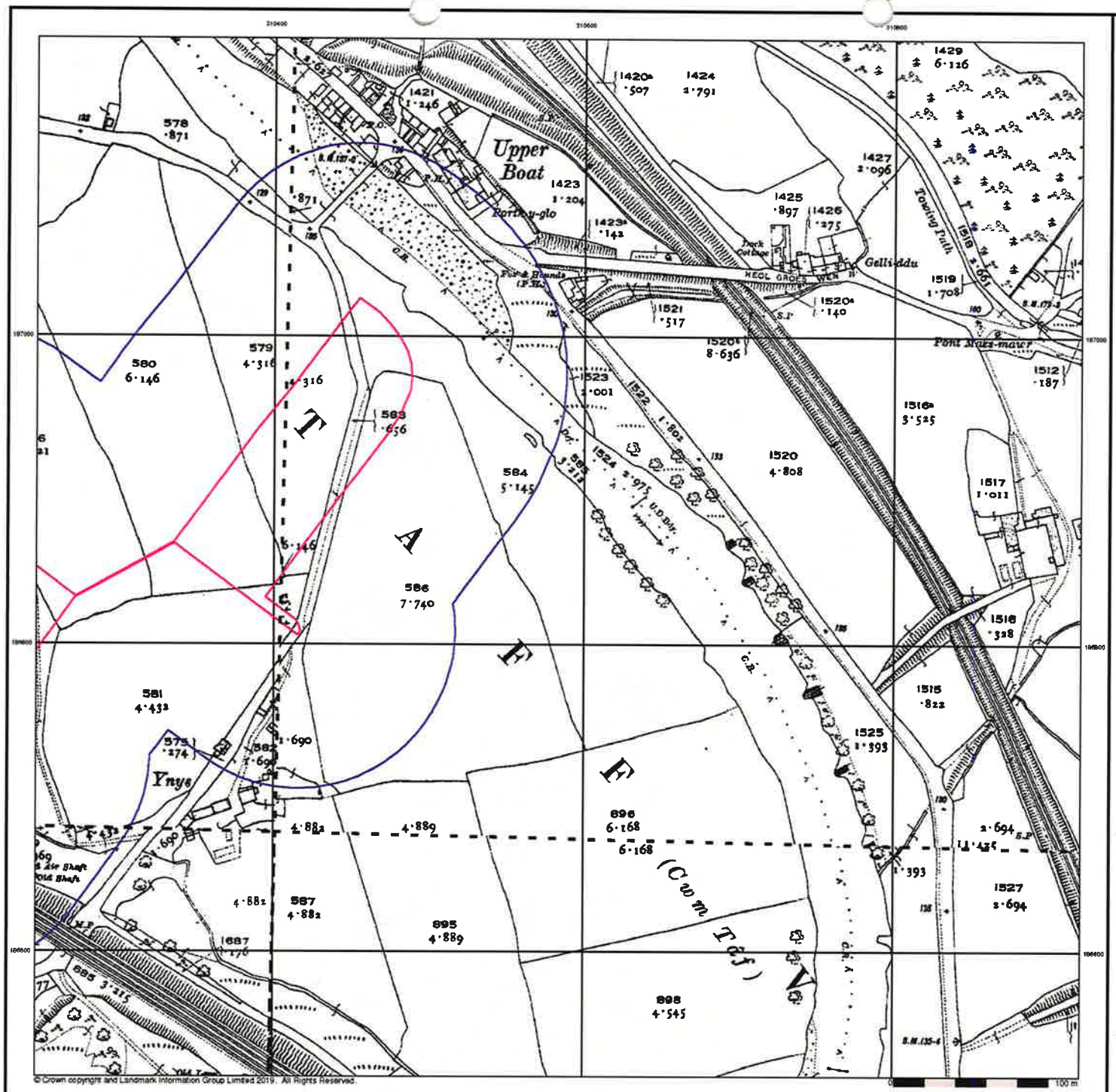

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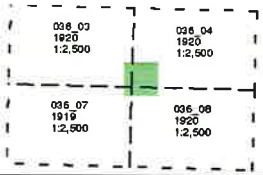
Intégral Géotechnique

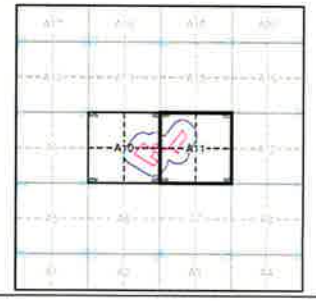
Glamorganshire
Published 1919 - 1920
Source map scale - 1:2,500

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 A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

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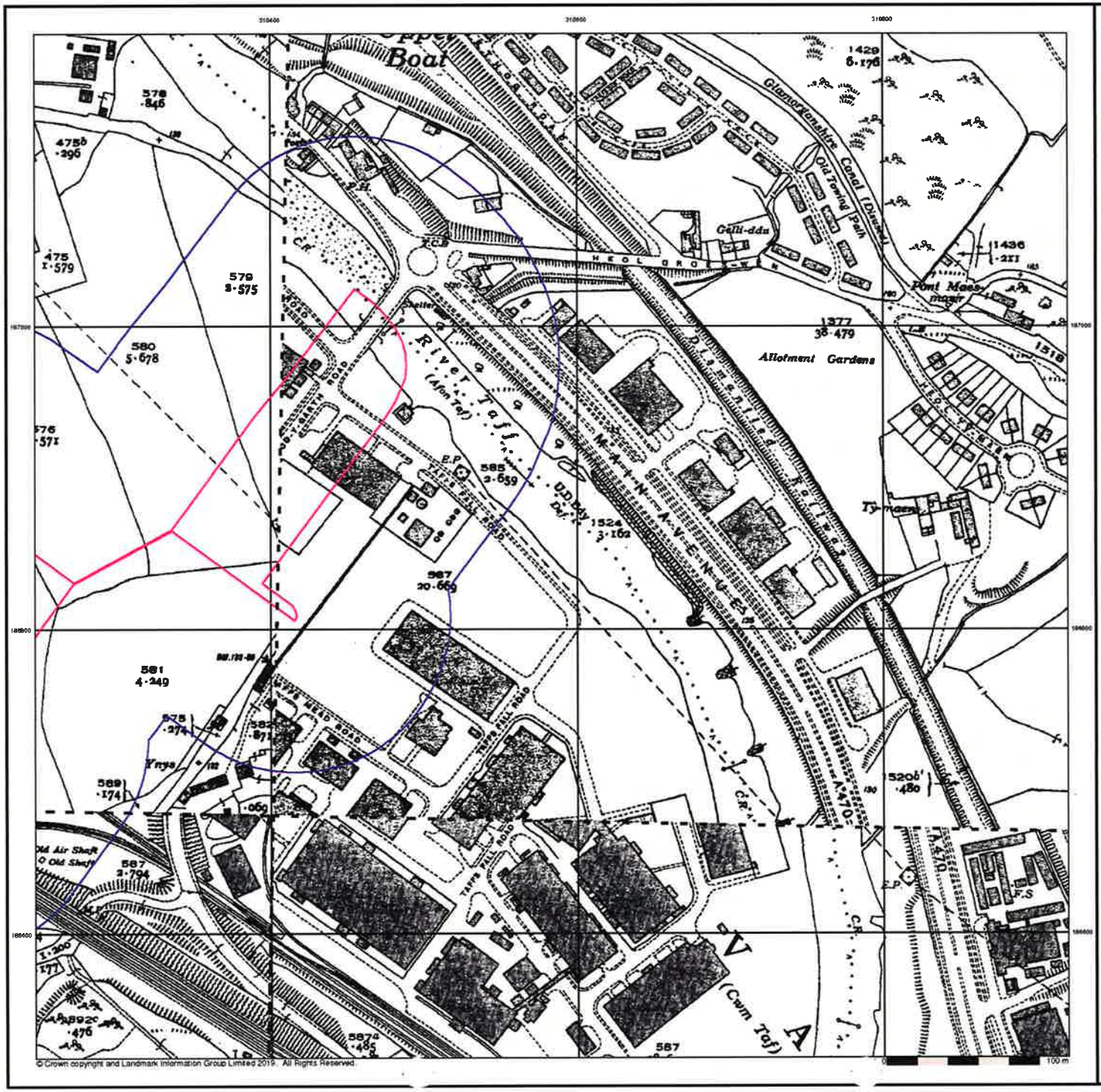

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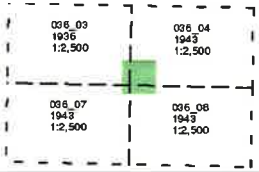
Intégral Géotechnique

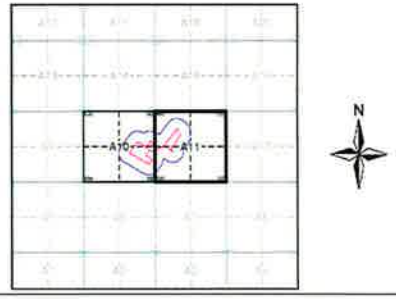
Glamorganshire
Published 1936 - 1943
Source map scale - 1:2,500

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 A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
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Site Details

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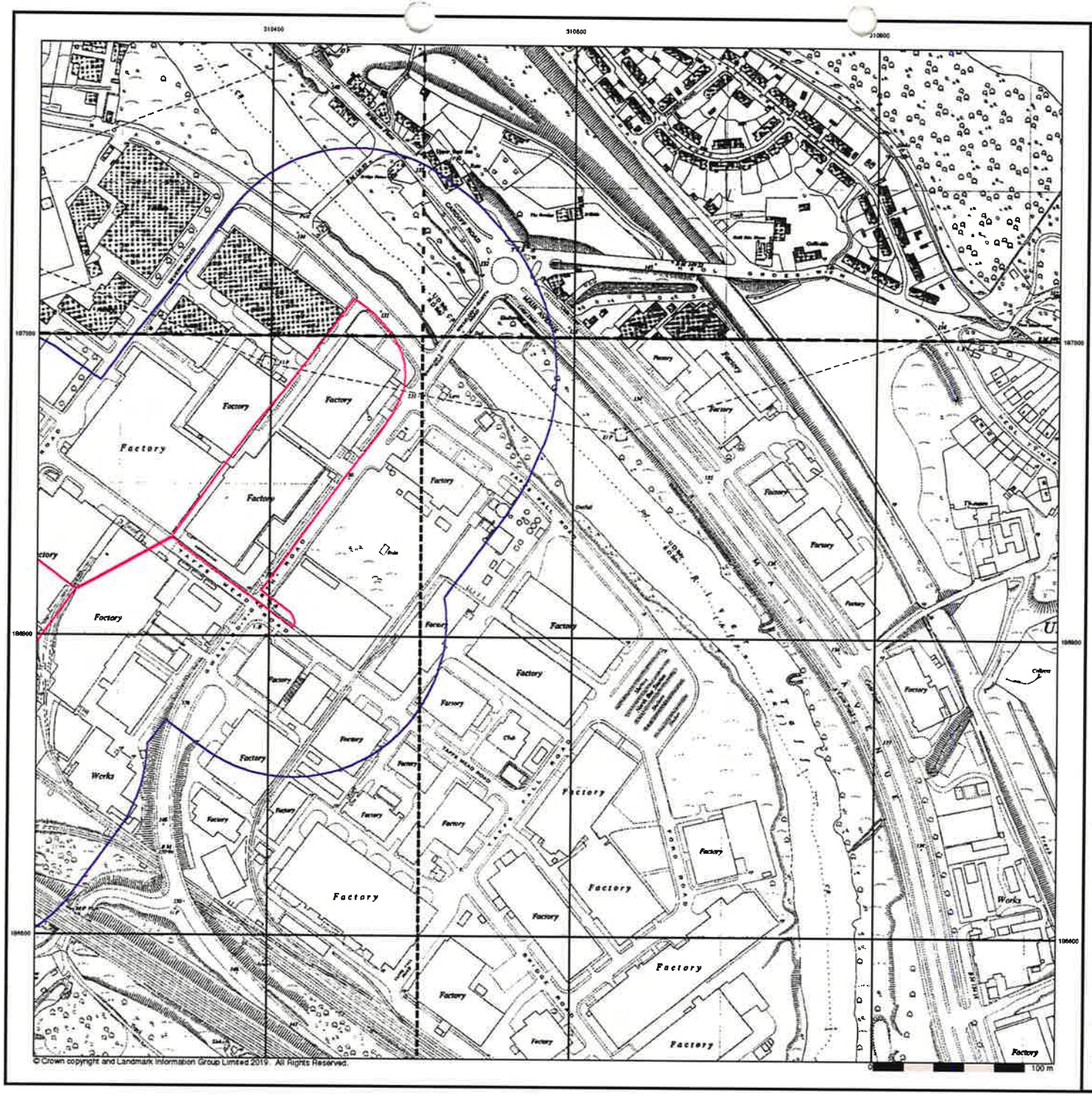

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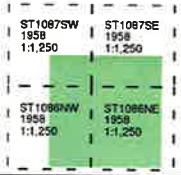
Intégral Géotechnique

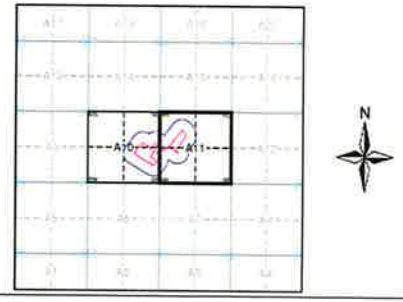
Ordnance Survey Plan
Published 1958
Source map scale - 1:1,250

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)



Historical Map - Segment A11

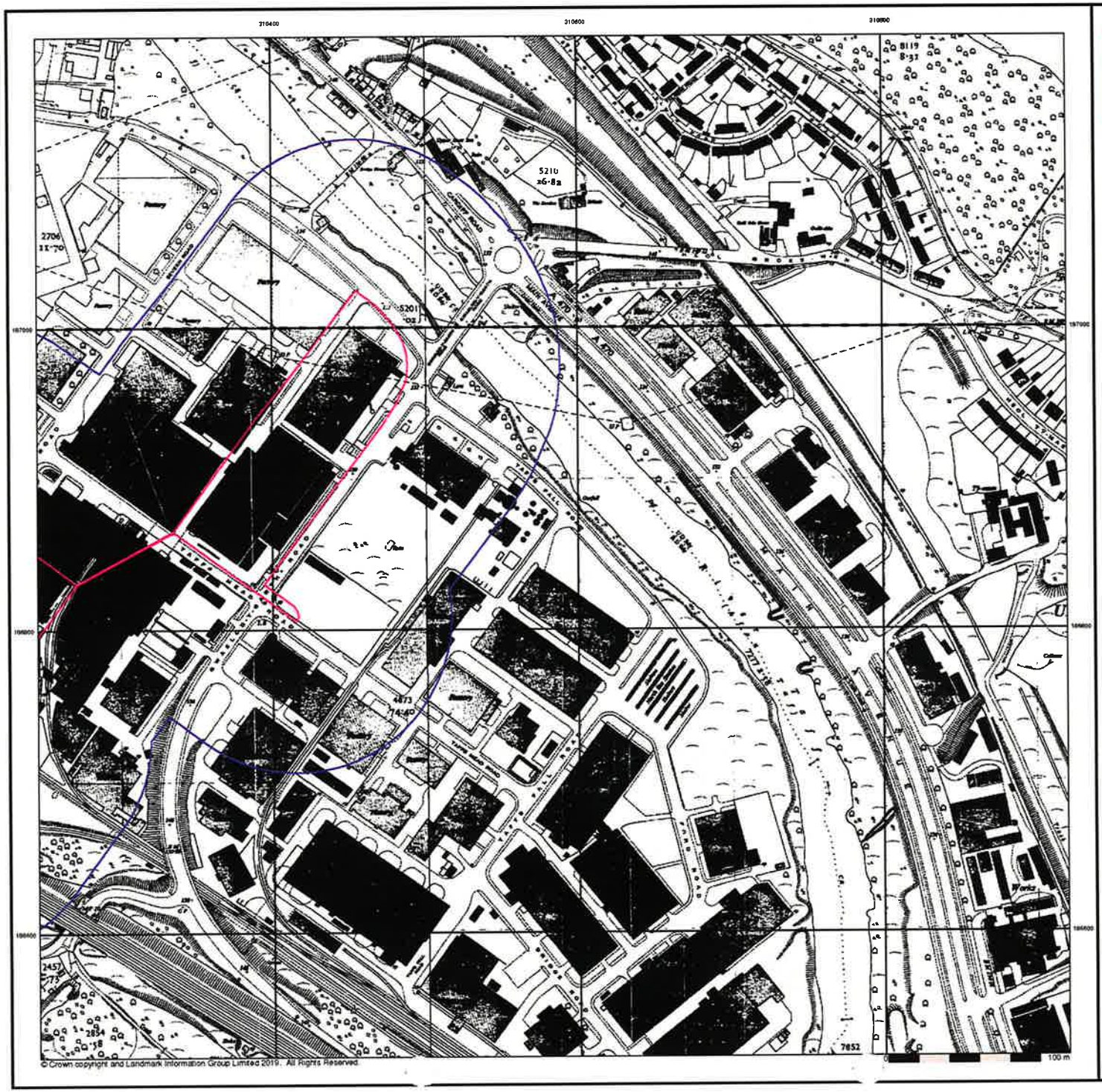


Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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Intégral Géotechnique

Ordnance Survey Plan
Published 1960
Source map scale - 1:2,500

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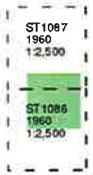
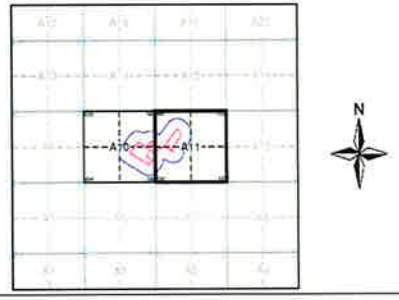
Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number:	228391279_1_1
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National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

Landmark INFORMATION GROUP
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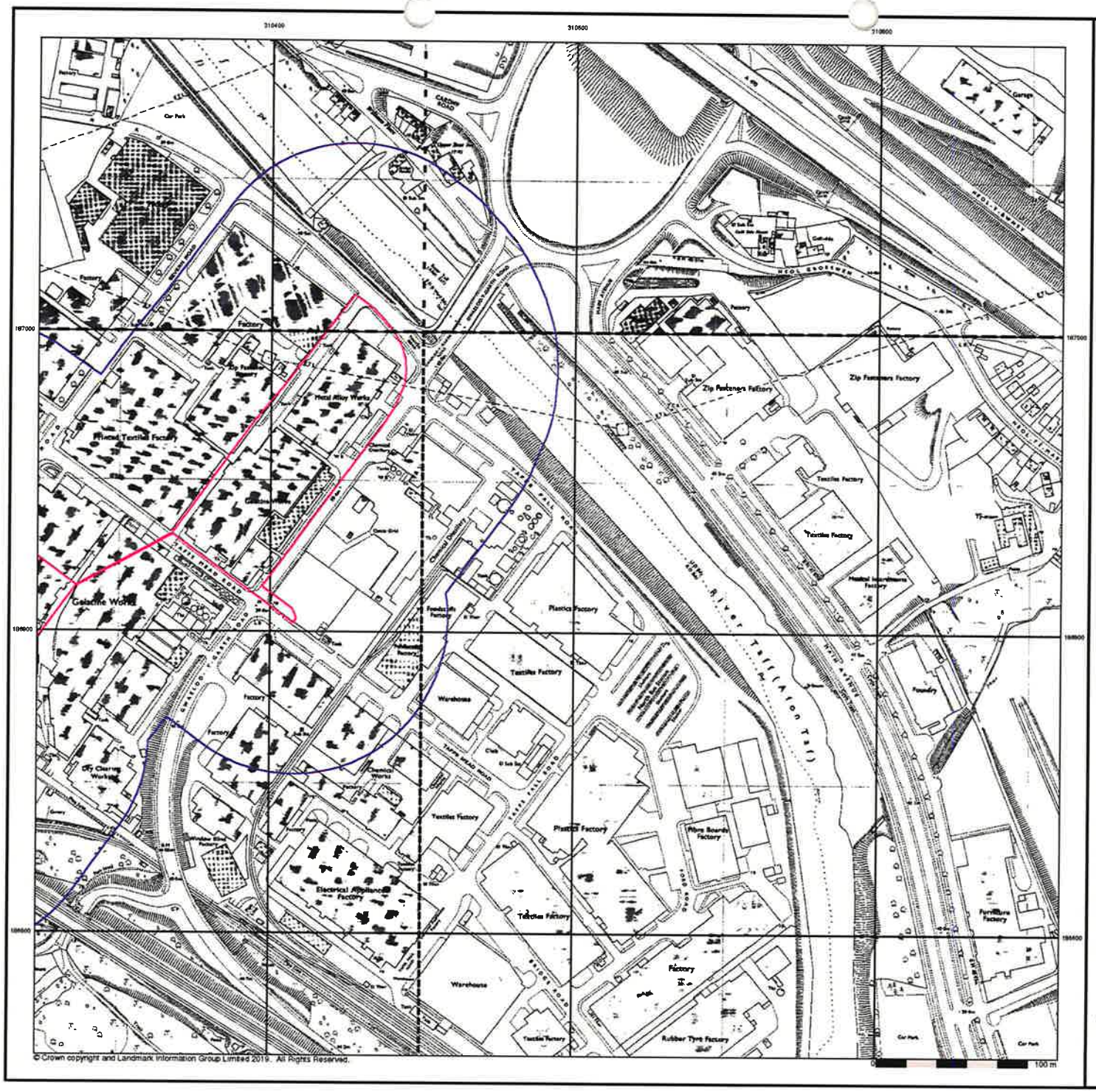

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Intégral Géotechnique

Ordnance Survey Plan
Published 1973 - 1976
Source map scale - 1:1,250

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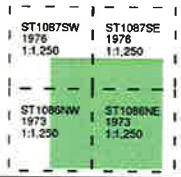
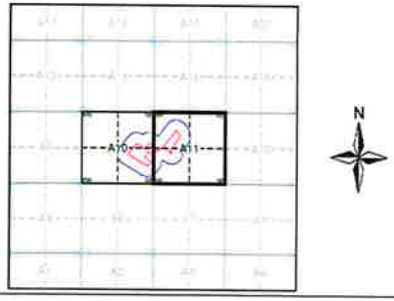
Map Name(s) and Date(s)



Historical Map - Segment A11



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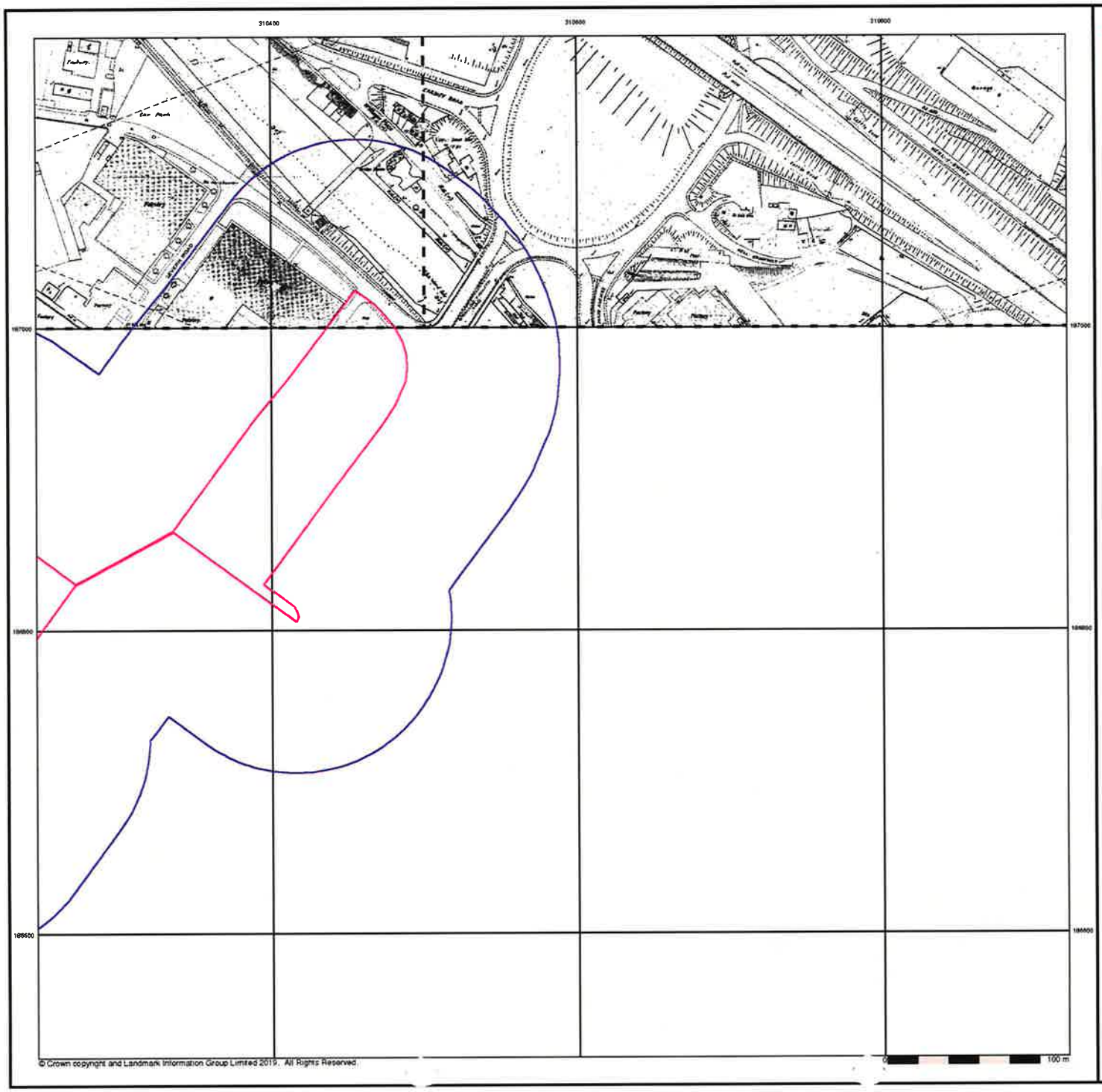
Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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Intégral Géotechnique

