Report No. BC/MB/07.24.05.

Geo-Environmental Report: Land at Tyn y Caeau, Margam Road, Port Talbot.

Prepared on behalf of:

Western Bio-Energy Ltd

By:

BLANDFORD CONSULTING

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Geo-Environmental Report: Land at Tyn-y-Caeau, Margam Road, Port Talbot.

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Appendices

Appendix I: ***Extracts of Margam Borehole Graphic Logs.***

Appendix II: ***Copy of The Coal Authority's Mining Report, reference no. 51002276499001.***

Appendix III: ***Copy of Public Health England's Radon Report.***

Geo-Environmental Report: Land at Tyn-y-Caeau, Margam Road, Port Talbot.

1 Introduction

This report has been prepared on behalf of our clients:

Western Bio-Energy Ltd.,
Longlands Lane,
Margam,
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and relates to a parcel of land at Tyn-y-Caeau, Margam, Port Talbot, where it is proposed to erect a data centre. This report discusses the geology, mining history and environmental setting of the Site as they may affect the construction of the data centre, and thereby assesses the environmental and mining risk to the proposed development.

The following sources of data were used in the compilation of this report:

i) *The findings of the 'Coal Mining Risk Assessment: Land at Tyn y Caeau, Margam, ref. no. BC/MB/05.20.03, published by Blandford Consulting;*

ii) *The findings of Envirocheck Report 324122328_1_1* and

iii) *the archive records of Blandford Consulting.*

The findings of this report are necessarily based upon the data used in its compilation and may be amended in the future in the light of additional material information. The report must only be used in its entirety for its stated purpose.

/Cont....

2 Brief Description of the Site

The plot of land that is the subject of this report, 'the Site' is presently a small holding set amongst agricultural enclosures (see Figure 1 and *General Location Plan, drawing no. BC/MB/07.24.05.01*). The land lying to the west of the Site is occupied with industrial developments and with the Margam Steel Works. Immediately to the east of the Site is a slip road from the M4 Motorway and beyond that the Motorway itself, beyond that is Margam Abbey Park set in an agricultural and forested landscape. The Site is irregular in outline and occupies an area of approximately 1.6 hectares, the centre of the Site is at an elevation of approximately 15m aod.