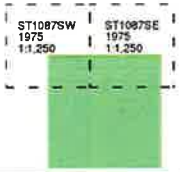
Supply of Unpublished Survey Information

Published 1975

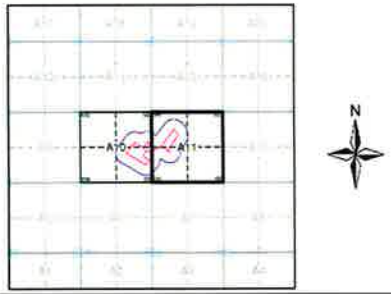
Source map scale - 1:1,250

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 A11

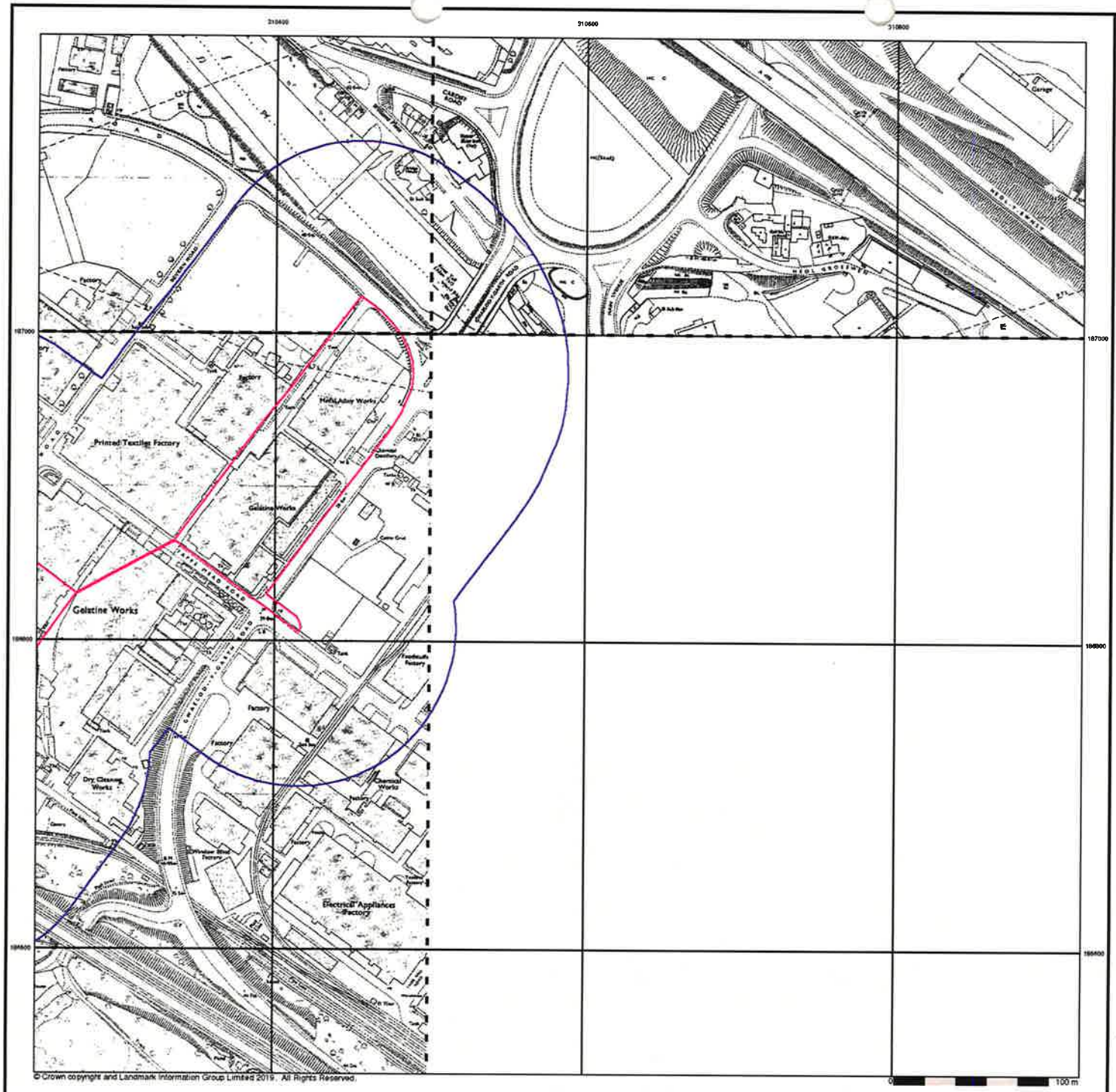


Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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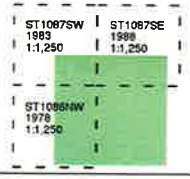
Intégral Géotechnique

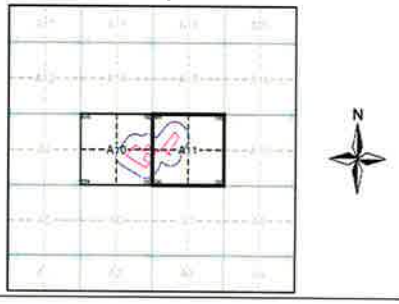
Additional SIMs
Published 1978 - 1988
Source map scale - 1:1,250

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)



Historical Map - Segment A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

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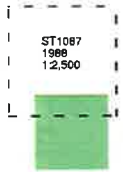
Intégral Géotechnique

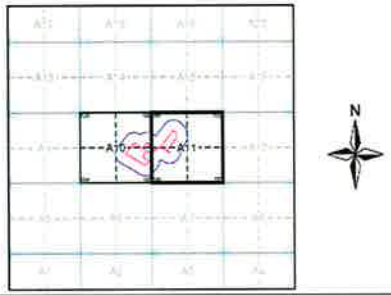
Additional SIMs
Published 1988
Source map scale - 1:2,500

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)



Historical Map - Segment A11



Order Details

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Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
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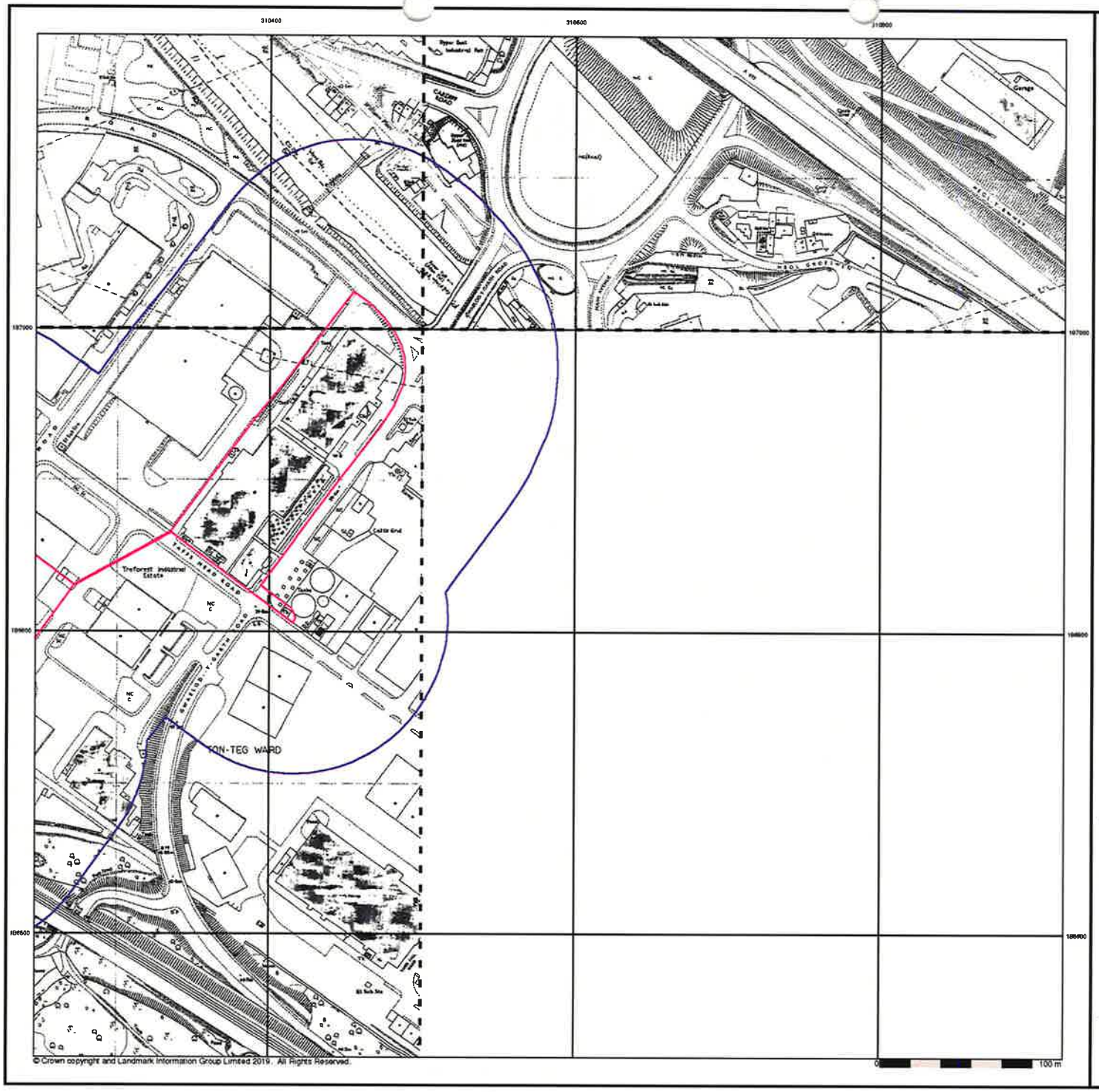
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ



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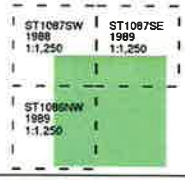
Intégral Géotechnique

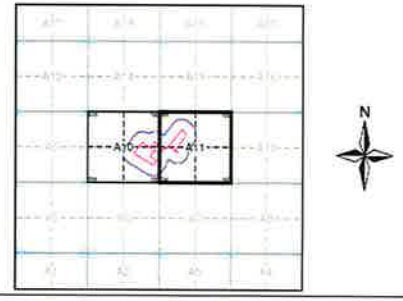
Additional SIMs
Published 1988 - 1989
Source map scale - 1:1,250

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)



Historical Map - Segment A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

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Intégral
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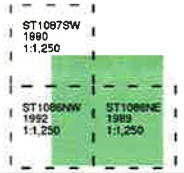
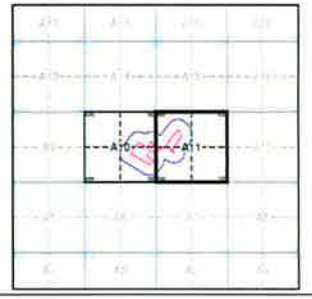
Ordnance Survey Plan
Published 1989 - 1992
Source map scale - 1:1,250

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)



Historical Map - Segment A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
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Site Details

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Intégral Géotechnique

Additional SIMs
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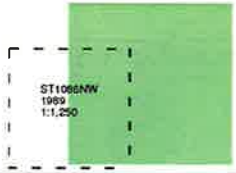
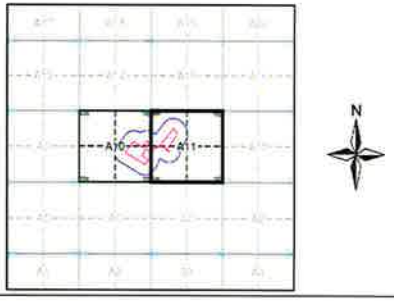
Source map scale - 1:1,250

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)



Historical Map - Segment A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

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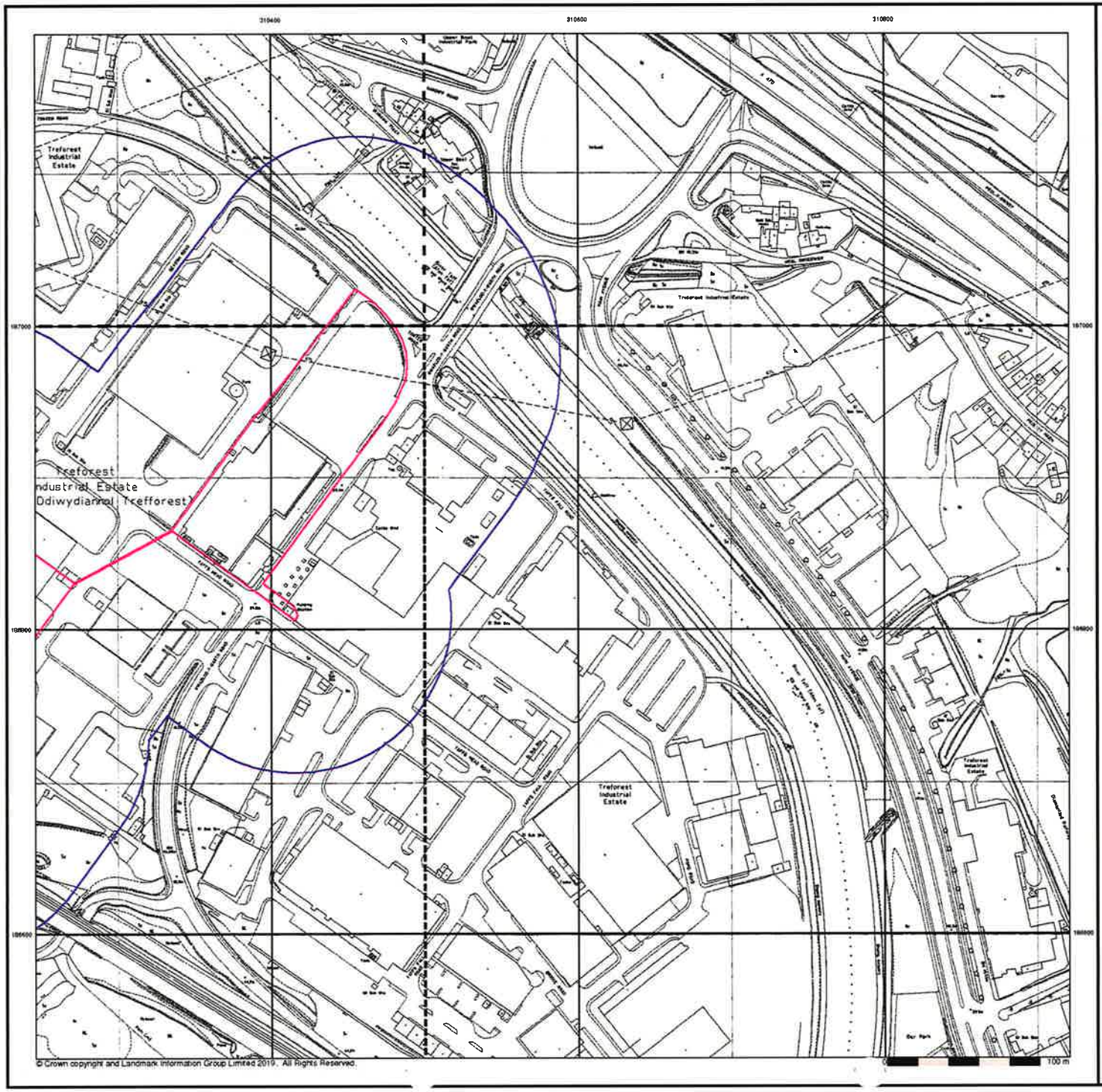
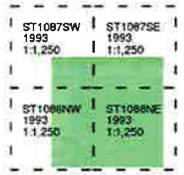


Intégral Géotechnique

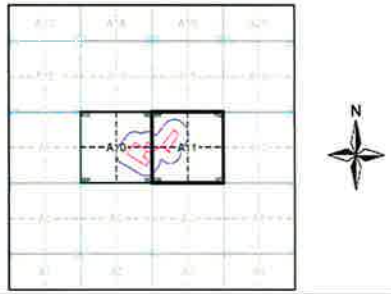
Large-Scale National Grid Data
Published 1993
Source map scale - 1:1,250

'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)



Historical Map - Segment A11



Order Details

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Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

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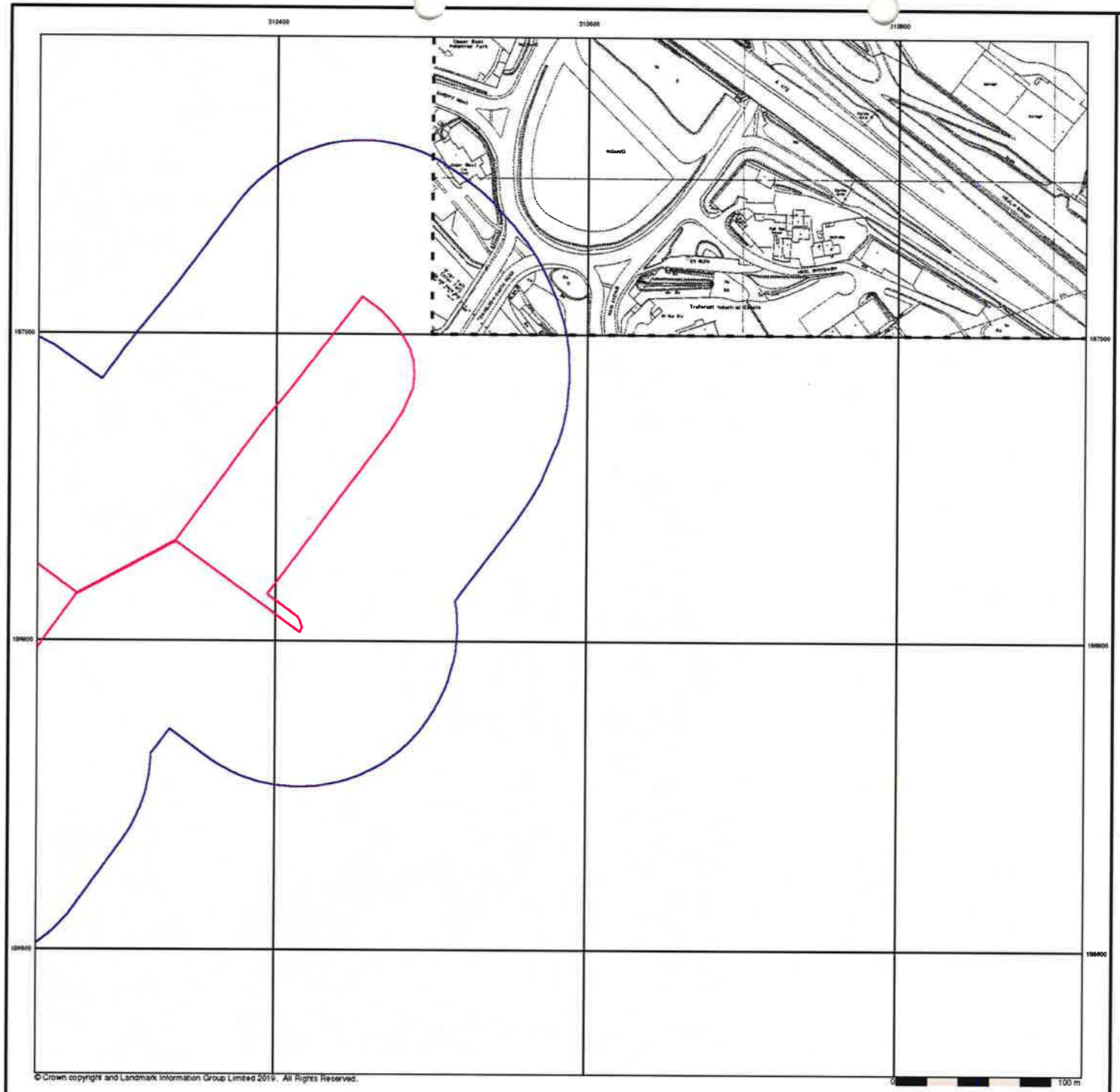

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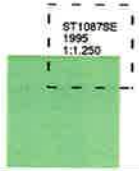
Intégral Géotechnique

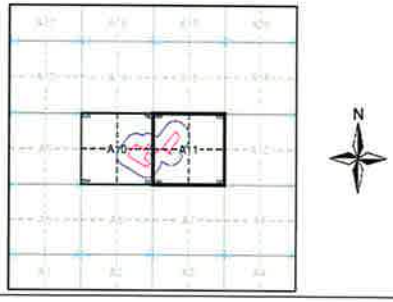
Large-Scale National Grid Data
Published 1995
Source map scale - 1:1,250

'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)



Historical Map - Segment A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
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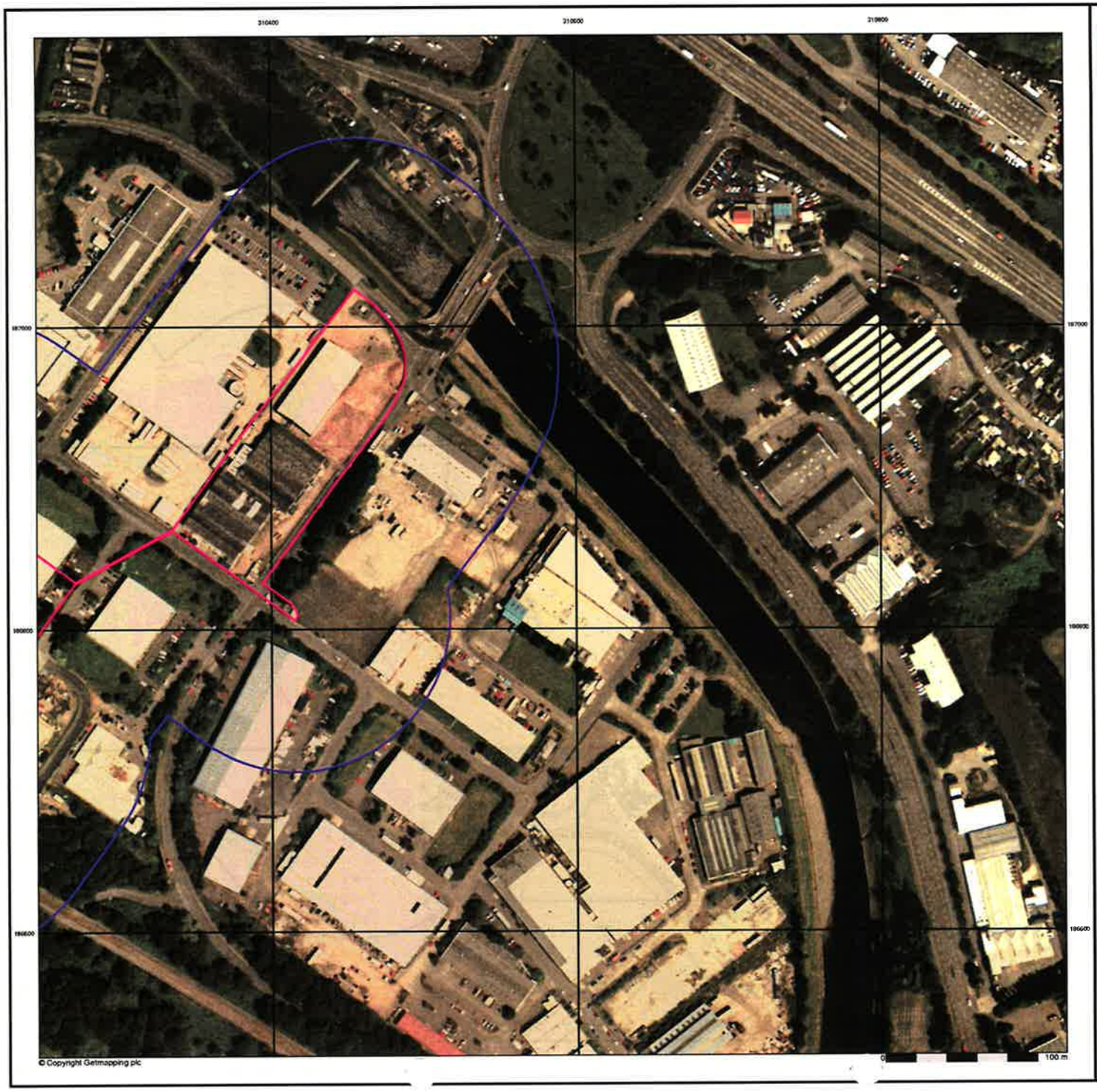
Search Buffer (m):	100

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

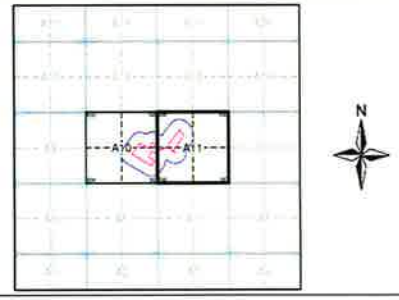


Intégral
Géotechnique

Historical Aerial Photography
Published 2000

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 A11



Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310260, 186860
Slice:	A
Site Area (Ha):	4.09
Search Buffer (m):	100

Site Details

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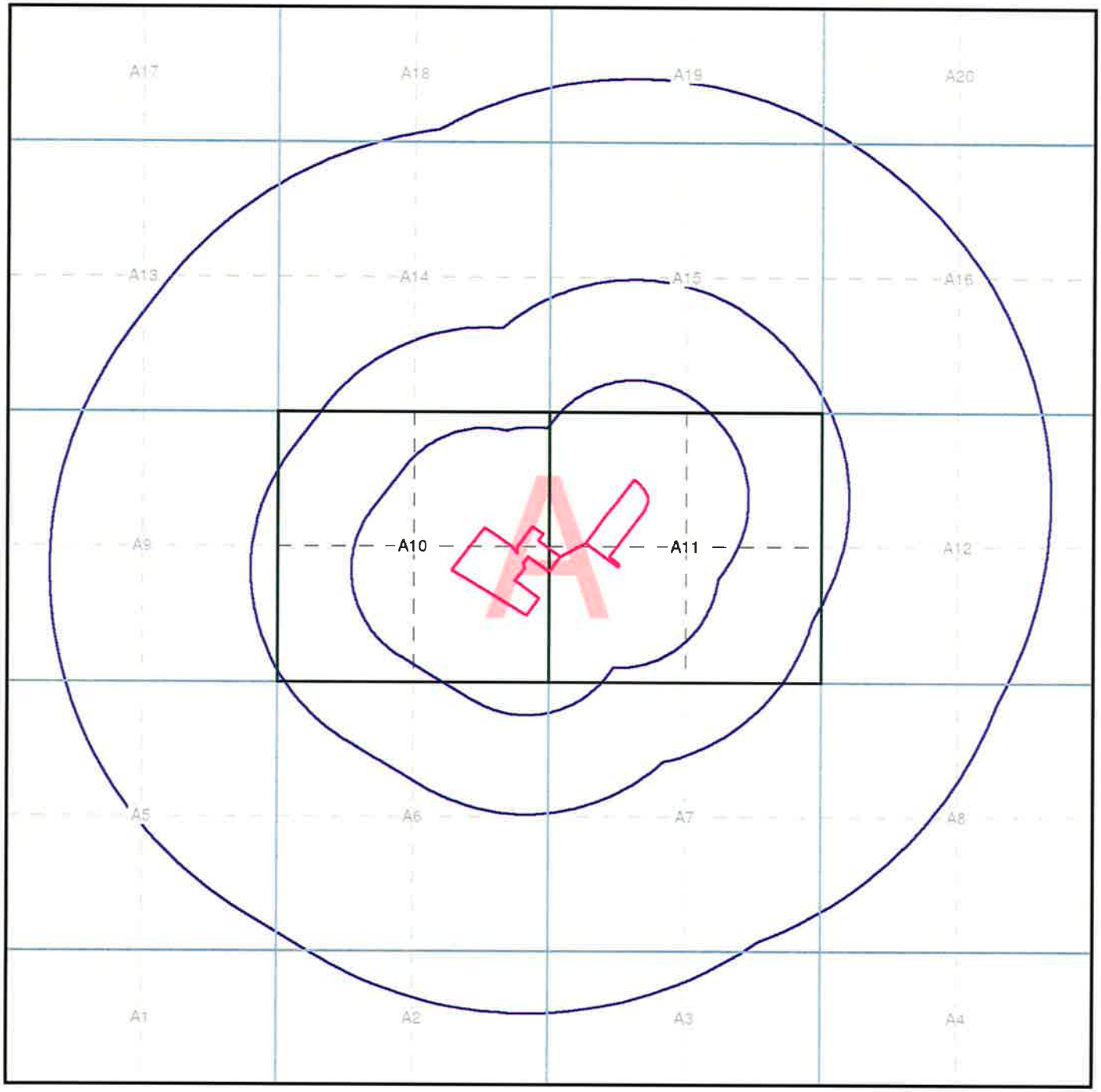

Intégral Géotechnique

Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey

Cyfoeth Naturiol Cymru Natural Resources Wales

Envirocheck reports are compiled from 136 different sources of data.

Client Details

MR H Pritchard, Integral Geotechnique, Integral House, 7 Beddau Way, Castlegate Business Park, Caerphilly, CF83 2AX

Order Details

Order Number:	228391279_1_1
Customer Ref:	11121/LP
National Grid Reference:	310230, 186840
Site Area (Ha):	4.09
Search Buffer (m):	1000

Site Details

P B Gelatins, Severn Road, Treforest Industrial Estate, PONTYPRIDD, CF37 5SQ

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http://www.landmarkinfo.co.uk/Terms/Show/515

APPENDIX B

COAL AUTHORITY MINING REPORT (10229/GNS/09)

The Coal Authority

Issued by:
The Coal Authority, Mining Reports Office, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire NG18 4RG
On-Line Service: www.coalminingreports.co.uk - Phone: 0845 762 6848 - DX 716176 MANSFIELD 5

OFFICE MANAGER,
INTEGRAL GEOTECHNIQUE (WALES) LTD.,
50 CATHEDRAL ROAD,
CARDIFF,
SOUTH GLAMORGAN,
CF11 9LL

Person dealing with this matter:	**Paul Heap**
Our reference:	**00061012-08**
Your reference:	10299/GNS
Electronic Ref:	EME_00010308270001_005
RRUID:	005.00010308270001
Date of your enquiry:	**12 September 2008**
Date we received your enquiry:	**12 September 2008**
Date of Issue:	**12 September 2008**

This report is for the property described in the address below and the attached plan.

Coal and Brine Report

P.B. Gelatins Uk Ltd, Tonteg Road, Treforest, Cardiff, Mid Glamorgan

This report is based on and limited to the records held by, the Coal Authority, and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Coal mining	Yes
Brine extraction	No

Information from the Coal Authority

Underground Coal Mining

Past

According to the records in our possession, the property is not within the zone of likely physical influence on the surface from past underground workings.

Present

The property is not in the likely zone of influence of any present underground coal workings.

Future

The property is not in an area for which the Coal Authority is determining whether to grant a licence to remove coal using underground methods.

The property is not in an area for which a licence has been granted to remove coal using underground methods.

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The property is not in an area that is likely to be affected at the surface from any planned future workings.

However reserves of coal exist in the local area which could be worked at some time in the future.

No notice of the risk of the land being affected by subsidence has been given under section 46 of the Coal Mining Subsidence Act 1991.

Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

Coal-mining geology

At the surface, there are no known faults or other lines of weakness due to coal mining that have made the property unstable.

Opencast Coal Mining

Past

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

Present

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

Future

The property is not within 800 metres of the boundary of an opencast site for which the Coal Authority is determining whether to grant a licence to remove coal by opencast methods.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

Coal-mining subsidence

The Coal Authority has not received a damage notice or claim for the property since 1 January 1984. There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority has not received a request to carry out preventive work before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

Withdrawal of Support

The property is in an area for which notices of entitlement to withdraw support were published in 1976,1984.

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

Working Facilities Orders

The property is not in an area for which an Order has been made under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

Payments to Owners of Former Copyhold Land

The property is not in an area for which a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Additional remarks

This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions 2006. The report is compliant with Home Information Pack requirements.

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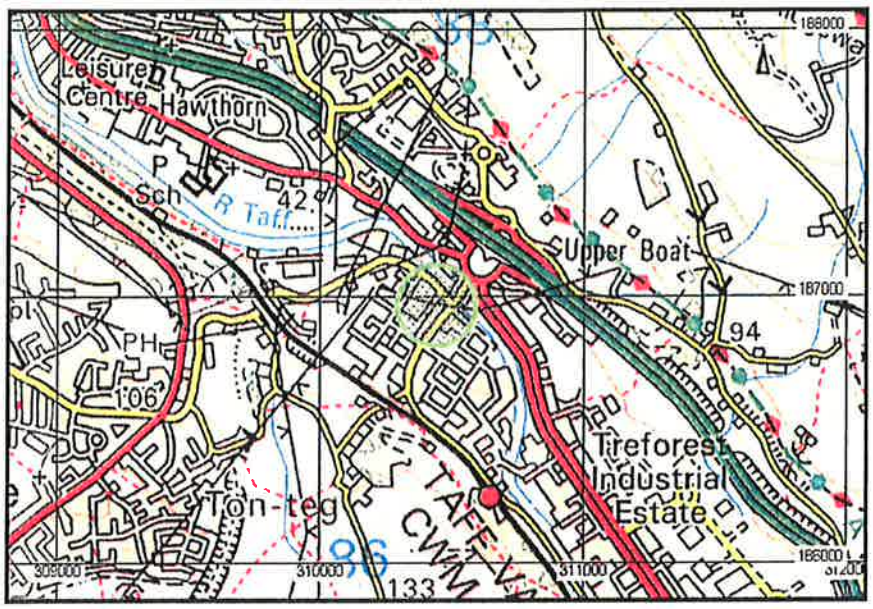
Location map

Approximate position of property



Enquiry boundary

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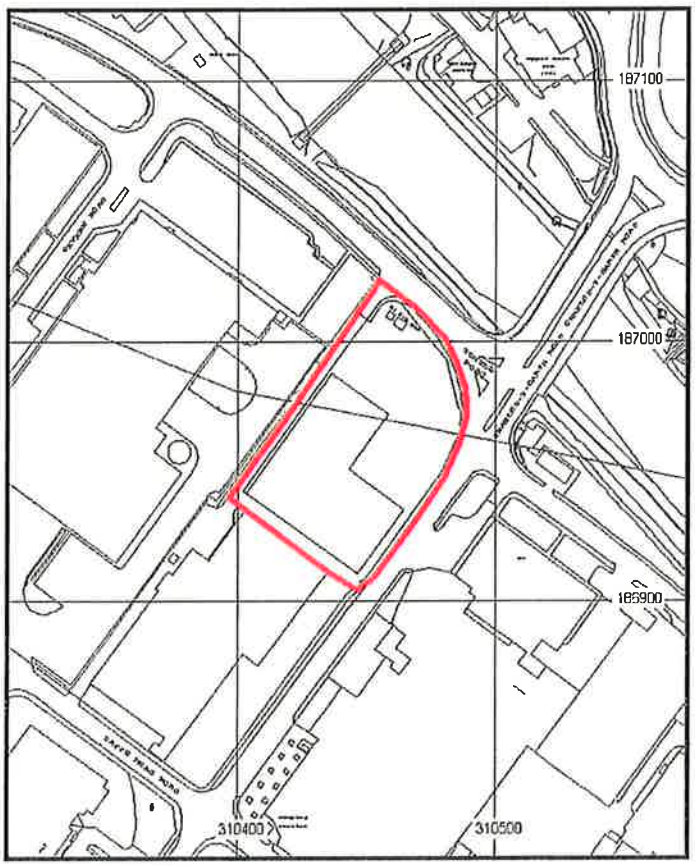
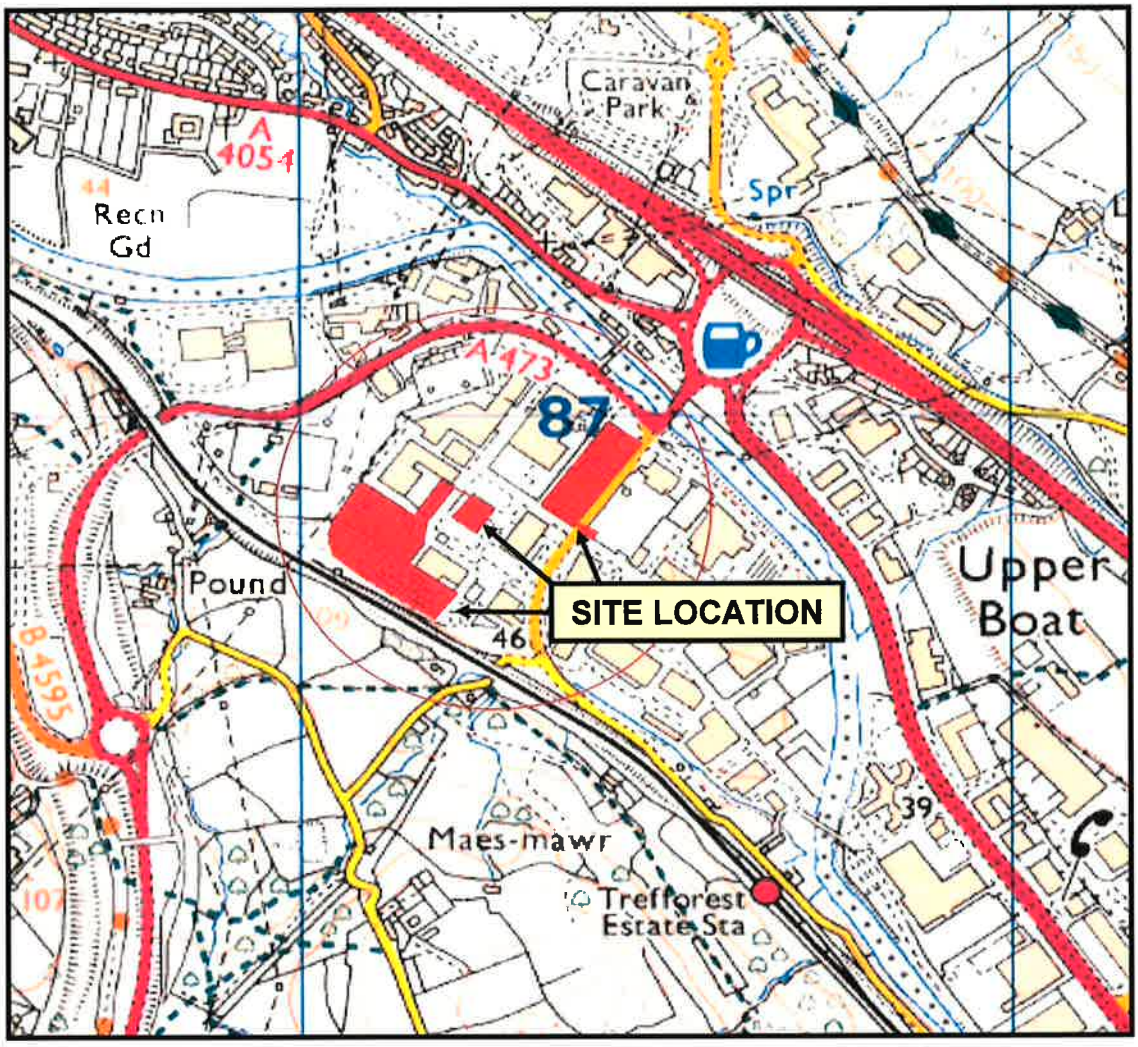


Key

Approximate position of enquiry boundary shown

FIGURES



Scale = 1:10,000 approx.

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Figure 1 - Site Location

PB Leiner, Treforest Industrial Estate

Intégral Géotechnique
Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176

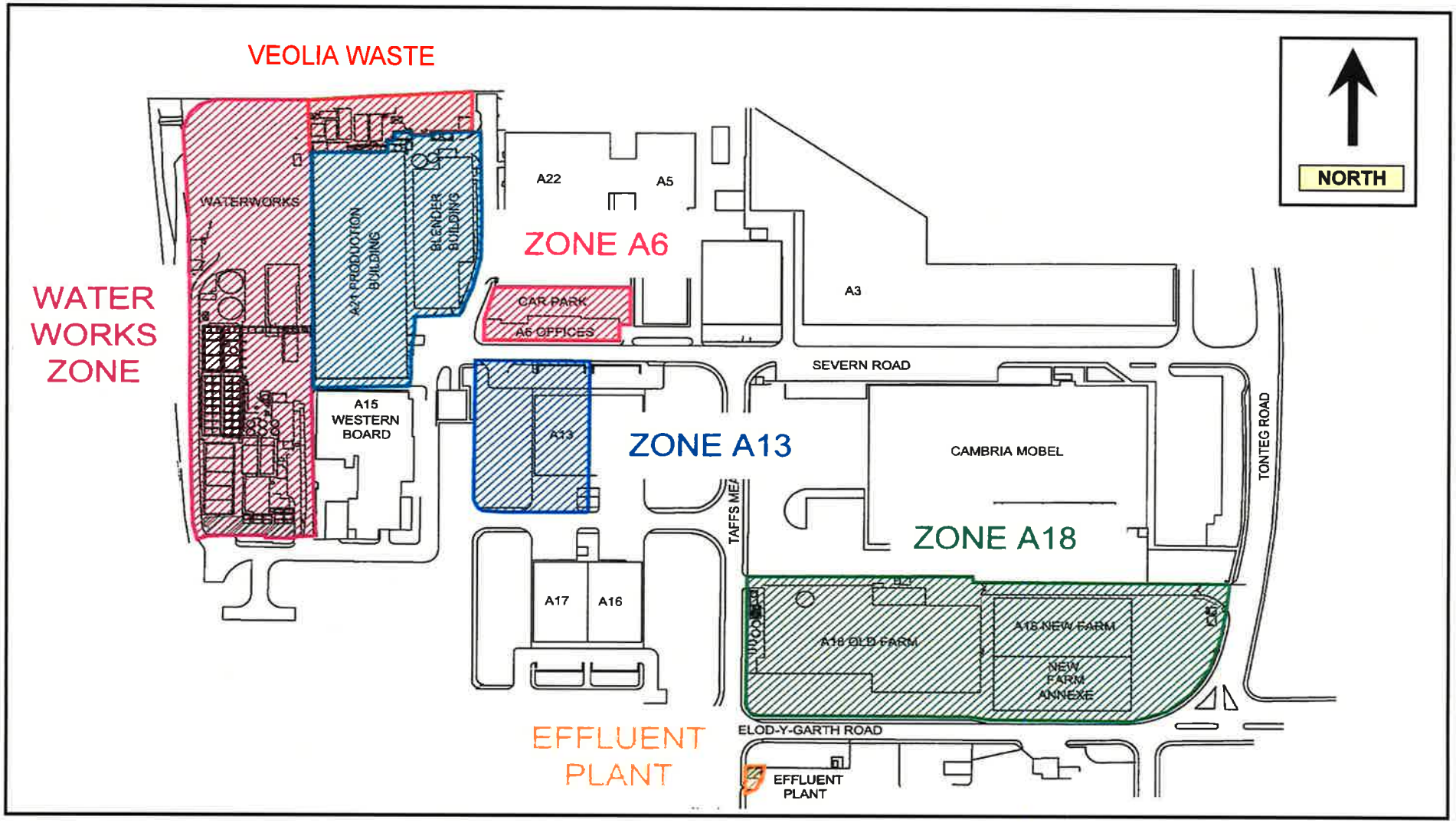

Figure 2 - Site Plan

PB Leiner, Treforest Industrial Estate

Intégral Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176

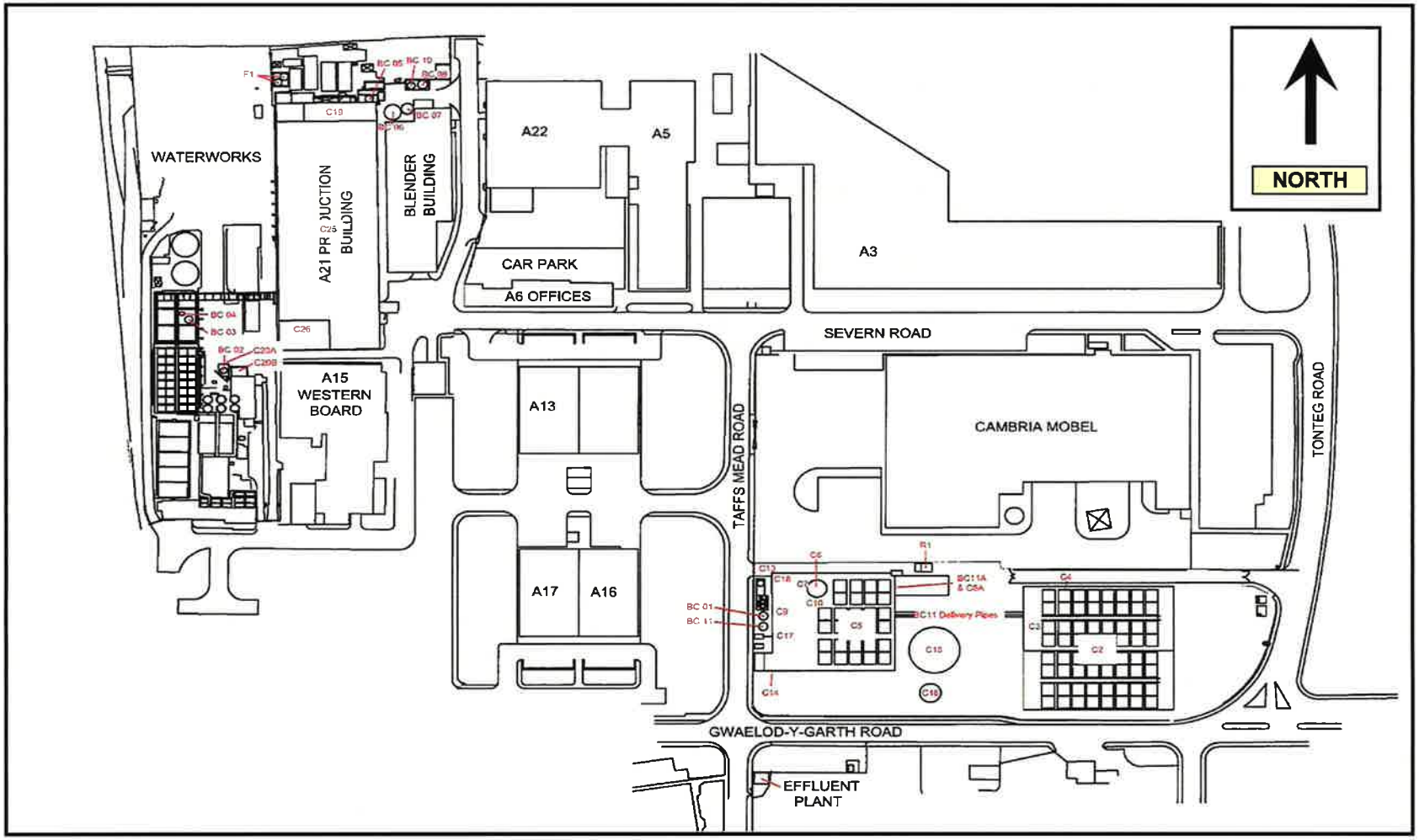

Figure 3 - Locations of Bulk Storage

PB Leiner, Treforest Industrial Estate

Intégral Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
t: 029 2080 7991
fax: 029 2086 2176

Waterworks, BC03

Old Farm, BC11

A21, BC06 and BC07

A21, BC05, BC08 and BC10

Waterworks, BC02

Figure 4a - Site Photos

PB Leiner, Treforest Industrial Estate

Intégral Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176

A18 Old Farm

A18 Old Farm

A18 C15 and C16

A18 New Farm

Figure 4b - Site Photos

PB Leiner, Treforest Industrial Estate

Intégral Géotechnique

Integral House
7 Beddau Way
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Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176

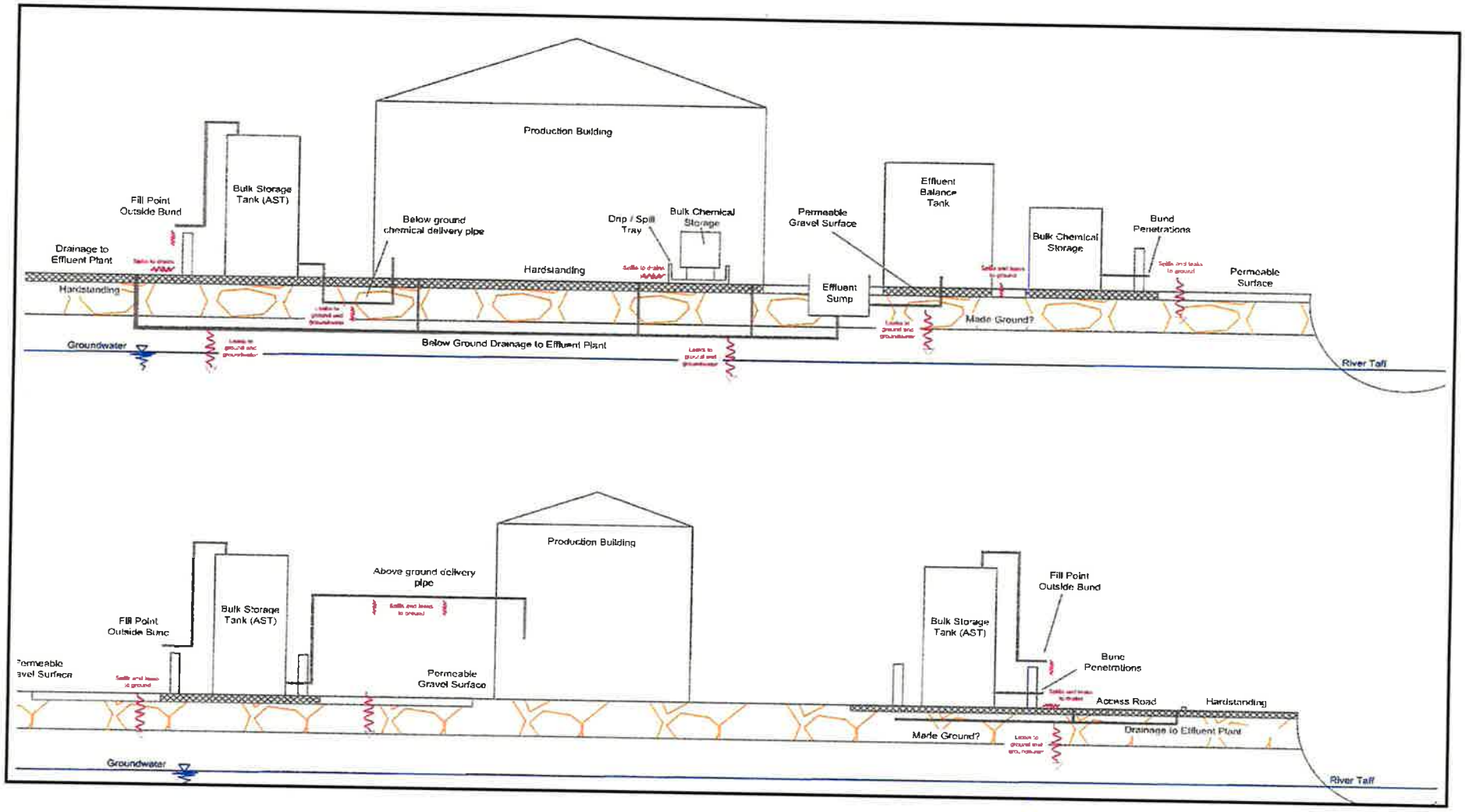


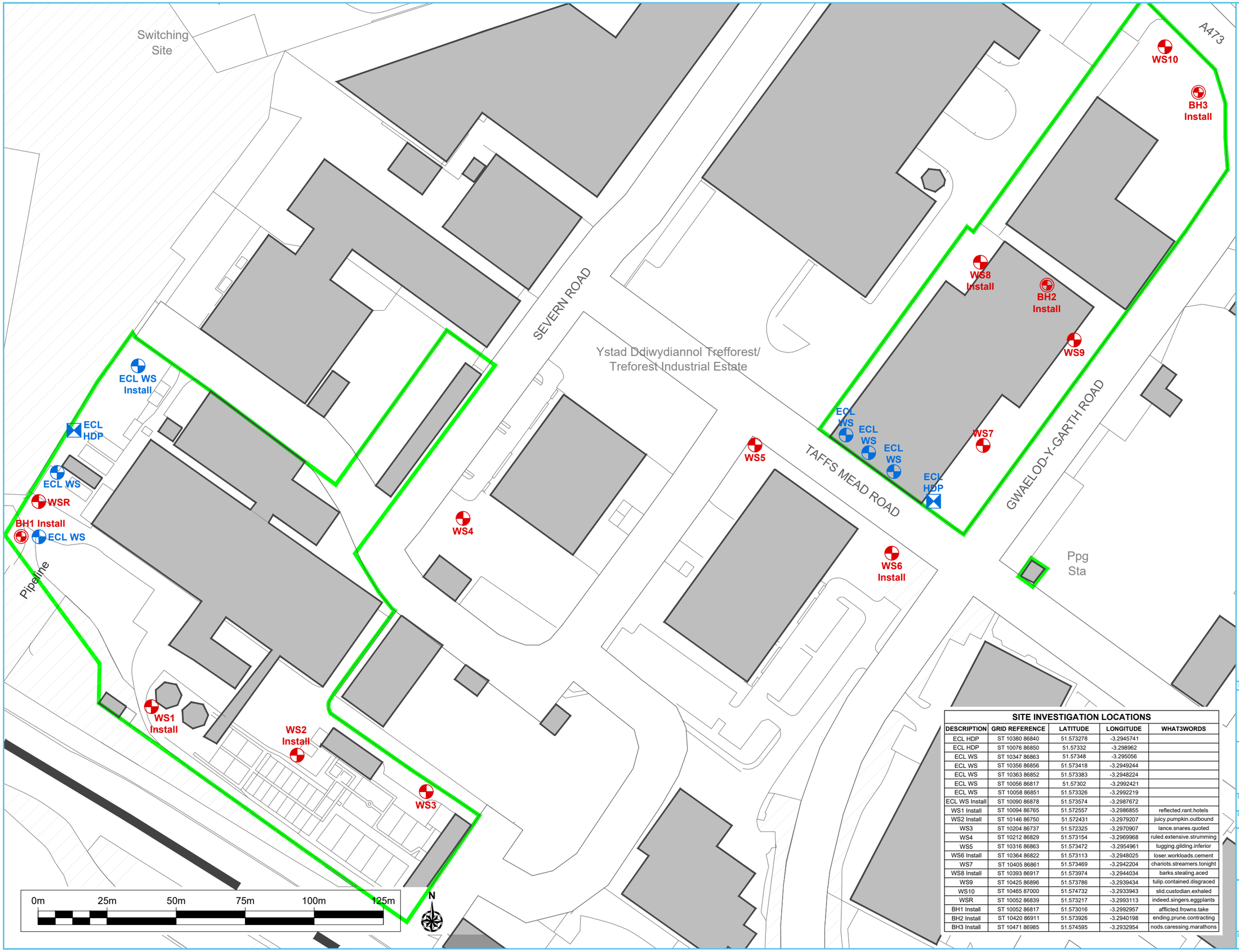
Figure 5 - Conceptual Site Model

PB Leiner, Treforest Industrial Estate

Intégral Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176

APPENDIX III
ECL SITE INVESTIGATION REPORT 2022
(INCL. APP III – ANALYSIS CERTIFICATES
APPENDIX IV – BOREHOLE LOGS)



LEGEND

- ENVIRONMENTAL PERMIT BOUNDARY
- TRIAL PIT / HAND DUG LOCATION
- BOREHOLE WITH MONITORING INSTALLATION
- BOREHOLE OR WINDOW SAMPLE LOCATION
- HISTORIC TRIAL PIT / HAND DUG LOCATION
- HISTORIC BOREHOLE WITH MONITORING INSTALLATION
- HISTORIC BOREHOLE OR WINDOW SAMPLE LOCATION

SITE INVESTIGATION LOCATIONS

DESCRIPTION	GRID REFERENCE	LATITUDE	LONGITUDE	WHAT3WORDS
ECL HDP	ST 10380 86840	51.573278	-3.2945741	
ECL HDP	ST 10076 86850	51.57332	-3.298962	
ECL WS	ST 10347 86863	51.57348	-3.295056	
ECL WS	ST 10356 86856	51.573418	-3.2949244	
ECL WS	ST 10363 86852	51.573383	-3.2948224	
ECL WS	ST 10056 86817	51.57302	-3.2992421	
ECL WS	ST 10058 86851	51.573326	-3.2992219	
ECL WS Install	ST 10090 86878	51.573574	-3.2987672	
WS1 Install	ST 10094 86765	51.572557	-3.2986855	reflected.rant.hotels
WS2 Install	ST 10146 86750	51.572431	-3.2979207	juicy.pumpkin.outbound
WS3	ST 10204 86737	51.572325	-3.2970907	lance.snares.quoted
WS4	ST 10212 86829	51.573154	-3.2969968	ruled.extensive.strumming
WS5	ST 10316 86863	51.573472	-3.2954961	tugging.gilding.inferior
WS6 Install	ST 10364 86822	51.573113	-3.2948025	loser.workloads.cement
WS7	ST 10405 86861	51.573469	-3.2942204	chariots.streamers.tonight
WS8 Install	ST 10393 86917	51.573974	-3.2944034	barks.stealing.aced
WS9	ST 10425 86896	51.573786	-3.2939434	tulip.contained.disgraced
WS10	ST 10465 87000	51.574732	-3.2933943	slid.custodian.exhaled
WSR	ST 10052 86839	51.573217	-3.2993113	indeed.singers.eggplants
BH1 Install	ST 10052 86817	51.573016	-3.2992957	afflicted.frowns.take
BH2 Install	ST 10420 86911	51.573926	-3.2940198	ending.prune.contracting
BH3 Install	ST 10471 86985	51.574595	-3.2932954	nods.caressing.marathons

Rev	Date	Details	Chkd

Environmental Compliance Ltd.
Unit G1
The Willowford
Main Avenue
Treforest Industrial Estate
Pontypridd.
CF37 5YL
Tel: 01443 841760
Fax: 01443 841761
Email: info@ecl.world
Web: www.ecl.world

Client: PB LEINER

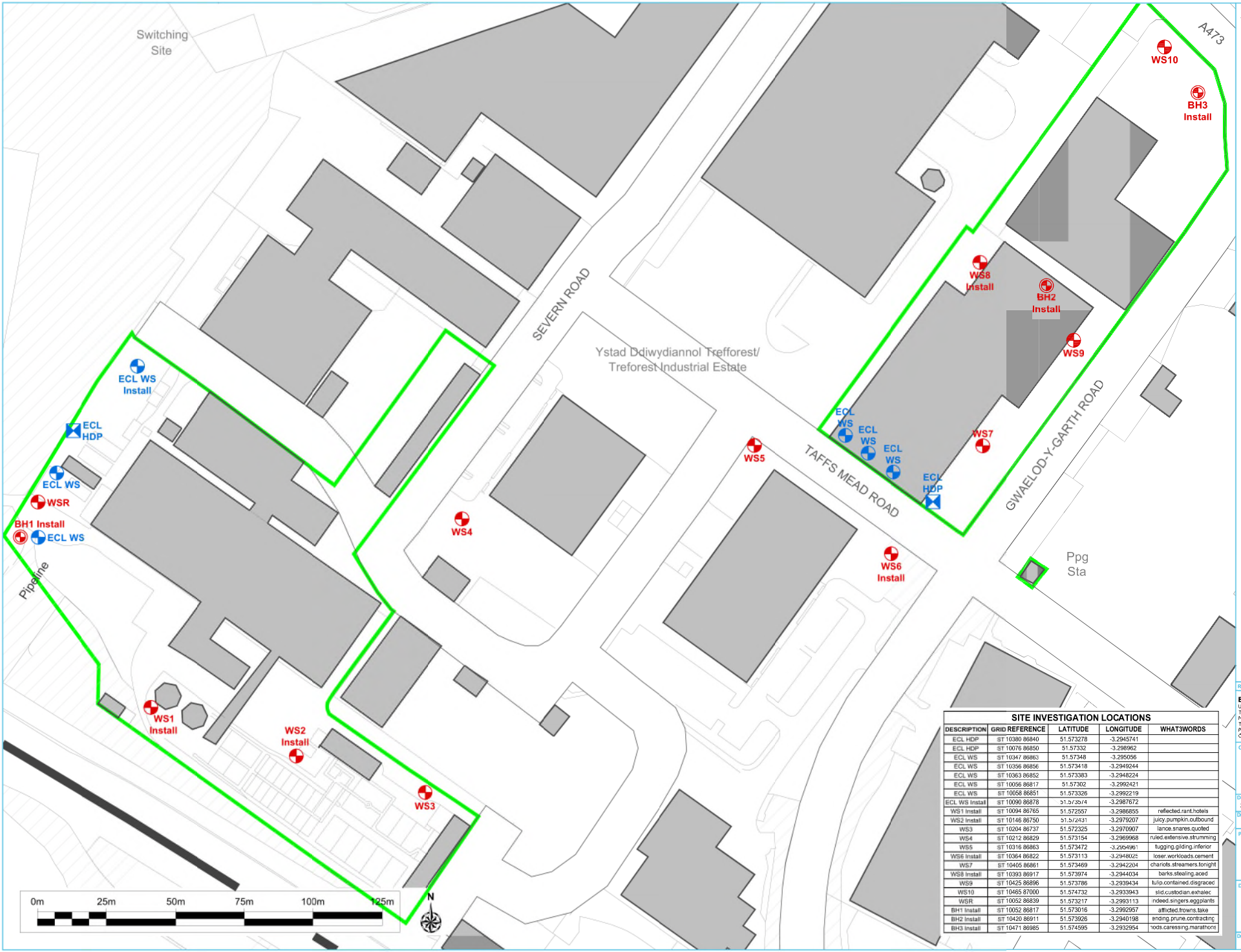
Date	Scale	Drawn by	Checked by	Approved by
24/10/2022	1:1250 @ A3	GTB	FT	FT

Drawing Status: WORKING DRAWING

Project Title:
SITE INVESTIGATION
PB GELATINS / PB LEINER UK
UNIT A6, SEVERN ROAD
TREFOREST INDUSTRIAL ESTATE
PONTYPRIDD. CF37 5SQ

Drawing Title:
INTRUSIVE INVESTIGATION LOCATIONS PLAN

Drawing Number: PBGE.01.06-01
Rev: -



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SITE INVESTIGATION LOCATIONS

DESCRIPTION	GRID REFERENCE	LATITUDE	LONGITUDE	WHAT3WORDS
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UNIT A6, SEVERN ROAD
TREFOREST INDUSTRIAL ESTATE
PONTYPRIDD. CF37 5SQ

Drawing Title:
INTRUSIVE INVESTIGATION LOCATIONS PLAN

Drawing Number: PBGE.01.06-01

Rev: -

1. Site Investigation Report

1.1. Investigation Overview

1.1.1. An Intrusive site investigation was designed by ECL in response to satisfy 'Action 4' of Compliance Assessment Report ID: CAR_NRW0040197 and to simultaneously collect soil and groundwater samples required to meet the 5 and 10year sampling requirements of the Installations Environmental Permit.

1.1.2. A Dynamic Sampling (window sampling) rig was utilised to obtain soil samples from both operational site areas and the off-site locations. A total of 11 intrusive locations were progressed, with 4 being installed with groundwater monitoring standpipes. The borehole logs for all locations are enclosed within Appendix IV of this report. Soil samples collected from the recovered cores were scheduled for laboratory analysis to satisfy 'Action 4' of Compliance Assessment Report ID: CAR_NRW0040197.

1.1.3. Three deeper boreholes were progressed by means of rotary open-hole drilling, with water flush, and installed at groundwater monitoring points with the one upgradient and two downgradient. These boreholes were installed to 15mbgl to ensure intersection of the groundwater table. Screen lengths of 6m were used to allow for seasonal fluctuations in groundwater table. Borehole logs are enclosed within Appendix IV of this report.

1.1.4. Groundwater strikes were recorded within the deeper boreholes at approximately 4mbgl and 12.6 - 13.4mbgl. With groundwater within the standpipe rising to approximately 4.4mbgl after 20 minutes. A groundwater strike at 2.5mbgl was recorded within WS8 however this standpipe was noted at dry following installation.

1.1.5. All works were undertaken between the 3rd and 5th of October 2022 in accordance with current guidance, such as LCRM – 'Land contamination: risk management' (Environment Agency, 2020), CLR 11 and 'Model Procedures for the Management of Land Contamination' (Environment Agency, 2004), BS10175-A2:2017 (Investigation of potentially contaminated sites, code of practice), BS5930-A3:2015 (Code of practice for site investigation), BS ISO 5667-11:2009 'Guidance on sampling of groundwaters'.) All works were supervised by suitably experienced personnel from ECL and/or Jackson Geo Services Ltd.

1.1.6. The intrusive investigation location plan is provided as drawing PBGE.01.06-01 and enclosed within Appendix I of this report with the rationale behind each intrusive location presented in Table A1 overleaf

Table A1: Exploratory Hole Rationale

Location	Notes	Location Rationale
BH1	Upgradient groundwater monitoring installation	BH1 was progressed upgradient of all site activities and upgradient of the anticipated groundwater flow direction. The groundwaters encountered within this borehole are anticipated to be reflective of the influent groundwater quality prior to contact with soils and groundwaters underlying the Installation.
BH2 and BH3	Downgradient groundwater monitoring installations	These boreholes have been progressed downgradient of the main site activities and storage areas. There are anticipated to capture the downgradient groundwater quality, effluent from ground materials underlying the Installation, prior to migrating off-site towards sensitive receptors (controlled waters; River Taff).
WSR	Repeat Window Sample	This location aimed to repeat sample, as close as practicably possible, two historic ECL sampling locations within the Veolia Ltd managed site area. This location was progressed as a hand-dug pit due to the presence of buried services (gas mains) within the site area.
WS1, WS2 and WS4	On-Site Window Sampling boreholes for collection of soil samples.	WS1 and WS2 have been installed as groundwater monitoring locations as they are located adjacent to the on-site effluent treatment plant. Whilst groundwater was not encountered during intrusive works, these boreholes may be utilised as monitoring points in the event of spillage or shallow groundwater conditions. Soil samples were collected from recovered cores of both boreholes. WM3 was terminated at 0.2mbgl due to the presence of concrete hand standing. No suitable alternative locations were found within this site area as the thickness of the concrete has not been confirmed. This location is directly upgradient of a spent oil storage location at the adjacent Egan Waste Management Ltd facility.
WS4	Off-site cross gradient borehole for soil sampling.	Boreholes progressed off-site to ascertain shallow soil quality of the land between the two main operating areas of PB Gelatins and for the purposes of investigating soil quality in proximity to the suspected effluent drainage line breach.
WS5	Off-site borehole adjacent to suspected effluent drainage line failure.	
WS6	Off-site borehole, in proximity to effluent drainage line.	
WS7, WS8, WS9, WS10	On-site Window Sampling boreholes for collection of soil samples.	On-site boreholes for the collection of soil samples across the operational site area. These have been progressed in external site areas surrounding the operational buildings within which storage and processing activities are undertaken.

1.1.7. Disturbed soil samples were collected from the recovered cores using a stainless-steel trowel, wiped clean between sampling locations. Soil samples were collected directly into pre-labelled sample containers. Care was taken to minimise head space of the sample containers. Once filled sample containers were placed within cool boxes containing ice packs to maintain as cool a temperature as possible, nominally 4°C, and stored in a refrigerator until collected by courier.

1.1.8. Laboratory testing has been scheduled based on ECL's comprehensive soil screening suite, amended as appropriate to cover the chemicals stored on site, outlined in Integral Geotechnique's 2020 condition report (reference 12588/PB/20/SCR). Samples were collected by courier, on each day of investigation and the 6th of October and delivered to the i2 Analytical UKAS/MCERTS accredited laboratory. All samples were accompanied by detailed chain of custody sheets.

1.1.9. A summary of the analytical suites is as follows;

- ECL Soils Suite (x29 Samples) – This suite will include a general screening for heavy metals, semi-metals, pH, phenols, cyanide, sulphide (sulphide and pH as markers for the presence of sodium hydroxide), speciated PAHs, mineral oil, total petroleum hydrocarbons ("TPH"), along with product ID, an asbestos screen (identification and type), VOCs and sVOCs if required;
- ECL Waters Suite (x4 Samples) – This suite will include a general screening for heavy metals, semi-metals, pH, cyanide, sulphide, speciated PAHs, TPH, product ID, asbestos screen (identification and type), VOCs and sVOCs if required; and
- ECL Leachate Suite (x4 Samples) – Given the principal aquifer classification of the geology underlying the site and the proximity of the River Taff, leachate tests are proposed to supplement the groundwater risk assessment by assessing the total leachable components from the made ground underlying the site.

1.1.10. All certificates of analysis are presented in Appendix III of ECL report PBGE.01.06.SCR.

1.2. Encountered materials summary

1.2.1. The encountered materials were predominantly made ground underlain by superficial deposits comprising sands, silts and gravels. The generalised ground profile encountered at the site is summarised in Table A2 below. Perched water strikes were encountered at approximately 4mbgl within BH1, BH2 and BH3 with groundwater being encountered at approximately 12.6 – 13.4mbgl, rising to 4.4mbgl after 20 minutes.

Table A2: Generalised Ground Profile

Depth (mbgl)	Encountered Material
0.0 – 2.5	**Made Ground:** Reddish brown and brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete (Made Ground)
2.5 – 5.0	**River Terrace Deposits:** Brown to dark brown, slightly silty gravelly fine to coarse SAND. Gravel fine to medium subangular to subrounded sandstone and limestone. (River Terrace Deposits)
5.0 – 15.0	**Alluvium;** Greyish brown slightly clayey sandy SILT.

1.2.2. All borehole logs are enclosed within Appendix IV of this report.

1.2.3. Following completion of the site works, groundwater monitoring and sampling was undertaken from BH1, BH2 and BH3. Boreholes were purged to three times well volume or effective dryness using a PP1 power pack groundwater pump. The wells were left to settle after which sampling by means of self-weighted bailer was undertaken.

1.3. Generic Quantitative Risk Assessment

Identified Potential Receptors and Pathways

1.3.1. Potential receptors identified as part of the generic risk assessment are:

- Current/future site users; and
- Controlled waters (Groundwaters and the River Taff).

1.3.2. Potential contaminant pathways identified as part of the generic risk assessment include:

- Dermal contact – contact with soil, dust or water;
- Ingestion - ingestion of soil, dust or water;
- Inhalation – inhalation of soil, dust or vapours; and
- Vertical and horizontal migration of contaminants through the unsaturated and saturated zones – contaminants leached from ground materials by infiltrated rainwater, migrating along preferential pathways.

1.1. Human Health Screening

1.3.3. Current legislation and guidance on the assessment of contaminated land promotes a tiered risk approach (LCRM). The generic quantitative risk assessment ("GQRA") approach comprises a screening of identified contaminants against generic guideline values that are appropriate to the site setting and the receptors concerned. For risks to human health the basis for these generic guideline values are the methodologies set out by the Environment Agency's Contaminated Land Exposure Assessment ("CLEA") guidelines.

1.3.4. The following regulatory and industry guidance has been utilised for the selection of Generic Assessment Criteria ("GAC") utilised as part of the GQRA. The order of the guidance listed is in terms of hierarchy for selection of GACs (where the land uses and parameters are considered most applicable).

- Category 4 Screen Levels (C4SLs) – DEFRA (2014);
- Soil Guidance Values (SGVs) – Environment Agency (2009);
- Suitable for Use Levels ("S4Uls") – LQM/CIEH (2015); and
- CL:AIRE Generic Assessment Criteria ("GAC") (2009)

1.3.5. In the absence of a published UK derived GAC for cyanide, the GQRA for total cyanide is based upon comparison of recorded values against the Dutch Intervention Value for free cyanide (VROM 2000).

1.3.6. The current site use is industrial. Therefore, the standard land use for the site, for use in the assessment has been defined as "**Commercial**" in accordance with current guidance.

1.2. Controlled Waters Screening

1.3.7. Risks to controlled waters have been assessed following current Environment Agency guidance such as "Remedial Targets Methodology – Hydrological Risk Assessment for Land Contamination". This guidance describes a tiered approach to the assessment and, if necessary, derivation of remedial targets for soils and groundwater with the emphasis on the protection of controlled waters.

1.3.8. In accordance with EA guidance a Level 2 soil (leachability) and Level 2 groundwater screening assessment has been undertaken, to identify the contaminants of concern that may pose a risk to controlled waters namely groundwaters and the River Taff. This assessment has been undertaken by the comparison of soil leachate and groundwater contaminant concentrations with criteria applicable to the long-term protection of water quality.

1.3.9. Analytical results have been assessed against Environment Agency EQSs for surface waters as presented within H1 Annex D1: Assessment of Hazardous Pollutants within Surface Water Discharges V2.0 (October 2014), River Basin Districts Typology, Standards and Groundwater Threshold Values (Water Framework Directive) (England and Wales) 2010, where available. Where such standards are not available, analytical results have been assessed against The Water Supply (Water Quality) Regulations 2010.

1.3. Soil Analysis – Human Health

1.3.10. Soil samples were collected and analysed from both made ground and natural soils. Certificates of analysis for the samples are contained within Appendix III.

1.3.11. Current guidance for the statistical assessment of environmental data within a contaminated land context is detailed within the CIEH and CL:AIRE joint publication titled 'Guidance on Comparing Soil Concentration Data with a Critical Concentration' (2008). However, as judgemental sampling has been undertaken, statistical assessment as detailed in CL:AIRE (2008) has not been carried out as part of this assessment. Therefore, to identify Contaminants of Potential Concern ("COPC") as part of this assessment, the analytical results for the ground materials sampled have been assessed by the screening of individual analyses against the relevant Tier 1 Site Screening Values (SSVs) adopted.

1.3.12. For generic assessment purposes, SSVs have been conservatively selected, where appropriate, based upon a sandy soil and Soil Organic Matter (SOM) of 1%.

Made Ground

1.3.13. Thirteen samples of made ground were scheduled for geo-chemical analysis. The samples were collected broadly between ground level and 2.5mbgl. Full certificates of chemical analysis are enclosed within Appendix III of this report.

1.3.14. Table A3 below summarises the determinands identified above the laboratory Limit of Detection ("LOD"). Results below the LOD have been discounted from further assessment and those determinands not detected above the LOD in any made ground sample are listed below;

- total, complex and free cyanide
- total Phenols
- chromium
- lithium
- benzene
- toluene
- ethylbenzene
- P, M&O xylene
- methyl tetra butyl ether ("MTBE")
- TPH-CWG – Aromatic EC5 – EC7
- VOC's and sVOC's other than those in TableA3

1.3.15. Asbestos was identified within four of the thirteen made ground samples as loose fibres and loose fibrous debris of Chrysotile and Amosite. Chrysotile sheeting board debris was present within sample WS8a.

Table A3: Made Ground Soil Concentration Values

Analytical Parameter (Soil Analysis)	Units	Results count (above LOD)	Min	Max	SSV
pH	pH Units	13	7.5	10	-
Total Sulphate as SO4	mg/kg	13	580	3200	-
Sulphide	mg/kg	13	2.6	210	-
Ammoniacal Nitrogen as NH4	mg/kg	2	0.5	8.5	-
Total Organic Carbon (TOC)	%	13	0.3	3.2	-
Naphthalene	mg/kg	2	0.27	0.72	190[c]
Acenaphthylene	mg/kg	2	0.2	0.23	83000[c]
Acenaphthene	mg/kg	4	0.26	1.5	84000[c]
Fluorene	mg/kg	4	0.26	1.7	63000[c]
Phenanthrene	mg/kg	11	0.4	6.8	22000[c]
Anthracene	mg/kg	7	0.15	2.5	520000[c]
Fluoranthene	mg/kg	12	0.33	16	23000[c]
Pyrene	mg/kg	12	0.28	12	54000[c]
Benzo(a)anthracene	mg/kg	12	0.3	13	170[c]
Chrysene	mg/kg	12	0.39	9.7	350[c]
Benzo(b)fluoranthene	mg/kg	12	0.33	12	44[c]
Benzo(k)fluoranthene	mg/kg	12	0.17	5.2	1200[c]
Benzo(a)pyrene	mg/kg	12	0.22	12	35[c]
Indeno(1,2,3-cd)pyrene	mg/kg	10	0.39	5.1	500[c]
Dibenz(a,h)anthracene	mg/kg	5	0.34	1.6	3.5[c]
Benzo(ghi)perylene	mg/kg	10	0.43	5.3	3900[c]
Speciated Total EPA-16 PAHs	mg/kg	12	2.09	101	-
Aluminium	mg/kg	13	1600	15000	-
Antimony	mg/kg	4	3	3.6	7500[d]
Arsenic	mg/kg	13	4.9	26	640[c]
Barium	mg/kg	13	190	1900	22000[c]
Beryllium	mg/kg	13	0.24	2.2	12[c]
Boron	mg/kg	13	0.2	2.6	240000[c]
Cadmium	mg/kg	7	0.4	4	190[c]
Chromium	mg/kg	13	15	2400	8600[c]
Cobalt	mg/kg	13	1.6	14	-
Copper	mg/kg	13	11	1900	68000[c]
Iron	mg/kg	13	8100	41000	-
Lead	mg/kg	13	7.9	110	2300[a]
Manganese	mg/kg	13	460	3800	-

Table A3: Made Ground Soil Concentration Values (Cont.)

Analytical Parameter (Soil Analysis)	Units	Results count (above LOD)	Min	Max	SSV
Mercury	mg/kg	6	0.4	8.8	1100 [c]
Molybdenum	mg/kg	13	0.73	27	170000 [d]
Nickel	mg/kg	13	6	170	980 [c]
Phosphorus	mg/kg	13	140	700	-
Selenium	mg/kg	1	2	2	12000 [c]
Tin	mg/kg	13	2.1	21	-
Vanadium	mg/kg	13	7.5	78	9000 [c]
Zinc	mg/kg	13	26	250	730000 [c]
Calcium	mg/kg	13	11000	140000	-
Magnesium	mg/kg	13	4300	49000	-
Potassium	mg/kg	13	410	1300	-
Sodium	mg/kg	13	170	700	-
Toluene	µg/kg	1	450	450	56000 [c]
Ethylbenzene	µg/kg	1	84	84	5700 [c]
p & m-xylene	µg/kg	1	340	340	6200 [c] /5900 [c]
o-xylene	µg/kg	1	110	110	6600
Mineral Oil (C10 - C40)	mg/kg	3	180	640	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	1	0.63	0.63	3200 [c]
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	1	0.87	0.87	7800 [c]
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	1	0.36	0.36	2000 [c]
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	2.3	2.3	9700 [c]
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	3	5.9	11	59000 [c]
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	3	9.8	130	1600000 [c]
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	3	100	470	1600000 [c]
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	3	120	610	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	1	0.45	0.45	56000 [c]
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	1	0.67	0.67	3500 [c]
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	2.8	2.8	16000 [c]
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	4	2.4	8.1	36000 [c]
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	5	12	69	28000 [c]
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	9	13	240	28000 [c]
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	15	310	-
Fluoranthene	mg/kg	2	0.33	0.72	23000 [c]

Table A3: Made Ground Soil Concentration Values (Cont.)

Analytical Parameter (Soil Analysis)	Units	Results count (above LOD)	Min	Max	SSV
Pyrene	mg/kg	2	0.28	0.58	54000 [c]
Butyl benzyl phthalate	mg/kg	1	0.3	0.3	940000 [c]
Benzo(a)anthracene	mg/kg	2	0.3	0.59	170 [c]
Chrysene	mg/kg	2	0.39	0.65	350 [c]
Benzo(b)fluoranthene	mg/kg	2	0.33	0.81	44 [c]
Benzo(k)fluoranthene	mg/kg	2	0.24	0.4	1200 [c]
Benzo(a)pyrene	mg/kg	2	0.22	0.58	35 [c]
Indeno(1,2,3-cd)pyrene	mg/kg	1	0.41	0.41	500 [c]
Benzo(ghi)perylene	mg/kg	1	0.43	0.43	3900 [c]

Notes to Table A3:
a) DEFRA C4SLs (2014) based on "Commercial" end use
b) Environment Agency SGVs (2009) based on "Commercial" end use
c) LQM/CIEH S4ULs (2015) based on "Commercial" end use
d) CL:AIRE, AGS & EIS (2009) based on "Commercial" end use
e) Dutch Intervention Value for free cyanide (VROM 2000)

1.3.16. No exceedances of the commercial SSV's are noted within the made ground materials, however metals such as aluminium, chromium, iron and manganese are noted to be elevated, likely resultant of historic site activities as a metal alloy works (As per Table 3).

1.3.17. Calcium and phosphorous concentrations are also noted to be elevated. Calcium and phosphate may be correlated to the bone raw product utilised on-site within the liming process and may be indicative of the site effluent. The concentrations are as follows in Table A4.

Table A4: Calcium and Phosphate Concentrations

Sample ID	Calcium (mg/kg)	Phosphate (mg/kg)	Notes
WSRa	120,000	660	Upgradient site area.
WS1a	62,000	300	Upgradient site area in proximity to effluent treatment plant.
WS1b	11,000	470	
WS2a	140,000	450	
WS2b	73,000	280	
WS3a	61,000	400	
WS5a	45,000	590	Borehole in proximity to efluent discharge pipe faliure point.
WS6a	71,000	540	
WS7a	130,000	140	Downgradient site area boreholes.
WS8a	45,000	700	
WS9a	140,000	340	
WS10a	66,000	350	
BH3a	36,000	370	

1.3.18. Whilst concentrations of calcium are recorded to be elevated, the presence of the highest concentrations (i.e., those recorded by samples WSRa, WS2a, WS7a and WS9a) do not necessarily correspond to the most elevated phosphate concentration. Should the calcium and phosphate concentrations correspond to the presence of process materials (bone, calcium phosphate[5] it would be expected that elevated concentrations of both determinands correspond in each sample. However, this does not seem to be the case.

1.3.19. Whilst some proportion of the calcium concentrations recorded are likely related to the calcium within limestone gravels recorded by the borehole logs, calcium utilised within the liming process by PB Gelatins may also be contributing to the recorded concentration values.

1.3.20. Historic ECL site investigation report ECL.01.01/GIR dated December 2020 recorded soil calcium concentrations between 4,100mg/kg and 49,000mg/kg within window sample boreholes progressed through a site area covered by concrete hardstanding. Phosphorous concentrations of up to 2,000mg/kg were recorded.

1.3.21. An additional near surface sample from a nearby site area was taken, recording a calcium concentration of 260,000mg/kg. Concentrations recorded by the 2022 site investigation are noted to be within the range previously recorded. However, samples WS5a and WS6a in closest proximity to the effluent drainage line failure point record calcium concentration lower than those of the up- and down-gradient sample points. Therefore as there is no clear trend, further sampling is advised.

Natural Ground

1.3.22. Eleven samples of Natural Ground material were scheduled for geo-chemical analysis. Full certificates of chemical analysis are enclosed within Appendix III of this report.

1.3.23. Table A5 below summarises the determinands identified above the laboratory Limit of Detection ("LOD"). Results below the LOD have been discounted from further assessment and those determinands not detected above the LOD in any Natural Ground sample are listed below;

- asbestos;
- total, complex and free cyanide;
- total phenols;
- cadmium;
- chromium;
- lithium;
- selenium;
- acenaphthylene;
- acenaphthene;
- fluorene;
- benzene;
- toluen;e
- ethylbenzene;

[5] Calcium and Phosphate paper, available online at https://pubmed.ncbi.nlm.nih.gov/22081690/#:~:text=Among%20micronutrients%2C%20calcium%20(Ca),of%20Ca%20and%20P%2C%20respectively. Accessed November 2022.

- P, M&O xylene;
- methyl tetra butyl ether ("MTBE");
- mineral oil (C10-C40);
- TPH-CWG – Aliphatic EC5 – EC35;
- TPH-CWG – Aromatic EC5 – EC16; and
- VOC's and sVOC's.

Table A5: Natural Ground Soil Concentrations

Analytical Parameter (Soil Analysis)	Units	Results count (above LOD)	Min	Max	SSV
pH	pH Units	11	6.4	8.1	-
Total Sulphate as SO_4	mg/kg	11	73	610	-
Sulphide	mg/kg	6	1.6	28	-
Ammoniacal Nitrogen as NH_4	mg/kg	1	160	160	-
Total Organic Carbon (TOC)	%	11	0.5	2.2	-
Naphthalene	mg/kg	1	0.25	0.25	190[c]
Phenanthrene	mg/kg	3	0.25	0.69	22,000[c]
Anthracene	mg/kg	1	0.14	0.14	520,000[c]
Fluoranthene	mg/kg	3	0.52	1.2	23,000[c]
Pyrene	mg/kg	3	0.45	0.89	54,000[c]
Benzo(a)anthracene	mg/kg	3	0.42	0.89	170[c]
Chrysene	mg/kg	3	0.61	0.96	350[c]
Benzo(b)fluoranthene	mg/kg	3	0.53	0.99	44[c]
Benzo(k)fluoranthene	mg/kg	3	0.28	0.46	1,200[c]
Benzo(a)pyrene	mg/kg	3	0.46	0.76	35[c]
Indeno(1,2,3-cd)pyrene	mg/kg	3	0.27	0.43	500[c]
Dibenz(a,h)anthracene	mg/kg	0	0	0	3.5[c]
Benzo(ghi)perylene	mg/kg	3	0.29	0.42	3,900[c]
Speciated Total EPA-16 PAHs	mg/kg	3	4.44	7.66	-
Aluminium	mg/kg	11	4800	8400	-
Antimony	mg/kg	4	2.9	4.6	7,500[d]
Arsenic	mg/kg	11	7	19	640[c]
Barium	mg/kg	11	28	150	22,000[c]
Beryllium	mg/kg	11	0.57	1	12[c]
Boron	mg/kg	4	0.2	1.6	240,000[c]
Chromium	mg/kg	11	10	51	8,600[c]
Cobalt	mg/kg	11	6.4	15	-
Copper	mg/kg	11	9.7	42	68,000[c]
Iron	mg/kg	11	22000	35000	-
Lead	mg/kg	11	9.9	51	2,300[a]
Manganese	mg/kg	11	230	5600	-
Mercury	mg/kg	3	0.3	0.5	1,100[c]

Table A5: Natural Ground Soil Concentrations

Analytical Parameter (Soil Analysis)	Units	Results count (above LOD)	Min	Max	SSV
Molybdenum	mg/kg	11	0.27	1.9	170,000[d]
Nickel	mg/kg	11	15	30	980[c]
Phosphorus	mg/kg	11	270	610	-
Tin	mg/kg	10	1.2	11	-
Vanadium	mg/kg	11	15	24	9,000[c]
Zinc	mg/kg	11	50	98	730,000[c]
Calcium	mg/kg	11	1200	18000	-
Magnesium	mg/kg	11	1500	4900	-
Potassium	mg/kg	11	370	940	-
Sodium	mg/kg	11	130	250	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	2	10	11	28,000[c]
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	3	15	27	28,000[c]
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	3	21	37	-

Notes to Table A5:

a) DEFRA C4SLs (2014) based on "Commercial" end use

b) Environment Agency SGVs (2009) based on "Commercial" end use

c) LQM/CIEH S4ULs (2015) based on "Commercial" end use

d) CL:AIRE, AGS & EIS (2009) based on "Commercial" end use

e) Dutch Intervention Value for free cyanide (VROM 2000)

1.3.24. No exceedances of the commercial SSV's are noted within the Natural Ground materials, however metals including aluminium and iron are noted to be elevated, potentially resultant of historic site activities as a metal alloy works (As per Table 3).

1.3.25. Calcium concentrations within the natural ground materials are noted to be significantly lower than those of the near surface made ground materials. Considering limestones were predominantly encountered within the made ground strata, these findings would suggest that the elevated calcium concentrations relate to the presence of limestone gravels within the sampled materials and not contamination relating to bone materials processed on-site.

1.3.26. Alternatively, should calcium be used as a marker for contamination related to on-site process, this would indicate that the impact is limited to that of the made ground materials and not into deeper natural geology.

Soil Analysis - Controlled Waters (Leachability)

1.3.27. In absence of groundwater samples being obtained from WS3, WS4 and WS6. Three soil samples, one from each window sampling location, were scheduled for a leachability analysis. The soi leachability analysis provided an indicative groundwater quality for shallow perched waters in the absence of water samples.

1.3.28. The certificates of analysis are enclosed within Appendix III of this report and a summary of results above the LOD, is presented below in Table A6. Any exceedances of the relevant EQS highlighted in bold.

1.3.29. Results below the LOD have been discounted from further assessment and those determinands not detected above the LOD in any made ground sample are listed below;

- total, complex and free cyanide;
- sulphide;
- speciated PAH's;
- antimony;
- beryllium;
- boron;
- cadmium;
- chromium;
- mercury;
- lithium;
- selenium;
- monoaromatics & oxygenates;
- petroleum hydrocarbons (aliphatic and aromatic EC5 – EC35);
- VOC and sVOCs.

Table A6: Soil Leachability Analysis

Analytical Parameter (Leachate Analysis)	units	WS3a	WS4a	WS6b	EQS (µg/l)
Electrical Conductivity	µS/cm	93	120	68	250[b]
Sulphate as SO_4	µg/l	1200	3700	1300	250000[b]
Chloride	µg/l	410	430	440	250000[b]
Ammoniacal Nitrogen as NH4	µg/l	< 15	38	18	500[b]
Total Organic Carbon (TOC)	µg/l	7190	9790	7120	-
Aluminium	**µg/l**	**570**	**480**	**830**	**200[b]**
Arsenic	µg/l	< 1.0	3.4	2.7	10[b]
Barium	µg/l	51	15	15	700[c]
Chromium	µg/l	< 0.4	0.5	1.4	50[b]
Cobalt	µg/l	< 0.3	< 0.3	0.4	3(AA)/100(MAC)[ac]
Copper	µg/l	9.8	9.5	10	2000[b]
Iron	**µg/l**	**460**	**340**	**540**	**200[b]**
Lead	µg/l	< 1.0	< 1.0	2.9	10[b]
Manganese	µg/l	45	39	36	50[b]
Molybdenum	µg/l	< 0.4	0.6	1.7	-
Nickel	µg/l	0.8	< 0.3	0.8	20[b]
Phosphorus	µg/l	73	< 30	100	-
Tin	µg/l	< 1.0	< 1.0	1.4	-
Vanadium	µg/l	7.4	< 1.7	< 1.7	-
Zinc	µg/l	9.5	7.1	6.7	10.9[a]
Calcium	µg/l	15000	19000	11000	-

Table A6: Soil Leachability Analysis (Cont.)

Analytical Parameter (Leachate Analysis)	units	WS3a	WS4a	WS6b	EQS (µg/l)
Magnesium	µg/l	1600	1900	820	-
Potassium	µg/l	580	160	750	-
Sodium	µg/l	1200	1300	1000	200,000[b]

Notes to Table A6:

a) EQS for Surface Waters (Environment Agency 'H1 Annex D1: Assessment of Hazardous Pollutants within Surface Water Discharges V2.0' (October 2014))
b) Water Supply (Water Quality Regulations) 2010
c) Guidelines for Drinking-water Quality (WHO) 2011
d) SSV based upon Groundwater Threshold Values from The Water Framework Directive (England and Wales) (2010), unless otherwise stated.
e) Annual Average ("AA") and Maximum Allowable Concentration ("MAC")

1.3.30. Exceedances of the relevant environmental Quality Standards ("EQS") have been identified for aluminium and iron, potentially resultant of the site's historic usage as a metal alloy works.

1.3.31. Calcium concentrations within sample WS6b, taken in proximity to the suspected effluent drainage line breach are noted to be below the concentrations recorded within off-site sample WS4a and on-site WS3a.

Controlled Waters – Groundwater Analysis

1.3.32. Three groundwater samples were scheduled for analysis following completion of siteworks, the certificate of analysis is contained within Appendix III and results above the LOD are summarised below in Table A7. Exceedances of the relevant EQS are highlighted in bold.

1.3.33. Results below the LOD have been discounted from further assessment and those determinands not detected above the LOD in any made ground sample are listed below;

- total, complex and free cyanide;
- sulphide;
- total phenols (monohydric);
- speciated PAH's (except those listed in Table A7);
- beryllium;
- boron;
- cadmium;
- chromium (hexavalent and total);
- mercury;
- lead;
- monoaromatics & oxygenates;
- petroleum hydrocarbons (aliphatic and aromatic EC5 – EC10)/

Table A7: Groundwater Analysis Summary

Analytical Parameter (Water Analysis)	Units	BH1	BH2	BH3	EQS (µg/l)
pH	pH Units	7.3	7.6	7.7	-
Sulphate as SO4	µg/l	21700	29600	34400	250000[b]
Chloride	µg/l	14000	22000	25000	250000[b]
Ammoniacal Nitrogen as NH4	µg/l	**1300**	**450**	20	**200[b]**
Total Organic Carbon (TOC)	µg/l	9440	2080	2940	-
Nitrite as N	µg/l	2.2	**110**	3.8	**50[b]**
Naphthalene	µg/l	**2.92**	< 0.01	< 0.01	2 (AA) 130(MAC)[a]
Fluorene	µg/l	1.29	< 0.01	< 0.01	-
Phenanthrene	µg/l	4.07	< 0.01	< 0.01	-
Anthracene	µg/l	**0.26**	< 0.01	< 0.01	**0.1[a]**
Fluoranthene	µg/l	**0.75**	< 0.01	< 0.01	**0.12(AA)[a]**
Pyrene	µg/l	1.1	< 0.01	< 0.01	-
Benzo(a)anthracene	µg/l	0.64	< 0.01	< 0.01	-
Chrysene	µg/l	2.12	< 0.01	< 0.01	-
Benzo(b)fluoranthene	µg/l	**0.79**	< 0.01	< 0.01	**0.1[c]**
Benzo(k)fluoranthene	µg/l	**0.22**	< 0.01	< 0.01	**0.1[c]**
Benzo(a)pyrene	µg/l	**0.28**	< 0.01	< 0.01	**0.01[c]**
Total EPA-16 PAHs	µg/l	14.4	< 0.16	< 0.16	-
Boron	µg/l	140	37	26	2000[a]
Calcium	µg/l	19,000	58,000	42,000	-
Iron	µg/l	32	14	9	200[b]
Lithium	µg/l	16	39	7.8	-
Magnesium	µg/l	7600	14000	10000	-
Phosphorus	µg/l	738	676	791	-
Potassium	µg/l	14000	4100	4800	-
Sodium	µg/l	48000	25000	25000	200000[b]
Aluminium	µg/l	**208**	13.4	21.4	**200[b]**
Antimony	µg/l	1.8	1	0.7	5[b]
Arsenic	µg/l	1.3	0.77	0.67	10[b]
Barium	µg/l	240	230	54	700[c]
Cadmium	µg/l	< 0.02	0.04	0.08	5[b]
Copper	µg/l	< 0.5	3	4	2000[b]
Manganese	**µg/l**	**170**	**610**	**78**	**50[b]**
Molybdenum	µg/l	4.8	2	0.83	-
Nickel	µg/l	1.1	1	1.1	20[b]
Selenium	µg/l	< 0.6	1.3	0.7	10[b]
Tin	µg/l	< 0.20	0.28	1.3	-
Vanadium	µg/l	0.7	< 0.2	0.5	-
Zinc	µg/l	1.2	2.5	8.3	10.9[a]
Mineral Oil (C10 - C40)	µg/l	4100	< 10.0	< 10.0	-

Table A7: Groundwater Analysis Summary

Analytical Parameter (Water Analysis)	Units	BH1	BH2	BH3	EQS (µg/l)
TPH-CWG - Aliphatic >C10 - C12	µg/l	130	< 10	< 10	-
TPH-CWG - Aliphatic >C12 - C16	µg/l	220	< 10	< 10	-
TPH-CWG - Aliphatic >C16 - C21	µg/l	220	< 10	< 10	-
TPH-CWG - Aliphatic >C21 - C35	µg/l	3500	< 10	< 10	-
TPH-CWG - Aliphatic (C5 - C35)	µg/l	**4100**	< 10	< 10	10[a]
TPH-CWG - Aromatic >C10 - C12	µg/l	70	< 10	< 10	-
TPH-CWG - Aromatic >C12 - C16	µg/l	230	< 10	< 10	-
TPH-CWG - Aromatic >C16 - C21	µg/l	180	< 10	< 10	-
TPH-CWG - Aromatic >C21 - C35	µg/l	310	< 10	< 10	-
TPH-CWG - Aromatic (C5 - C35)	µg/l	**790**	< 10	< 10	10[a]

Notes to Table A7:

a) EQS for Surface Waters (Environment Agency 'H1 Annex D1: Assessment of Hazardous Pollutants within Surface Water Discharges V2.0' (October 2014))
b) Water Supply (Water Quality Regulations) 2010
c) Guidelines for Drinking-water Quality (WHO) 2011
d) SSV based upon Groundwater Threshold Values from The Water Framework Directive (England and Wales) (2010), unless otherwise stated.
e) Annual Average ("AA") and Maximum Allowable Concentration ("MAC")

1.3.34. Exceedances of the relevant EQS are noted for ammoniacal nitrogen, nitrate, hydrocarbons, aluminium and manganese, with the majority of exceedances being recorded within the upgradient BH1. Heavy metals are potentially resultant of historic contamination associated with the site's usage as a metal alloy works. Hydrocarbons may also be associated with this historic land use; however no clearly defined source has been identified at this time.

1.3.35. Calcium concentrations within the deeper groundwaters are noted to be greater than those of the near-surface soil leachability analytical results. Suggesting that the solid phase near surface made ground materials (most likely to have been contaminated by site operations) are potentially not the source of elevated calcium concentrations within the deeper groundwater. As such any elevated concentrations may potentially relate to liquid phase contamination from effluent.

1.3.36. Whilst exceedances of determinands such as aluminium and hydrocarbons are limited to that of sample BH1, with no re-occurrence or significantly reduced concentrations in down-gradient samples. The downgradient sample results for calcium (in BH2 and BH3) are noted to exceed those of the upgradient borehole BH1, suggesting that groundwater quality downgradient of site operations may have been impacted by the recent effluent spillage. It is noted that the suspected drainage line breach is downgradient of location BH1.

1.3.37. Additional sampling would be required in order to determine trends within these results. The greatest concentration has been recorded within BH2, closest to the suspected location of the effluent drainage line breach, with concentrations slightly reduced within the furthest location, BH3. Additional sampling of BH1, BH2 and BH3 would be required to ascertain whether concentrations within BH3 are increasing.

1.4. References

- BS10175 British Standards Institute (2011+A2:2017) Investigation of Potentially Contaminated Land - Code of Practice.
- BS5930 British Standards Institute (2015) Code of Practice for Site Investigation.
- CIEH & CL:AIRE (2008) Guidance on Comparing Soil Contamination Data with a Critical Concentration.
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- DEFRA (2014) SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document (March 2014).
- Department for the Environment (1995/1996) DOE Industry Profiles.
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- Environment Agency (2019) LCRM - Land contamination: risk management
- LQM & CIEH (2015) The LQM/CIEH S4ULs for Human Health Risk Assessment.
- Environment Agency (2009) Human health toxicological assessment of contaminants in soil. Science Report SC050021/SR2. Bristol: Environment Agency.
- Environment Agency (2009) Updated technical background to the CLEA model. Science Report SC050021/SR3. Bristol: Environment Agency.

APPENDIX III
CERTIFICATES OF GEO-CHEMICAL ANALYSIS
(October 2022 – i2 Analytical)

Filip Taylor
Environmental Compliance Ltd
Unit G1, The Willowford
Treforest Industrial Estate
Pontypridd
CF37 5BF

e: f.taylor@ecl.world

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 22-89118

Project / Site name:	PGBE 01 06	**Samples received on:**	10/10/2022
Your job number:		**Samples instructed on/ Analysis started on:**	11/10/2022
Your order number:	C0038	**Analysis completed by:**	27/10/2022
Report Issue Number:	1	**Report issued on:**	28/10/2022
Samples Analysed:	3 leachate samples - 24 soil samples - 2 water samples		

Signed:

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

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

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

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

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

Excel copies of reports are only valid when accompanied by this PDF certificate.

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

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

Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454566	2454567	2454568	2454569	2454570
Sample Reference				WSRa	WS1a	WS1b	WS2a	WS2b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	26	< 0.1	< 0.1	< 0.1	34
Moisture Content	%	0.01	NONE	7.8	13	25	9.9	9.7
Total mass of sample received	kg	0.001	NONE	0.4	0.4	0.4	0.4	0.4
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile, Amosite- Loose Fibrous Debris; Amosite- Loose Fibres	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	ASE	ASE	ASE	ASE	ASE

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.4	8.2	7.7	10	7.5
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	2700	730	580	2200	3200
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	340	42	370	610	2500
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.17	0.021	0.18	0.3	1.3
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	168	21.1	184	304	1250
Sulphide	mg/kg	1	NONE	210	14	34	75	38
Ammoniacal Nitrogen as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	8.5	0.5	< 0.5
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.7	1.6	3.2	2	0.6

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	0.72	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	0.2	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.47	1.5	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	0.45	1.7	< 0.05
Phenanthrene	mg/kg	0.05	NONE	1.4	3.3	2.4	6.3	0.4
Anthracene	mg/kg	0.05	NONE	0.39	0.92	0.68	1.8	< 0.05
Fluoranthene	mg/kg	0.05	NONE	1.9	7	3.7	6.9	1.1
Pyrene	mg/kg	0.05	NONE	1.4	5.1	2.8	5.3	0.93
Benzo(a)anthracene	mg/kg	0.05	NONE	1.3	5.8	2.5	4.6	0.44
Chrysene	mg/kg	0.05	NONE	1.3	5.5	3.1	3.7	0.43
Benzo(b)fluoranthene	mg/kg	0.05	NONE	1.2	6	3	4.4	0.36
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.72	3.7	1.7	2.7	0.17
Benzo(a)pyrene	mg/kg	0.05	NONE	1.1	4.8	2.5	3.6	0.28
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.49	2.4	1.1	2.4	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	0.83	0.41	0.81	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.67	2.5	1.3	3	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	11.8	47.7	26	49.6	4.06

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Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454566	2454567	2454568	2454569	2454570
Sample Reference				WSRa	WS1a	WS1b	WS2a	WS2b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	ISO 17025	12000	6400	7600	15000	13000
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	3.6	3	< 1.0	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	4.9	7.7	11	10	8.1
Barium (aqua regia extractable)	mg/kg	1	MCERTS	1300	470	190	680	220
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.2	0.59	0.77	1.9	0.53
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3	0.4	0.6	1	0.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	0.5	< 0.2	0.5	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	110	17	15	280	15
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	2.6	6.3	9.4	9.2	6.6
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	22	37	63	11
Iron (aqua regia extractable)	mg/kg	40	MCERTS	12000	15000	17000	29000	26000
Lead (aqua regia extractable)	mg/kg	1	MCERTS	10	24	32	43	17
Lithium (aqua regia extractable)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	3400	680	460	1900	1500
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.6	0.4	8.8	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.1	0.73	0.9	27	1.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	6.6	18	20	170	15
Phosphorus (aqua regia extractable)	mg/kg	20	ISO 17025	660	300	470	450	280
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	2	< 1.0
Tin (aqua regia extractable)	mg/kg	1	MCERTS	2.2	3.2	5.8	6.1	3.3
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	78	30	19	33	15
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	41	110	95	250	49
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	120000	62000	11000	140000	73000
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	43000	16000	4300	31000	34000
Potassium (aqua regia extractable)	mg/kg	20	ISO 17025	990	630	620	1300	530
Sodium (aqua regia extractable)	mg/kg	20	ISO 17025	700	230	170	650	260
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	450	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	84	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	340	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	110	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
Mineral Oil (C10 - C40) EH_CU_1D_AL	mg/kg	10	NONE	180	< 10	< 10	240	< 10
TPH-CWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.001	NONE	< 0.001	0.63	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.001	NONE	< 0.001	0.87	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.001	NONE	< 0.001	0.36	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	NONE	2.3	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	NONE	6	< 2.0	< 2.0	5.9	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	NONE	9.8	< 8.0	< 8.0	14	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	NONE	100	< 8.0	< 8.0	150	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) EH_CU+HS_1D_AL	mg/kg	10	NONE	120	< 10	< 10	170	< 10

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454566	2454567	2454568	2454569	2454570
Sample Reference				WSRa	WS1a	WS1b	WS2a	WS2b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	0.45	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	0.67	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	2.8	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	NONE	< 2.0	< 2.0	2.5	8.1	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	< 10	26	12	36	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	100	72	22	220	17
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	110	100	37	260	26
VOCs								
Chloromethane	µg/kg	1	NONE	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	NONE	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	NONE	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Trichloromethane	µg/kg	1	NONE	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	NONE	-	-	-	-	-
Tetrachloromethane	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Trichloroethene	µg/kg	1	NONE	-	-	-	-	-
Dibromomethane	µg/kg	1	NONE	-	-	-	-	-
Bromodichloromethane	µg/kg	1	NONE	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Toluene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Dibromochloromethane	µg/kg	1	NONE	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	NONE	-	-	-	-	-
Chlorobenzene	µg/kg	1	NONE	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-	-
Ethylbenzene	µg/kg	1	NONE	-	-	-	-	-
p & m-Xylene	µg/kg	1	NONE	-	-	-	-	-
Styrene	µg/kg	1	NONE	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	NONE	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-	-
Isopropylbenzene	µg/kg	1	NONE	-	-	-	-	-
Bromobenzene	µg/kg	1	NONE	-	-	-	-	-
n-Propylbenzene	µg/kg	1	NONE	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	NONE	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	NONE	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-	-

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Lab Sample Number				2454566	2454567	2454568	2454569	2454570
Sample Reference				WSRa	WS1a	WS1b	WS2a	WS2b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
sec-Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	NONE	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-	-

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	NONE	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	NONE	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	NONE	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	NONE	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	NONE	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	NONE	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Naphthalene	mg/kg	0.05	NONE	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	NONE	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	NONE	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	NONE	-	-	-	-	-
Acenaphthene	mg/kg	0.05	NONE	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	NONE	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	NONE	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	-	-	-
Fluorene	mg/kg	0.05	NONE	-	-	-	-	-
Azobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-	-	-	-
Anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Carbazole	mg/kg	0.3	NONE	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	-	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-	-	-	-

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Project / Site name: PGBE 01 06
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Lab Sample Number				2454566	2454567	2454568	2454569	2454570
Sample Reference				WSRa	WS1a	WS1b	WS2a	WS2b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Chrysene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454571	2454572	2454573	2454574	2454575
Sample Reference				WS2c	WS3a	WS4a	WS4b	WS5a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	04/10/2022	04/10/2022	04/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	55	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	21	13	10	6.1	12
Total mass of sample received	kg	0.001	NONE	0.4	0.4	0.4	0.4	0.4
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile- Loose Fibrous Debris	-	-	Amosite- Loose Fibrous Debris
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Not-detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	ASE	ASE	ASE	ASE	ASE

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.6	7.6	7.9	7.6	9.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	610	1400	340	98	970
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	280	1100	55	12	260
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.14	0.55	0.028	0.0062	0.13
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	142	555	27.5	6.2	132
Sulphide	mg/kg	1	NONE	< 1.0	34	2.2	< 1.0	3
Ammoniacal Nitrogen as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.5	2.3	1.2	0.6	1.7

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	< 0.05	0.4	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	< 0.05	0.72	< 0.05	< 0.05	0.33
Pyrene	mg/kg	0.05	NONE	< 0.05	0.58	< 0.05	< 0.05	0.28
Benzo(a)anthracene	mg/kg	0.05	NONE	< 0.05	0.59	< 0.05	< 0.05	0.3
Chrysene	mg/kg	0.05	NONE	< 0.05	0.65	< 0.05	< 0.05	0.39
Benzo(b)fluoranthene	mg/kg	0.05	NONE	< 0.05	0.81	< 0.05	< 0.05	0.33
Benzo(k)fluoranthene	mg/kg	0.05	NONE	< 0.05	0.4	< 0.05	< 0.05	0.24
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	0.58	< 0.05	< 0.05	0.22
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05	0.41	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	0.43	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	< 0.80	5.57	< 0.80	< 0.80	2.09

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454571	2454572	2454573	2454574	2454575
Sample Reference				WS2c	WS3a	WS4a	WS4b	WS5a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	04/10/2022	04/10/2022	04/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	ISO 17025	6600	6900	7200	4800	7400
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	3
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7	12	8.7	7	11
Barium (aqua regia extractable)	mg/kg	1	MCERTS	110	610	72	28	210
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.69	0.73	0.57	0.82	0.53
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	0.7	0.5	< 0.2	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	11	27	14	10	19
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	11	8.9	9.2	9.5	6.6
Copper (aqua regia extractable)	mg/kg	1	MCERTS	9.7	63	14	10	14
Iron (aqua regia extractable)	mg/kg	40	MCERTS	26000	24000	22000	28000	19000
Lead (aqua regia extractable)	mg/kg	1	MCERTS	11	45	37	10	31
Lithium (aqua regia extractable)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	5600	1200	1200	690	700
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.1	1.3	0.48	0.34	1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	21	22	16	18	16
Phosphorus (aqua regia extractable)	mg/kg	20	ISO 17025	270	400	340	280	590
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tin (aqua regia extractable)	mg/kg	1	MCERTS	1.3	7.6	1.9	1.4	2.3
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	15	23	18	15	19
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	50	180	57	50	77
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	2300	61000	18000	1200	45000
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	1600	24000	2600	1500	13000
Potassium (aqua regia extractable)	mg/kg	20	ISO 17025	490	810	670	370	850
Sodium (aqua regia extractable)	mg/kg	20	ISO 17025	180	230	180	140	270
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
Mineral Oil (C10 - C40) $_{EH_CU_1D_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454571	2454572	2454573	2454574	2454575
Sample Reference				WS2c	WS3a	WS4a	WS4b	WS5a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	04/10/2022	04/10/2022	04/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
VOCs								
Chloromethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Bromomethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Trichloromethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Benzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Tetrachloromethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Trichloroethene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Dibromomethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Bromodichloromethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Toluene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Dibromochloromethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Chlorobenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Ethylbenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
p & m-Xylene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Styrene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
o-Xylene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Isopropylbenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Bromobenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
n-Propylbenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0

Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454571	2454572	2454573	2454574	2454575
Sample Reference				WS2c	WS3a	WS4a	WS4b	WS5a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	04/10/2022	04/10/2022	04/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
sec-Butylbenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Butylbenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	< 1.0	-	-	< 1.0

SVOCs

Aniline	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
Phenol	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	NONE	-	< 0.05	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
Isophorone	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
Naphthalene	mg/kg	0.05	NONE	-	< 0.05	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	< 0.1	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	NONE	-	< 0.05	-	-	< 0.05
Acenaphthene	mg/kg	0.05	NONE	-	< 0.05	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
Fluorene	mg/kg	0.05	NONE	-	< 0.05	-	-	< 0.05
Azobenzene	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
Phenanthrene	mg/kg	0.05	NONE	-	0.4	-	-	< 0.05
Anthracene	mg/kg	0.05	NONE	-	< 0.05	-	-	< 0.05
Carbazole	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	NONE	-	< 0.2	-	-	< 0.2
Anthraquinone	mg/kg	0.3	NONE	-	< 0.3	-	-	< 0.3

Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454571	2454572	2454573	2454574	2454575
Sample Reference				WS2c	WS3a	WS4a	WS4b	WS5a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	04/10/2022	04/10/2022	04/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Fluoranthene	mg/kg	0.05	NONE	-	0.72	-	-	0.33
Pyrene	mg/kg	0.05	NONE	-	0.58	-	-	0.28
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	0.3	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	NONE	-	0.59	-	-	0.3
Chrysene	mg/kg	0.05	NONE	-	0.65	-	-	0.39
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	0.81	-	-	0.33
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	0.4	-	-	0.24
Benzo(a)pyrene	mg/kg	0.05	NONE	-	0.58	-	-	0.22
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	0.41	-	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	< 0.05	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	0.43	-	-	< 0.05

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454576	2454577	2454578	2454579	2454580
Sample Reference				WS6a	WS6b	WS6c	WS6d	WS7a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/10/2022	04/10/2022	04/10/2022	04/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	19	< 0.1	< 0.1	< 0.1	40
Moisture Content	%	0.01	NONE	7.6	5.1	15	3.6	3.6
Total mass of sample received	kg	0.001	NONE	0.4	0.4	0.4	0.4	0.4

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	PDO	PDO	PDO	PDO	PDO

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.3	7.2	7.9	7.8	9.6
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	740	500	120	73	2300
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	57	75	16	4.9	360
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.028	0.037	0.0082	0.0025	0.18
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	28.4	37.4	8.2	2.5	180
Sulphide	mg/kg	1	NONE	13	1.6	< 1.0	2.4	20
Ammoniacal Nitrogen as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.2	1.4	1.3	0.7	0.3

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.41	0.25	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.87	0.52	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	NONE	0.71	0.45	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	NONE	0.67	0.42	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	NONE	0.79	0.61	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.7	0.53	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.72	0.46	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	0.67	0.52	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.4	0.33	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.43	0.35	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	6.37	4.44	< 0.80	< 0.80	< 0.80

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454576	2454577	2454578	2454579	2454580
Sample Reference				WS6a	WS6b	WS6c	WS6d	WS7a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/10/2022	04/10/2022	04/10/2022	04/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	ISO 17025	7300	7800	4800	5900	1600
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	3.1	< 1.0	3.8	< 1.0	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.4	11	7.2	8	5.1
Barium (aqua regia extractable)	mg/kg	1	MCERTS	340	150	74	44	1900
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.66	0.68	1	0.79	0.24
Boron (water soluble)	mg/kg	0.2	MCERTS	0.3	0.4	< 0.2	< 0.2	0.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.6	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35	23	10	12	16
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	12	9.2	6.4	11	1.6
Copper (aqua regia extractable)	mg/kg	1	MCERTS	24	22	12	12	21
Iron (aqua regia extractable)	mg/kg	40	MCERTS	19000	23000	29000	35000	8100
Lead (aqua regia extractable)	mg/kg	1	MCERTS	40	31	9.9	10	7.9
Lithium (aqua regia extractable)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	1300	870	230	990	720
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.1	0.81	0.34	0.27	0.79
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	20	15	18	6
Phosphorus (aqua regia extractable)	mg/kg	20	ISO 17025	540	610	360	320	140
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tin (aqua regia extractable)	mg/kg	1	MCERTS	3.2	2.4	1.2	< 1.0	2.1
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	20	24	15	17	7.5
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	93	82	50	53	26
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	71000	17000	3600	1400	130000
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	18000	4900	2400	1800	49000
Potassium (aqua regia extractable)	mg/kg	20	ISO 17025	1000	940	430	490	410
Sodium (aqua regia extractable)	mg/kg	20	ISO 17025	260	200	140	130	410
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
Mineral Oil (C10 - C40) $_{EH_CU_1D_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	640
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	11
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	130
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	470
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	610

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454576	2454577	2454578	2454579	2454580
Sample Reference				WS6a	WS6b	WS6c	WS6d	WS7a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/10/2022	04/10/2022	04/10/2022	04/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	< 10	10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	< 10	21	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	15	32	< 10	< 10	< 10
VOCs								
Chloromethane	µg/kg	1	NONE	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	NONE	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	NONE	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Trichloromethane	µg/kg	1	NONE	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	NONE	-	-	-	-	-
Tetrachloromethane	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Trichloroethene	µg/kg	1	NONE	-	-	-	-	-
Dibromomethane	µg/kg	1	NONE	-	-	-	-	-
Bromodichloromethane	µg/kg	1	NONE	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Toluene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Dibromochloromethane	µg/kg	1	NONE	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	NONE	-	-	-	-	-
Chlorobenzene	µg/kg	1	NONE	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-	-
Ethylbenzene	µg/kg	1	NONE	-	-	-	-	-
p & m-Xylene	µg/kg	1	NONE	-	-	-	-	-
Styrene	µg/kg	1	NONE	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	NONE	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-	-
Isopropylbenzene	µg/kg	1	NONE	-	-	-	-	-
Bromobenzene	µg/kg	1	NONE	-	-	-	-	-
n-Propylbenzene	µg/kg	1	NONE	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	NONE	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	NONE	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-	-

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454576	2454577	2454578	2454579	2454580
Sample Reference				WS6a	WS6b	WS6c	WS6d	WS7a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/10/2022	04/10/2022	04/10/2022	04/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
sec-Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	NONE	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-	-

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	NONE	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	NONE	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	NONE	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	NONE	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	NONE	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	NONE	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Naphthalene	mg/kg	0.05	NONE	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	NONE	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	NONE	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	NONE	-	-	-	-	-
Acenaphthene	mg/kg	0.05	NONE	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	NONE	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	NONE	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	-	-	-
Fluorene	mg/kg	0.05	NONE	-	-	-	-	-
Azobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-	-	-	-
Anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Carbazole	mg/kg	0.3	NONE	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	-	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-	-	-	-

Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454576	2454577	2454578	2454579	2454580
Sample Reference				WS6a	WS6b	WS6c	WS6d	WS7a
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/10/2022	04/10/2022	04/10/2022	04/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Chrysene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454581	2454582	2454583	2454584	2454585
Sample Reference				WS7b	WS8a	WS8b	WS9a	WS9b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	36	< 0.1	20	< 0.1
Moisture Content	%	0.01	NONE	18	14	20	5.6	11
Total mass of sample received	kg	0.001	NONE	0.4	0.4	0.4	0.4	0.4

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile-Sheeting/Board Debris	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	PDO	PDO	PDO	PDO	PDO

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.8	8.2	8.1	9.4	6.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	420	1500	470	1300	190
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	180	600	150	340	26
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.091	0.3	0.076	0.17	0.013
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	91	301	76.1	168	13.1
Sulphide	mg/kg	1	NONE	< 1.0	110	28	30	< 1.0
Ammoniacal Nitrogen as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	160	< 0.5	< 0.5
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.9	1.4	2	0.5	0.6

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	0.26	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	0.26	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	< 0.05	2.9	< 0.05	0.48	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	0.81	< 0.05	0.15	< 0.05
Fluoranthene	mg/kg	0.05	NONE	< 0.05	5.6	< 0.05	1	< 0.05
Pyrene	mg/kg	0.05	NONE	< 0.05	4.8	< 0.05	0.83	< 0.05
Benzo(a)anthracene	mg/kg	0.05	NONE	< 0.05	3	< 0.05	0.85	< 0.05
Chrysene	mg/kg	0.05	NONE	< 0.05	2.8	< 0.05	0.83	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	NONE	< 0.05	2.6	< 0.05	0.72	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	< 0.05	2.1	< 0.05	0.76	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	2.5	< 0.05	0.73	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05	1.3	< 0.05	0.39	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05	0.34	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05	1.4	< 0.05	0.46	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	< 0.80	30.6	< 0.80	7.21	< 0.80

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454581	2454582	2454583	2454584	2454585
Sample Reference				WS7b	WS8a	WS8b	WS9a	WS9b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Aluminium (aqua regia extractable)	mg/kg	30	ISO 17025	7100	12000	8400	4600	5900
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	4.6	< 1.0	3.3
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	26	15	7.7	8.6
Barium (aqua regia extractable)	mg/kg	1	MCERTS	81	340	120	650	49
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.61	0.98	0.74	0.46	0.62
Boron (water soluble)	mg/kg	0.2	MCERTS	0.2	2.6	1.6	1.3	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	4	< 0.2	0.5	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	37	2400	51	41	13
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	9.6	14	12	4.6	10
Copper (aqua regia extractable)	mg/kg	1	MCERTS	42	1900	17	27	11
Iron (aqua regia extractable)	mg/kg	40	MCERTS	29000	27000	28000	13000	33000
Lead (aqua regia extractable)	mg/kg	1	MCERTS	19	110	23	21	12
Lithium (aqua regia extractable)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	950	3800	1200	930	930
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.3	1.6	< 0.3	0.7	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.67	3.6	0.93	0.77	0.4
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16	48	18	12	17
Phosphorus (aqua regia extractable)	mg/kg	20	ISO 17025	410	700	430	340	320
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tin (aqua regia extractable)	mg/kg	1	MCERTS	2	21	2.3	4.1	1.5
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	18	26	22	14	18
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	69	230	59	60	51
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	3000	45000	5800	140000	1300
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	2100	11000	2200	16000	1600
Potassium (aqua regia extractable)	mg/kg	20	ISO 17025	700	1100	780	960	540
Sodium (aqua regia extractable)	mg/kg	20	ISO 17025	220	370	210	310	140
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
Mineral Oil (C10 - C40) $_{EH_CU_1D_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454581	2454582	2454583	2454584	2454585
Sample Reference				WS7b	WS8a	WS8b	WS9a	WS9b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	NONE	< 2.0	2.4	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	< 10	27	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	< 10	100	< 10	13	< 10
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	< 10	130	< 10	17	< 10
VOCs								
Chloromethane	µg/kg	1	NONE	-	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-	-
Bromomethane	µg/kg	1	NONE	-	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	NONE	-	-	-	-	-
2,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Trichloromethane	µg/kg	1	NONE	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,1-Dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Benzene	µg/kg	1	NONE	-	-	-	-	-
Tetrachloromethane	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Trichloroethene	µg/kg	1	NONE	-	-	-	-	-
Dibromomethane	µg/kg	1	NONE	-	-	-	-	-
Bromodichloromethane	µg/kg	1	NONE	-	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-	-
Toluene	µg/kg	1	NONE	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	NONE	-	-	-	-	-
1,3-Dichloropropane	µg/kg	1	NONE	-	-	-	-	-
Dibromochloromethane	µg/kg	1	NONE	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromoethane	µg/kg	1	NONE	-	-	-	-	-
Chlorobenzene	µg/kg	1	NONE	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-	-
Ethylbenzene	µg/kg	1	NONE	-	-	-	-	-
p & m-Xylene	µg/kg	1	NONE	-	-	-	-	-
Styrene	µg/kg	1	NONE	-	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-	-
o-Xylene	µg/kg	1	NONE	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-	-
Isopropylbenzene	µg/kg	1	NONE	-	-	-	-	-
Bromobenzene	µg/kg	1	NONE	-	-	-	-	-
n-Propylbenzene	µg/kg	1	NONE	-	-	-	-	-
2-Chlorotoluene	µg/kg	1	NONE	-	-	-	-	-
4-Chlorotoluene	µg/kg	1	NONE	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-	-
tert-Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-	-

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454581	2454582	2454583	2454584	2454585
Sample Reference				WS7b	WS8a	WS8b	WS9a	WS9b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
sec-Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
p-Isopropyltoluene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
Butylbenzene	µg/kg	1	NONE	-	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-	-
Hexachlorobutadiene	µg/kg	1	NONE	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-	-

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	-	-	-
Phenol	mg/kg	0.2	NONE	-	-	-	-	-
2-Chlorophenol	mg/kg	0.1	NONE	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	-	-	-	-
2-Methylphenol	mg/kg	0.3	NONE	-	-	-	-	-
Hexachloroethane	mg/kg	0.05	NONE	-	-	-	-	-
Nitrobenzene	mg/kg	0.3	NONE	-	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	-
Isophorone	mg/kg	0.2	NONE	-	-	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Naphthalene	mg/kg	0.05	NONE	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	NONE	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	NONE	-	-	-	-	-
Dimethylphthalate	mg/kg	0.1	NONE	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	-	-	-
Acenaphthylene	mg/kg	0.05	NONE	-	-	-	-	-
Acenaphthene	mg/kg	0.05	NONE	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	-	-	-
Dibenzofuran	mg/kg	0.2	NONE	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	-	-	-	-
Diethyl phthalate	mg/kg	0.2	NONE	-	-	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	-	-	-
Fluorene	mg/kg	0.05	NONE	-	-	-	-	-
Azobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	NONE	-	-	-	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-	-	-	-
Anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Carbazole	mg/kg	0.3	NONE	-	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	-	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-	-	-	-

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454581	2454582	2454583	2454584	2454585
Sample Reference				WS7b	WS8a	WS8b	WS9a	WS9b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Chrysene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454586	2454587	2454588	2454589
Sample Reference				WS10a	WS10b	BH3a	BH3b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.9	17	9.6	20
Total mass of sample received	kg	0.001	NONE	0.4	0.4	0.4	0.4
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KSZ	KSZ	KSZ	KSZ

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.7	8.1	8.1	7.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	770	380	590	390
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	210	22	85	45
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.1	0.011	0.042	0.023
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	105	10.8	42.4	22.6
Sulphide	mg/kg	1	NONE	170	2.7	2.6	2.7
Ammoniacal Nitrogen as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2	2.2	1.4	1.8

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	0.27	0.25	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	0.23	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	0.36	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	0.67	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	NONE	6.8	0.58	0.91	0.69
Anthracene	mg/kg	0.05	NONE	2.5	0.14	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	16	0.68	1.6	1.2
Pyrene	mg/kg	0.05	NONE	12	0.54	1.3	0.89
Benzo(a)anthracene	mg/kg	0.05	NONE	13	0.43	1.1	0.89
Chrysene	mg/kg	0.05	NONE	9.7	0.8	1	0.96
Benzo(b)fluoranthene	mg/kg	0.05	NONE	12	0.7	1.1	0.99
Benzo(k)fluoranthene	mg/kg	0.05	NONE	5.2	0.28	0.6	0.44
Benzo(a)pyrene	mg/kg	0.05	NONE	12	0.46	0.95	0.76
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	5.1	0.27	0.5	0.43
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	1.6	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	5.3	0.29	0.59	0.42

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	101	5.42	9.59	7.66

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454586	2454587	2454588	2454589
Sample Reference				WS10a	WS10b	BH3a	BH3b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Aluminium (aqua regia extractable)	mg/kg	30	ISO 17025	9800	7100	7300	6900
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	2.9
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	17	10	19
Barium (aqua regia extractable)	mg/kg	1	MCERTS	490	150	370	140
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1	1	0.74	1
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	< 0.2	0.2	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.8	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	22	16	88	29
Cobalt (aqua regia extractable)	mg/kg	0.15	MCERTS	12	14	11	15
Copper (aqua regia extractable)	mg/kg	1	MCERTS	28	37	53	37
Iron (aqua regia extractable)	mg/kg	40	MCERTS	41000	25000	23000	27000
Lead (aqua regia extractable)	mg/kg	1	MCERTS	20	44	49	51
Lithium (aqua regia extractable)	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	1000	850	1200	1300
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.5	4.3	0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.96	1.2	0.75	1.9
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	27	30	27	30
Phosphorus (aqua regia extractable)	mg/kg	20	ISO 17025	350	390	370	430
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Tin (aqua regia extractable)	mg/kg	1	MCERTS	2.7	11	4.5	10
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	21	21	19	21
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	63	93	110	98
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	66000	4300	36000	3100
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	12000	2200	14000	1900
Potassium (aqua regia extractable)	mg/kg	20	ISO 17025	810	770	740	720
Sodium (aqua regia extractable)	mg/kg	20	ISO 17025	310	250	230	190
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons							
Mineral Oil (C10 - C40) $_{EH_CU_1D_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	< 10	< 10	< 10	< 10

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454586	2454587	2454588	2454589
Sample Reference				WS10a	WS10b	BH3a	BH3b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
TPH-CWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	NONE	6.2	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	69	11	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	NONE	240	27	24	15
TPH-CWG - Aromatic (EC5 - EC35) $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	310	37	32	21
VOCs							
Chloromethane	µg/kg	1	NONE	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	NONE	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	NONE	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethane	µg/kg	1	NONE	-	-	-	-
2,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-
Trichloromethane	µg/kg	1	NONE	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	NONE	-	-	-	-
1,2-Dichloroethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloropropene	µg/kg	1	NONE	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	NONE	-	-	-	-
Tetrachloromethane	µg/kg	1	NONE	-	-	-	-
1,2-Dichloropropane	µg/kg	1	NONE	-	-	-	-
Trichloroethene	µg/kg	1	NONE	-	-	-	-
Dibromomethane	µg/kg	1	NONE	-	-	-	-
Bromodichloromethane	µg/kg	1	NONE	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	NONE	-	-	-	-
Toluene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	NONE	-	-	-	-
1,3-Dichloropropane	µg/kg	1	NONE	-	-	-	-
Dibromochloromethane	µg/kg	1	NONE	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	NONE	-	-	-	-
Chlorobenzene	µg/kg	1	NONE	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-
Ethylbenzene	µg/kg	1	NONE	-	-	-	-
p & m-Xylene	µg/kg	1	NONE	-	-	-	-
Styrene	µg/kg	1	NONE	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	NONE	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	-	-	-	-
Isopropylbenzene	µg/kg	1	NONE	-	-	-	-
Bromobenzene	µg/kg	1	NONE	-	-	-	-
n-Propylbenzene	µg/kg	1	NONE	-	-	-	-
2-Chlorotoluene	µg/kg	1	NONE	-	-	-	-
4-Chlorotoluene	µg/kg	1	NONE	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-
tert-Butylbenzene	µg/kg	1	NONE	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	NONE	-	-	-	-

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454586	2454587	2454588	2454589
Sample Reference				WS10a	WS10b	BH3a	BH3b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
sec-Butylbenzene	µg/kg	1	NONE	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-
p-Isopropyltoluene	µg/kg	1	NONE	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	NONE	-	-	-	-
Butylbenzene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	NONE	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-
Hexachlorobutadiene	µg/kg	1	NONE	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	NONE	-	-	-	-

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	NONE	-	-	-	-
2-Chlorophenol	mg/kg	0.1	NONE	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	NONE	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	NONE	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	NONE	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	NONE	-	-	-	-
2-Methylphenol	mg/kg	0.3	NONE	-	-	-	-
Hexachloroethane	mg/kg	0.05	NONE	-	-	-	-
Nitrobenzene	mg/kg	0.3	NONE	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	NONE	-	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	NONE	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	NONE	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	NONE	-	-	-	-
Naphthalene	mg/kg	0.05	NONE	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	NONE	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	NONE	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	NONE	-	-	-	-
Dimethylphthalate	mg/kg	0.1	NONE	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	-	-
Acenaphthylene	mg/kg	0.05	NONE	-	-	-	-
Acenaphthene	mg/kg	0.05	NONE	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	-	-
Dibenzofuran	mg/kg	0.2	NONE	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	NONE	-	-	-	-
Diethyl phthalate	mg/kg	0.2	NONE	-	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	-	-
Fluorene	mg/kg	0.05	NONE	-	-	-	-
Azobenzene	mg/kg	0.3	NONE	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	NONE	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	NONE	-	-	-	-
Phenanthrene	mg/kg	0.05	NONE	-	-	-	-
Anthracene	mg/kg	0.05	NONE	-	-	-	-
Carbazole	mg/kg	0.3	NONE	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-	-	-

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06
Your Order No: C0038

Lab Sample Number				2454586	2454587	2454588	2454589
Sample Reference				WS10a	WS10b	BH3a	BH3b
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/10/2022	03/10/2022	03/10/2022	03/10/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Fluoranthene	mg/kg	0.05	NONE	-	-	-	-
Pyrene	mg/kg	0.05	NONE	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	NONE	-	-	-	-
Chrysene	mg/kg	0.05	NONE	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	NONE	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	NONE	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	NONE	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2454564	2454565
Sample Reference				BH2	BH3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				05/10/2022	06/10/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
General Inorganics					
pH	pH Units	N/A	ISO 17025	7.6	7.7
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10
Complex Cyanide	µg/l	10	ISO 17025	< 10	< 10
Free Cyanide	µg/l	10	ISO 17025	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	29.6	34.4
Sulphide	µg/l	5	NONE	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	22	25
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	450	20
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	2.08	2.94
Nitrite as N	µg/l	1	ISO 17025	110	3.8
Total Phenols					
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
Speciated PAHs					
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Total PAH					
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16
Heavy Metals / Metalloids					
Boron (dissolved)	µg/l	10	ISO 17025	37	26
Calcium (dissolved)	mg/l	0.012	ISO 17025	58	42
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.014	0.009
Lithium (dissolved)	µg/l	1	NONE	39	7.8
Magnesium (dissolved)	mg/l	0.005	ISO 17025	14	10
Phosphorus (dissolved)	µg/l	20	ISO 17025	676	791
Potassium (dissolved)	mg/l	0.025	ISO 17025	4.1	4.8
Sodium (dissolved)	mg/l	0.01	ISO 17025	25	25

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UKAS TESTING
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Analytical i2 Environmental Science

Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2454564	2454565
Sample Reference				BH2	BH3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				05/10/2022	06/10/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.0134	0.0214
Antimony (dissolved)	µg/l	0.4	ISO 17025	1	0.7
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.77	0.67
Barium (dissolved)	µg/l	0.06	ISO 17025	230	54
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.04	0.08
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	3	4
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	610	78
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05
Molybdenum (dissolved)	µg/l	0.05	ISO 17025	2	0.83
Nickel (dissolved)	µg/l	0.5	ISO 17025	1	1.1
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.3	0.7
Tin (dissolved)	µg/l	0.2	ISO 17025	0.28	1.3
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.5
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.5	8.3

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0

Petroleum Hydrocarbons

Mineral Oil (C10 - C40) $_{EH_1D_AL_MS}$	µg/l	10	NONE	< 10.0	< 10.0

TPH-CWG - Aliphatic >C5 - C6 $_{HS_1D_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS_1D_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS_1D_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH_1D_AL_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH_1D_AL_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH_1D_AL_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH_1D_AL_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH_1D_AL_MS}$	µg/l	10	NONE	< 10	< 10

TPH-CWG - Aromatic >C5 - C7 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2454590	2454591	2454592
Sample Reference				WS3a	WS4a	WS6b
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
General Inorganics						
Electrical Conductivity	µS/cm	10	ISO 17025	93	120	68
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10
Complex Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10
Free Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10
Sulphate as SO_4	mg/l	0.1	ISO 17025	1.2	3.7	1.3
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	0.41	0.43	0.44
Ammoniacal Nitrogen as NH4	µg/l	15	NONE	< 15	38	18
Total Organic Carbon (TOC)	mg/l	0.1	NONE	7.19	9.79	7.12
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01
Total PAH						
Total EPA-16 PAHs	µg/l	0.2	NONE	< 0.2	< 0.2	< 0.2

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2454590	2454591	2454592
Sample Reference				WS3a	WS4a	WS6b
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Aluminium (dissolved)	mg/l	0.012	ISO 17025	0.57	0.48	0.83
Antimony (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7
Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	3.4	2.7
Barium (dissolved)	µg/l	0.05	ISO 17025	51	15	15
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	< 10	< 10	< 10
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	< 0.4	0.5	1.4
Cobalt (dissolved)	µg/l	0.3	ISO 17025	< 0.3	< 0.3	0.4
Copper (dissolved)	µg/l	0.7	ISO 17025	9.8	9.5	10
Iron (dissolved)	mg/l	0.004	ISO 17025	0.46	0.34	0.54
Lead (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	2.9
Lithium (dissolved)	µg/l	30	NONE	< 30	< 30	< 30
Manganese (dissolved)	µg/l	0.06	ISO 17025	45	39	36
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5
Molybdenum (dissolved)	µg/l	0.4	ISO 17025	< 0.4	0.6	1.7
Nickel (dissolved)	µg/l	0.3	ISO 17025	0.8	< 0.3	0.8
Phosphorus (dissolved)	µg/l	30	NONE	73	< 30	100
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0
Tin (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	1.4
Vanadium (dissolved)	µg/l	1.7	ISO 17025	7.4	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	9.5	7.1	6.7
Calcium (dissolved)	mg/l	0.012	ISO 17025	15	19	11
Magnesium (dissolved)	mg/l	0.005	ISO 17025	1.6	1.9	0.82
Potassium (dissolved)	mg/l	0.025	ISO 17025	0.58	1.6	0.75
Sodium (dissolved)	mg/l	0.01	ISO 17025	1.2	1.3	1
Monoaromatics & Oxygenates						
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10
Petroleum Hydrocarbons						
Mineral Oil (C10 - C40) EH_1D_AL_MS	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_MS	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_MS	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_MS	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_MS	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_MS	µg/l	10	NONE	< 10	< 10	< 10

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2454590	2454591	2454592
Sample Reference				WS3a	WS4a	WS6b
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
TPH-CWG - Aromatic >C5 - C7 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH_1D_AR_MS}$	µg/l	10	NONE	< 10	< 10	< 10

VOCs

Chloromethane	µg/l	1	NONE	< 1.0	-	-
Chloroethane	µg/l	1	NONE	< 1.0	-	-
Bromomethane	µg/l	1	NONE	< 1.0	-	-
Vinyl Chloride	µg/l	1	NONE	< 1.0	-	-
1,1-dichloroethene	µg/l	1	NONE	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	-	-
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	-	-
1,1-dichloroethane	µg/l	1	NONE	< 1.0	-	-
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	-	-
Trichloromethane	µg/l	1	NONE	< 1.0	-	-
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	-	-
1,2-dichloroethane	µg/l	1	NONE	< 1.0	-	-
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	-	-
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	-	-
Benzene	µg/l	1	ISO 17025	< 1.0	-	-
Tetrachloromethane	µg/l	1	NONE	< 1.0	-	-
1,2-dichloropropane	µg/l	1	NONE	< 1.0	-	-
Trichloroethene	µg/l	1	NONE	< 1.0	-	-
Dibromomethane	µg/l	1	NONE	< 1.0	-	-
Bromodichloromethane	µg/l	1	NONE	< 1.0	-	-
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	-	-
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	-	-
Toluene	µg/l	1	ISO 17025	< 1.0	-	-
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	-	-
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	-	-
Dibromochloromethane	µg/l	1	NONE	< 1.0	-	-
Tetrachloroethene	µg/l	1	NONE	< 1.0	-	-
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	-	-
Chlorobenzene	µg/l	1	NONE	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	-	-
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	-	-
p & m-xylene	µg/l	1	ISO 17025	< 1.0	-	-
Styrene	µg/l	1	NONE	< 1.0	-	-
Tribromomethane	µg/l	1	NONE	< 1.0	-	-
o-xylene	µg/l	1	ISO 17025	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	-	-
Isopropylbenzene	µg/l	1	NONE	< 1.0	-	-
Bromobenzene	µg/l	1	NONE	< 1.0	-	-
n-Propylbenzene	µg/l	1	NONE	< 1.0	-	-
2-Chlorotoluene	µg/l	1	NONE	< 1.0	-	-
4-Chlorotoluene	µg/l	1	NONE	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	-	-
ter-Butylbenzene	µg/l	1	NONE	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	-	-
sec-Butylbenzene	µg/l	1	NONE	< 1.0	-	-

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2454590	2454591	2454592
Sample Reference				WS3a	WS4a	WS6b
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	-	-
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	-	-
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	-	-
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	-	-
Butylbenzene	µg/l	1	NONE	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	-	-
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	-	-
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	-	-
SVOCs						
Aniline	µg/l	0.05	NONE	< 0.05	-	-
Phenol	µg/l	0.05	NONE	< 0.05	-	-
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	-	-
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	-	-
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	-	-
2-Methylphenol	µg/l	0.05	NONE	< 0.05	-	-
Hexachloroethane	µg/l	0.05	NONE	< 0.05	-	-
Nitrobenzene	µg/l	0.05	NONE	< 0.05	-	-
4-Methylphenol	µg/l	0.05	NONE	< 0.05	-	-
Isophorone	µg/l	0.05	NONE	< 0.05	-	-
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	-	-
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	-	-
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	-	-
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	-	-
Naphthalene	µg/l	0.01	NONE	< 0.01	-	-
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	-	-
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	-	-
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	-	-
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	-	-
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	-	-
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	-	-
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	-	-
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	-	-
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	-	-
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	-	-
Acenaphthylene	µg/l	0.01	NONE	< 0.01	-	-
Acenaphthene	µg/l	0.01	NONE	< 0.01	-	-
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	-	-
Dibenzofuran	µg/l	0.05	NONE	< 0.05	-	-
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	-	-
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	-	-
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	-	-
Fluorene	µg/l	0.01	NONE	< 0.01	-	-
Azobenzene	µg/l	0.05	NONE	< 0.05	-	-
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	-	-
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	-	-
Phenanthrene	µg/l	0.01	NONE	< 0.01	-	-
Anthracene	µg/l	0.01	NONE	< 0.01	-	-
Carbazole	µg/l	0.05	NONE	< 0.05	-	-
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	-	-
Anthraquinone	µg/l	0.05	NONE	< 0.05	-	-
Fluoranthene	µg/l	0.01	NONE	< 0.01	-	-

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Analytical Report Number: 22-89118
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2454590	2454591	2454592
Sample Reference				WS3a	WS4a	WS6b
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				05/10/2022	05/10/2022	05/10/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Pyrene	µg/l	0.01	NONE	< 0.01	-	-
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	-	-
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	-	-
Chrysene	µg/l	0.01	NONE	< 0.01	-	-
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	-	-
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	-	-
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	-	-
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	-	-
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	-	-
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number : 22-89118
Project / Site name: PGBE 01 06

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2454566	WSRa	None Supplied	None Supplied	Brown loam and sand with gravel and stones.
2454567	WS1a	None Supplied	None Supplied	Brown clay and sand.
2454568	WS1b	None Supplied	None Supplied	Brown clay and sand.
2454569	WS2a	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
2454570	WS2b	None Supplied	None Supplied	Brown clay and sand with gravel and stones.
2454571	WS2c	None Supplied	None Supplied	Brown loam and sand.
2454572	WS3a	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2454573	WS4a	None Supplied	None Supplied	Brown clay and sand with gravel and stones.
2454574	WS4b	None Supplied	None Supplied	Brown sand.
2454575	WS5a	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
2454576	WS6a	None Supplied	None Supplied	Brown loam and sand with gravel and stones.
2454577	WS6b	None Supplied	None Supplied	Brown loam and sand with gravel.
2454578	WS6c	None Supplied	None Supplied	Brown clay and sand with gravel.
2454579	WS6d	None Supplied	None Supplied	Brown loam and sand.
2454580	WS7a	None Supplied	None Supplied	Brown clay and sand with gravel and stones.
2454581	WS7b	None Supplied	None Supplied	Brown clay and sand.
2454582	WS8a	None Supplied	None Supplied	Brown loam and sand with gravel and stones.
2454583	WS8b	None Supplied	None Supplied	Brown clay.
2454584	WS9a	None Supplied	None Supplied	Brown loam and sand with gravel and stones.
2454585	WS9b	None Supplied	None Supplied	Brown loam and sand.
2454586	WS10a	None Supplied	None Supplied	Brown loam and sand with gravel.
2454587	WS10b	None Supplied	None Supplied	Brown loam and sand with gravel.
2454588	BH3a	None Supplied	None Supplied	Brown clay and sand with gravel and brick.
2454589	BH3b	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.

Analytical Report Number : 22-89118
Project / Site name: PGBE 01 06

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Cations in soil by ICP-OES	Determination of cations in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron in leachate	Determination of boron in leachate. Sample acidified and followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Complex cyanide in leachate	Determination of complex cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L040-PL	W	ISO 17025
Complex Cyanide in soil	Determination of complex cyanide by calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Complex cyanide in water	Determination of complex cyanide by calculation. Accredited matrices SW, PW, GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Electrical conductivity at 20oC of leachate	Determination of electrical conductivity in leachate by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	ISO 17025

Analytical Report Number : 22-89118
Project / Site name: PGBE 01 06

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Free cyanide in leachate	Determination of free cyanide by distillation followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Mineral Oil (Leachates) C10 - C40	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Mineral Oil (Waters) C10 - C40	Determination of dichloromethane extractable hydrocarbons in water by GC-MS.	In-house method	L070-PL	W	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Sulphide in leachate	Determination of sulphide in leachate by ion selective electrode.	In-house method	L010-PL	W	NONE
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	NONE
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS

Analytical Report Number : 22-89118
Project / Site name: PGBE 01 06

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in leachate	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total organic carbon in leachate	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
Volatile organic compounds in leachate	Determination of volatile organic compounds in leachate by headspace GC-MS	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
BTEX and MTBE in leachates (Monoaromatics)	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

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Analytical Report Number : 22-89118
Project / Site name: PGBE 01 06

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Chloride in leachate	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Chloride in water	Determination of Chloride (diissolved) colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

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

Information in Support of Analytical Results

Analytical Report Number : 22-89118
Project / Site name: PGBE 01 06

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

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

List of HWOL Acronyms and Operators

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

Sample Deviation Report

Analytical Report Number : 22-89118
Project / Site name: PGBE 01 06

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

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH2	None Supplied	W	2454564	c	Ammoniacal Nitrogen as N in water	L082-PL	c
BH2	None Supplied	W	2454564	c	Ammonium as NH4 in water	L082-PL	c
BH2	None Supplied	W	2454564	c	Nitrite as N in water	L082-PL	c
BH2	None Supplied	W	2454564	c	pH at 20oC in water (automated)	L099-PL	c
BH3	None Supplied	W	2454565	c	Ammoniacal Nitrogen as N in water	L082-PL	c
BH3	None Supplied	W	2454565	c	Ammonium as NH4 in water	L082-PL	c
BH3	None Supplied	W	2454565	c	pH at 20oC in water (automated)	L099-PL	c
BH3a	None Supplied	S	2454588	c	Free cyanide in soil	L080-PL	c
BH3a	None Supplied	S	2454588	c	Complex Cyanide in soil	L080-PL	c
BH3a	None Supplied	S	2454588	c	Sulphide in soil	L010-PL	c
BH3a	None Supplied	S	2454588	c	Total cyanide in soil	L080-PL	c
BH3b	None Supplied	S	2454589	c	Free cyanide in soil	L080-PL	c
BH3b	None Supplied	S	2454589	c	Complex Cyanide in soil	L080-PL	c
BH3b	None Supplied	S	2454589	c	Sulphide in soil	L010-PL	c
BH3b	None Supplied	S	2454589	c	Total cyanide in soil	L080-PL	c
WS10a	None Supplied	S	2454586	c	Free cyanide in soil	L080-PL	c
WS10a	None Supplied	S	2454586	c	Complex Cyanide in soil	L080-PL	c
WS10a	None Supplied	S	2454586	c	Sulphide in soil	L010-PL	c
WS10a	None Supplied	S	2454586	c	Total cyanide in soil	L080-PL	c
WS10b	None Supplied	S	2454587	c	Free cyanide in soil	L080-PL	c
WS10b	None Supplied	S	2454587	c	Complex Cyanide in soil	L080-PL	c
WS10b	None Supplied	S	2454587	c	Sulphide in soil	L010-PL	c
WS10b	None Supplied	S	2454587	c	Total cyanide in soil	L080-PL	c
WS7a	None Supplied	S	2454580	c	Free cyanide in soil	L080-PL	c
WS7a	None Supplied	S	2454580	c	Complex Cyanide in soil	L080-PL	c
WS7a	None Supplied	S	2454580	c	Sulphide in soil	L010-PL	c
WS7a	None Supplied	S	2454580	c	Total cyanide in soil	L080-PL	c
WS7b	None Supplied	S	2454581	c	Free cyanide in soil	L080-PL	c
WS7b	None Supplied	S	2454581	c	Complex Cyanide in soil	L080-PL	c
WS7b	None Supplied	S	2454581	c	Sulphide in soil	L010-PL	c
WS7b	None Supplied	S	2454581	c	Total cyanide in soil	L080-PL	c
WS8a	None Supplied	S	2454582	c	Free cyanide in soil	L080-PL	c
WS8a	None Supplied	S	2454582	c	Complex Cyanide in soil	L080-PL	c
WS8a	None Supplied	S	2454582	c	Sulphide in soil	L010-PL	c
WS8a	None Supplied	S	2454582	c	Total cyanide in soil	L080-PL	c
WS8b	None Supplied	S	2454583	c	Free cyanide in soil	L080-PL	c
WS8b	None Supplied	S	2454583	c	Complex Cyanide in soil	L080-PL	c
WS8b	None Supplied	S	2454583	c	Sulphide in soil	L010-PL	c
WS8b	None Supplied	S	2454583	c	Total cyanide in soil	L080-PL	c
WS9a	None Supplied	S	2454584	c	Free cyanide in soil	L080-PL	c
WS9a	None Supplied	S	2454584	c	Complex Cyanide in soil	L080-PL	c
WS9a	None Supplied	S	2454584	c	Sulphide in soil	L010-PL	c
WS9a	None Supplied	S	2454584	c	Total cyanide in soil	L080-PL	c
WS9b	None Supplied	S	2454585	c	Free cyanide in soil	L080-PL	c
WS9b	None Supplied	S	2454585	c	Complex Cyanide in soil	L080-PL	c
WS9b	None Supplied	S	2454585	c	Sulphide in soil	L010-PL	c
WS9b	None Supplied	S	2454585	c	Total cyanide in soil	L080-PL	c

Filip Taylor
Environmental Compliance Ltd
Unit G1, The Willowford
Treforest Industrial Estate
Pontypridd
CF37 5BF

e: f.taylor@ecl.world

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 22-88943

Project / Site name:	PGBE 01 06	**Samples received on:**	10/10/2022
Your job number:		**Samples instructed on/ Analysis started on:**	10/10/2022
Your order number:	C0038	**Analysis completed by:**	18/10/2022
Report Issue Number:	1	**Report issued on:**	18/10/2022
Samples Analysed:	1 water sample		

Signed:

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

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

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

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

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

Excel copies of reports are only valid when accompanied by this PDF certificate.

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

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

Analytical Report Number: 22-88943
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2453695
Sample Reference				BH1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				07/10/2022
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
General Inorganics				
pH	pH Units	N/A	ISO 17025	7.3
Total Cyanide	µg/l	10	ISO 17025	< 10
Complex Cyanide	µg/l	10	ISO 17025	< 10
Free Cyanide	µg/l	10	ISO 17025	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	21.7
Sulphide	µg/l	5	NONE	< 5.0
Chloride	mg/l	0.15	ISO 17025	14
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	1300
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	9.44
Nitrite as N	µg/l	1	ISO 17025	2.2
Total Phenols				
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10
Speciated PAHs				
Naphthalene	µg/l	0.01	ISO 17025	2.92
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01
Fluorene	µg/l	0.01	ISO 17025	1.29
Phenanthrene	µg/l	0.01	ISO 17025	4.07
Anthracene	µg/l	0.01	ISO 17025	0.26
Fluoranthene	µg/l	0.01	ISO 17025	0.75
Pyrene	µg/l	0.01	ISO 17025	1.1
Benzo(a)anthracene	µg/l	0.01	ISO 17025	0.64
Chrysene	µg/l	0.01	ISO 17025	2.12
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	0.79
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	0.22
Benzo(a)pyrene	µg/l	0.01	ISO 17025	0.28
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01
Total PAH				
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	14.4
Heavy Metals / Metalloids				
Boron (dissolved)	µg/l	10	ISO 17025	140
Calcium (dissolved)	mg/l	0.012	ISO 17025	19
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.032
Lithium (dissolved)	µg/l	1	NONE	16
Magnesium (dissolved)	mg/l	0.005	ISO 17025	7.6
Phosphorus (dissolved)	µg/l	20	ISO 17025	738
Potassium (dissolved)	mg/l	0.025	ISO 17025	14
Sodium (dissolved)	mg/l	0.01	ISO 17025	48

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

UKAS TESTING
4041

Analytical i2 Environmental Science

Analytical Report Number: 22-88943
Project / Site name: PGBE 01 06

Your Order No: C0038

Lab Sample Number				2453695
Sample Reference				BH1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				07/10/2022
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.208
Antimony (dissolved)	µg/l	0.4	ISO 17025	1.8
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.3
Barium (dissolved)	µg/l	0.06	ISO 17025	240
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	< 0.5
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	170
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05
Molybdenum (dissolved)	µg/l	0.05	ISO 17025	4.8
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.1
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6
Tin (dissolved)	µg/l	0.2	ISO 17025	< 0.20
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	1.2

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0

Petroleum Hydrocarbons

Mineral Oil (C10 - C40) $_{EH_1D_AL_MS}$	µg/l	10	NONE	4100

TPH-CWG - Aliphatic >C5 - C6 $_{HS_1D_AL}$	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS_1D_AL}$	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS_1D_AL}$	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH_1D_AL_MS}$	µg/l	10	NONE	130
TPH-CWG - Aliphatic >C12 - C16 $_{EH_1D_AL_MS}$	µg/l	10	NONE	220
TPH-CWG - Aliphatic >C16 - C21 $_{EH_1D_AL_MS}$	µg/l	10	NONE	220
TPH-CWG - Aliphatic >C21 - C35 $_{EH_1D_AL_MS}$	µg/l	10	NONE	3500
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH_1D_AL_MS}$	µg/l	10	NONE	4100

TPH-CWG - Aromatic >C5 - C7 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS_1D_AR}$	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH_1D_AR_MS}$	µg/l	10	NONE	70
TPH-CWG - Aromatic >C12 - C16 $_{EH_1D_AR_MS}$	µg/l	10	NONE	230
TPH-CWG - Aromatic >C16 - C21 $_{EH_1D_AR_MS}$	µg/l	10	NONE	180
TPH-CWG - Aromatic >C21 - C35 $_{EH_1D_AR_MS}$	µg/l	10	NONE	310
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH_1D_AR_MS}$	µg/l	10	NONE	790

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number : 22-88943
Project / Site name: PGBE 01 06

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Complex cyanide in water	Determination of complex cyanide by calculation. Accredited matrices SW, PW, GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Free cyanide in water	Determination of free cyanide by distillation followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Mineral Oil (Waters) C10 - C40	Determination of dichloromethane extractable hydrocarbons in water by GC-MS.	In-house method	L070-PL	W	NONE
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 22-88943
Project / Site name: PGBE 01 06

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Chloride in water	Determination of Chloride (diissolved) colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

APPENDIX IV
BOREHOLE LOGS – ECL

BH1 PBGE.01.06

PROJECT NUMBER PBGE.01.06
PROJECT NAME PBGE Site Investigation
CLIENT PB Gelatins / PB Leiner
ADDRESS Pontypridd, CF37 5SQ

DRILLING DATE 05/10/2022
INSTALL DEPTH 15.0mbgl
SCREEN 6m slotted
GROUNDWATER 4.28

Grid Reference: ST 10052 86817
Drilling Rig Rotary open-hole
Total Depth 16.0mbgl

COMMENTS

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Well Diagram	Graphic Log	Material Description	Additional Observations
	0			Reddish brown and brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete (MADE GROUND)	
	1				
	2				
	3			Brown to dark brown, slightly silty gravelly fine to coarse SAND. Gravel fine to medium subangular to subrounded sandstone and limestone. (River Terrace Deposits)	
	4	Bentonite			
	5			Grey to brownish slightly clayey sandy SILT (Alluvium)	
	6				
	7				
	8				
BH1	9				
	10				
	11				
	12	Gravel pack			
	13				
	14				
	15				
	16	Collapse		Terminated 16mbgl	

BH2 PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 03/10/2022	**Grid Reference:** ST 10420 86911
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH** 15.0mbgl	**Drilling Rig** Rotary open-hole
CLIENT PB Gelatins / PB Leiner	**SCREEN** 6m slotted	**Total Depth** 15.0mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER** 4.40mbgl	

COMMENTS

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Well Diagram	Graphic Log	Material Description	Additional Observations
	0			Greyish brown to brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete (MADE GROUND)	
	1				
	2				
	3			Brown to dark brown, slightly silty gravelly fine to coarse SAND. Gravel fine to medium subangular to subrounded sandstone and limestone. (River Terrace Deposits)	
	4	Bentonite			
	5				
	6			Grey to brownish slightly clayey sandy SILT (Alluvium)	
	7				
	8				
BH2	9				
	10				
	11				
	12	Gravel pack			
	13				
	14				
	15			Terminated 15mbgl	

BH3 PBGE.01.06

PROJECT NUMBER PBGE.01.06
PROJECT NAME PBGE Site Investigation
CLIENT PB Gelatins / PB Leiner
ADDRESS Pontypridd, CF37 5SQ

DRILLING DATE 04/10/2022
INSTALL DEPTH 15.0mbgl
SCREEN 6m slotted
GROUNDWATER 4.40mbgl

Grid Reference: ST 10471 86985
Drilling Rig Rotary open-hole
Total Depth 15.0mbgl

COMMENTS

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Well Diagram	Graphic Log	Material Description	Additional Observations
	0			Greyish brown to brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete (MADE GROUND)	
	3	Bentonite		Dark yellowish brown, slightly silty gravelly fine to coarse SAND. Gravel fine to medium subangular to subrounded sandstone and limestone. (River Terrace Deposits)	
	5			Grey to brownish slightly clayey sandy SILT (Alluvium)	
BH3	9				
	12	Gravel pack			
	15			Terminated 15mbgl	

WS1 PBGE.01.06

PROJECT NUMBER PBGE.01.06
PROJECT NAME PBGE Site Investigation
CLIENT PB Gelatins / PB Leiner
ADDRESS Pontypridd, CF37 5SQ

DRILLING DATE 05/10/2022
INSTALL DEPTH 2.0mbgl
SCREEN 1.5m slotted
GROUNDWATER Dry

Grid Reference: ST 10094 86765
Drilling Rig Dando Terrier - Window Sampling
Total Depth 2.0mbgl

COMMENTS

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Well Diagram	Graphic Log	Material Description	Additional Observations
WS1a WS1b	0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2	Bentonite Gravel pack		Greyish brown to brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete (MADE GROUND)	
	2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8			Refusal at 2.0mbgl	

WS3 PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 05/10/2022	**Grid Reference:** ST 10052 86839
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH**	**Drilling Rig** Hand-Dug-Pit
CLIENT PB Gelatins / PB Leiner	**SCREEN**	**Total Depth** 0.2mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER**	

COMMENTS Hand Dug Pit

LOGGED BY FT
CHECKED BY SB

Samples	Sample Type	Depth (m)	Graphic Log	Material Description	Additional Observations
WS3a	soil	0.1		Greyish brown to brown, slightly silty gravelly fine to coarse SAND. Gravel is angular to sub-rounded, fine to coarse, of brick, limestone, sandstone and concrete (MADE GROUND).	Hand-Dug-Pit terminated on flat concrete. Unknown thickness.
		0.2		Terminated at 0.2mbgl	
		0.3			
		0.4			
		0.5			
		0.6			
		0.7			
		0.8			
		0.9			
		1			
		1.1			
		1.2			
		1.3			
		1.4			
		1.5			
		1.6			
		1.7			
		1.8			
		1.9			

WS4 PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 04/10/2022	**Grid Reference:** ST 10212 86829
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH** -	**Drilling Rig** Dando Terrier - Window Sampling
CLIENT PB Gelatins / PB Leiner	**SCREEN** -	**Total Depth** 1.9mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER** Dry	

COMMENTS Off-Site borehole

LOGGED BY FT
CHECKED BY SB

Samples	Sample Type	Depth (m)	Graphic Log	Material Description	Additional Observations
		0.2		Brown slightly silty, clayey medium sand with rootlets and occasional fine to medium gravel of Limestone (Topsoil)	
WS4a	soil	0.4			
		0.6		Yellowish-brown, slightly clayey silty SAND with occasional rounded gravel inclusions. Gravel of Sandstone (River Terrace Deposits).	
		0.8			
		1			
WS4b	soil	1.2			
		1.4			
		1.6			
		1.8			
		2		Refusal at 1.9mbgl	
		2.2			
		2.4			
		2.6			
		2.8			

WS5 PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 04/10/2022	**Grid Reference:** ST 10212 86829
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH** -	**Drilling Rig** Hand-Dug-Pit
CLIENT PB Gelatins / PB Leiner	**SCREEN** -	**Total Depth** 1.2mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER** Dry	

COMMENTS Off-Site borehole

LOGGED BY FT
CHECKED BY SB

Samples	Sample Type	Depth (m)	Graphic Log	Material Description	Additional Observations
		0		Brown to yellowish brown, slightly silty, fine to medium sand with occasional rootlets to 0.2mbgl and occasional fine to medium gravel of Limestone and Sandstone (Made Ground)	
WS5a	soil	0.2			
		0.4			
		0.6			
		0.8			
		1			Borehole terminated due to building sand being encountered - potential buried services.
		1.2		Yellowish medium SAND. Sand is angular. (Made Ground)	
				Terminated at 1.2mbgl	
		1.4			
		1.6			
		1.8			
		2			
		2.2			
		2.4			
		2.6			
		2.8			

WS6 PBGE.01.06

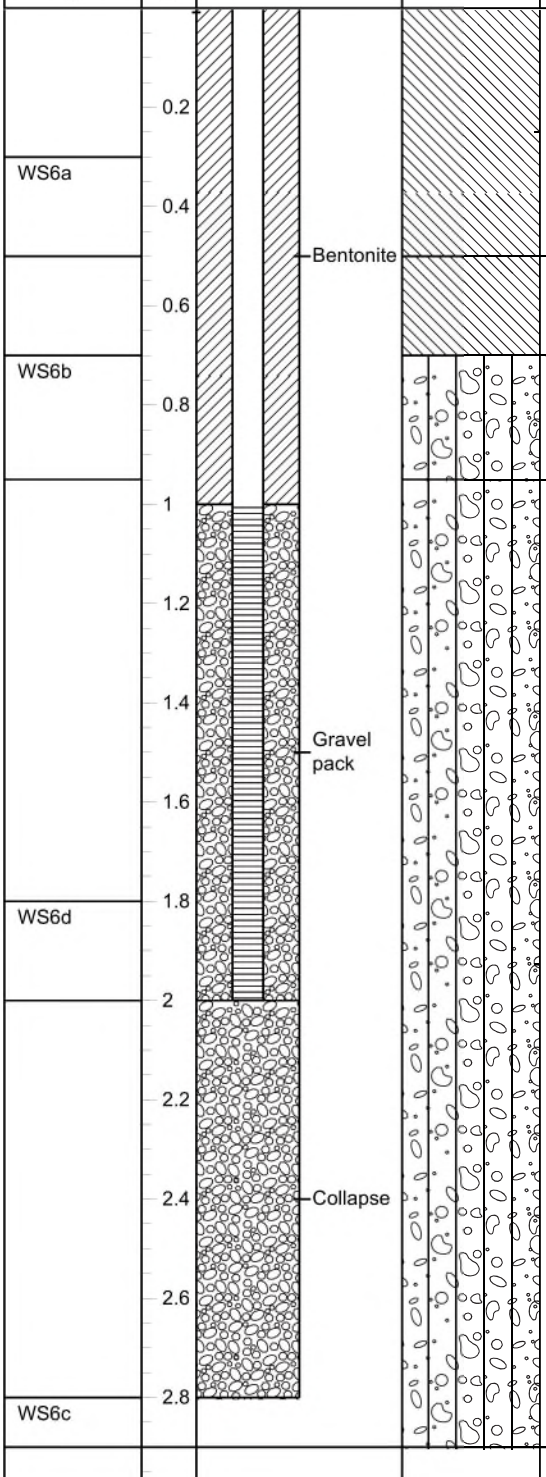
PROJECT NUMBER PBGE.01.06
PROJECT NAME PBGE Site Investigation
CLIENT PB Gelatins / PB Leiner
ADDRESS Pontypridd, CF37 5SQ

DRILLING DATE 04/10/2022
INSTALL DEPTH 2.0mbgl
SCREEN 1m slotted
GROUNDWATER Dry

Grid Reference: ST 10364 86822
Drilling Rig Dando Terrier - Window Sampling
Total Depth 2.9mbgl

COMMENTS Off-site borehole.

LOGGED BY FT
CHECKED BY SB



Material Description	Additional Observations
Brown slightly silty, clayey medium sand with rootlets (topsoil) and occasional fine to medium gravel of Limestone (Made Ground)	
Yellowish brown, silty sand with cobble sized gravel fragments of concrete, sub-angular Limestone. (Made Ground)	
Yellowish brown silty, fine to medium sand and gravel. Gravel is sub-rounded to rounded sandstone (River Terrace Deposits) Blackish brown organic layer, plant matter and silty sand with occasional sub-angular gravel at 0.95 - 1.0mbgl	
Yellowish-brown, firm becoming loose at 1.5mbgl, slightly clayey silty sand with occasional rounded gravel inclusions. Gravel of Sandstone (River Terrace Deposits). Refusal on cobble sized fragment.	Collapse - casing could not be used due to cobble sized concrete fragments in Made Ground
Refusal at 2.9mbgl	

WS7 PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 03/10/2022	**Grid Reference:** ST 10405 86861
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH** -	**Drilling Rig** Dando Terrier - Window Sampling
CLIENT PB Gelatins / PB Leiner	**SCREEN** -	**Total Depth** 2.5mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER** Dry	

COMMENTS Off-Site borehole

LOGGED BY FT
CHECKED BY SB

Samples	Sample Type	Depth (m)	Graphic Log	Material Description	Additional Observations
		0.2		Reddish brown, slightly silty, sandy Clay with gravel or red-brick, concrete and sub-angular limestone. (Made Ground)	
WS7a	soil	0.4			
		0.6			
		0.8			
		1		Red brick fragments 1.0 - 1.3mbgl	
		1.2			
		1.4		Yellowish-brown, slightly clayey silty SAND with occasional rounded gravel inclusions. Gravel of Sandstone, increasing gravel content to base (River Terrace Deposits).	
		1.6			
		1.8			
WS4b	soil	2			
		2.2			
		2.4			
		2.6		Refusal at 2.5mbgl	
		2.8			

DYNAMIC SAMPLING EXPLORATORY HOLE LOG

JACKSON GEO SERVICES

Exploratory Hole Progress by Time			
Date and Time	Depth	Casing Depth	Water Depth
03/10/2022 10:35	0.00		
03/10/2022 11:00	2.80		Wet

Exploratory Hole: WS8

Sheet 1 of 1

Project	PB Liener, Treforest	**Equipment**	Competitor Rig	**Scale**	1:50
Client	ECL	**Method**	WLS	**Drilled**	SGT
Project No	G22066 **Level**	**Inclination**	90 degrees	**Logged**	AP
Easting	**Northing**	**SPT Hammer Serial Number**		**Checked**	SSe
Termination Reason	Refusal	**SPT Hammer Energy Ratio**	%		

Samples	Sampling and Testing Depths	Insitu Testing and Depth Related Remarks	Depth (Thickness)	Level (mAOD)	Legend	Description
			0.00			
			(0.30)			
WS8a	0.35		0.30			Reddish brown slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to subrounded fine to coarse of brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete. (MADE GROUND)
			(0.60)			Black slightly gravelly fine to coarse SAND predominantly of ash. Gravel is subangular to subrounded of sandstone and limestone. Rare wood fragments (up to 15mm x 20mm) and rare plastic. Slight organic odour. (MADE GROUND)
			0.90			
			(0.10)			Very soft reddish brown slightly gravelly sandy CLAY. Gravel is subangular to subrounded of sandstone. Sand is fine to coarse. (ALLUVIUM)
			1.00			
WS8b	1.30		(0.90)			Soft greenish grey slightly sandy SILT. Sand is fine. (ALLUVIUM)
			1.90			
			(0.90)			Brownish grey gravelly fine to coarse SAND. Gravel is subrounded to rounded fine to coarse of sandstone. (ALLUVIUM)
						End of Exploratory Hole at 2.80m

Scale: 0.50, 1.00, 1.50, 2.00, 2.50, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 7.50, 8.00, 8.50, 9.00, 9.50, 10.00

Backfill

Dynamic Sampling Run Details

Test No.	Depth Top	Depth Base	Diameter	Duration (hh:mm:ss)	Recovery
1	0.45	1.00	102mm	00:15:00	100%
2	1.00	2.00	87mm	00:10:00	100%
3	2.00	2.80	77mm	00:10:00	100%

Hole Diameter

Depth Base	Diameter
1.00	116mm
2.00	102mm
2.80	77mm

Casing Diameter

Depth Base	Diameter

Water Strikes

Date and Time	Casing	Strike	Sealed	Rising to	Time	Remarks
03/10/2022 11:20		0.45		0.45	20mins	Seepage
03/10/2022 11:50		2.50		2.50	20mins	

Remarks

Printed 03/10/2022 15:08

EXPLORATORY HOLE PHOTOGRAPHS

Remarks	Exploratory Hole
	WS8

Project	PB Liener, Treforest	**Easting**		**Equipment**	Competitor Rig	Sheet 1 of 1
Client	ECL	**Northing**		**Method**	WLS	
Project No	G22066	**Level**		**Termination Reason**	Refusal	

WS10 0.45 m to 1.00 m

WS9 PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 03/10/2022	**Grid Reference:** ST 10425 86896
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH** -	**Drilling Rig** Hand-Dug-Pit
CLIENT PB Gelatins / PB Leiner	**SCREEN** -	**Total Depth** 1.9mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER** Dry	

COMMENTS Off-Site borehole

LOGGED BY FT
CHECKED BY SB

Samples	Sample Type	Depth (m)	Graphic Log	Material Description	Additional Observations
		0.2		Reddish brown slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded fine to coarse of brick, limestone, sandstone and concrete. Cobbles are angular to sub-angular of concrete. (MADE GROUND)	
WS9a	soil	0.4			
		0.6			
		0.8		Yellowish brown very fine to fine silty sand with infrequent rounded gravel of sandstone. Gravel is coarse to cobble sized fragments. (River Terrace Deposits)	
WS9b		1			
		1.2			
		1.4			
		1.6			
		1.8			
		2		Refusal at 1.9mbgl on cobble of sandstone.	
		2.2			
		2.4			
		2.6			
		2.8			

WS10 PBGE.01.06

PROJECT NUMBER PBGE.01.06
PROJECT NAME PBGE Site Investigation
CLIENT PB Gelatins / PB Leiner
ADDRESS Pontypridd, CF37 5SQ

DRILLING DATE 03/10/2022
INSTALL DEPTH -
SCREEN -
GROUNDWATER Dry

Grid Reference: ST 10465 87000
Drilling Rig Hand-Dug-Pit
Total Depth 3.5mbgl

COMMENTS Off-Site borehole

LOGGED BY FT
CHECKED BY SB

Samples	Sample Type	Depth (m)	Graphic Log	Material Description	Additional Observations
		0.2		Greyish brown slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded fine to coarse of brick, limestone, sandstone and concrete. Cobbles are angular to sub-angular of concrete. (MADE GROUND)	
WS10a	soil	0.4			
		0.6			
		0.8			
		1			
		1.2			
		1.4			
		1.6		Yellowish brown to brown silty fine sand with medium to coarse sub-rounded gravel of limestone and sandstone. Gravel is stiff with increasing silty sand content to base. (River Terrace Deposits)	
		1.8			
		2		Light brown silty, fine to medium sand with occasional rub-rounded and rounded gravel of sandstone.	
		2.2			
		2.4			
		2.6			
WS10b		2.8			
		3			
		3.2			
		3.4			
		3.6		Refusal at 3.5mbgl on cobble of sandstone.	
		3.8			

WSR PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 05/10/2022	**Grid Reference:** ST 10052 86839
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH**	**Drilling Rig** Hand-Dug-Pit
CLIENT PB Gelatins / PB Leiner	**SCREEN**	**Total Depth** 0.85mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER**	

COMMENTS Repeat borehole - Hand Dug Pit

LOGGED BY FT
CHECKED BY SB

Samples	Sample Type	Depth (m)	Graphic Log	Material Description	Additional Observations
		0.1		Greyish brown to brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to sub-angular of concrete (MADE GROUND)	Hand-Dug pit terminated due to presence of concrete at base.
		0.2			
		0.3			
		0.4			
WS6a	soil	0.5			
		0.6			
		0.7			
		0.8			
		0.9		Terminated at 0.85mbgl	
		1			
		1.1			
		1.2			
		1.3			
		1.4			
		1.5			
		1.6			
		1.7			
		1.8			
		1.9			