Figure 1
Aerial View of the Site



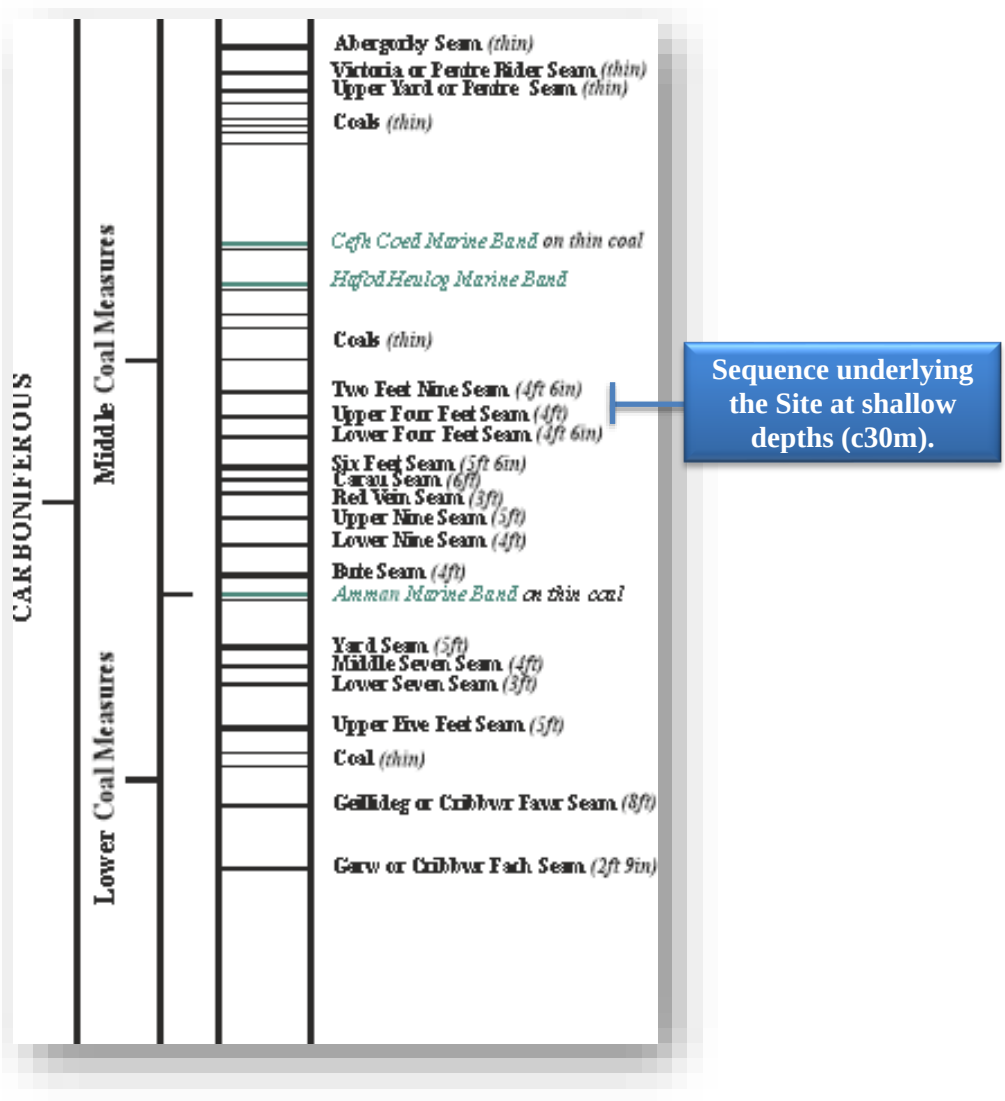
3 Geology of the Site

The Site is situated at the southern margins of the former South Wales Coalfield and is underlain at shallow depths by strata assigned to the Middle Coal Measures, which are of Upper

/Cont....

Carboniferous age. The most recently published geological sheet at the 1:10,560 scale (Sheet SS 78 NE) shows the conjectural outcrop of the Two Feet Nine Seam to pass through the Site and the conjectural outcrop of the Upper Four Feet Seam to pass through the south-west corner of the Site (see *Geology Plan, drawing no. BC/MB/07.24.05.02*). A number of other conjectural outcrops are present to the south of the Site, all the outcrops have an east-south-easterly trend.

Figure 2
Indicative Stratigraphic Column
(After BGS SS 79 NE)



The regional dip of the coal measures is northerly such that the published geological sheet indicates that the Two Feet Nine and Upper Four Feet Seams variously underlie parts of the Site

/Cont....

at shallow depths. The Lower Four Feet is estimated to be at a depth below the Site that is greater than 30m. Borehole records held by The British Geological Survey (BGS) include those of two deep boreholes drilled close to the south-west corner of the Site, Margam 1 and Morfa 1. Each of the two boreholes prove that there are no coal seams at shallow depths that are thick enough to have supported underground mining operations (see Appendix I).

The coal measures of the South Wales Coalfield have been affected by large faults. These large faults have a slightly sinuous trace at the surface and, in the Margam area, an average trend towards the north-west. The Site is not affected by any such faulting. The coal measures in the area have also been affected by large overthrusts and lag faults having a generally south-easterly trend; the Site is not affected by any of these faults. The published geological sheet indicates that the coal measures are overlain with locally derived soils at the northern corner of the Site and otherwise by deposits of sand and gravel; we have no detailed information relating to the engineering properties or thickness of the soils at the Site.

The published geological sheet also shows that the Site is not affected by landslip conditions.

4 Hydrology and Hydrogeology

4.1 Hydrology

There are no streams or land drains crossing the Site and no bodies of standing water on the Site.

4.2 Hydrogeology

Groundwater Protection Policy (GP3) and the Water Framework Directive (WFD) Maps are managed by Natural Resources Wales (NRW) and an inspection of these maps indicated the following:

/Cont....

- The Site is at not at risk from flooding from rivers or from the sea (see *Flood Risk Plan: Rivers/Sea, drawing no. BC/MB/07.24.05.04*).
- The Site is at not at risk from flooding from surface waters (see *Flood Risk Plan: Surface Water, drawing no. BC/MB/07.24.05.05*).
- The Superficial Aquifer designation for the Site is High Vulnerability Secondary A.
- The Bedrock Aquifer designation for the Site is High Vulnerability Secondary A.
- The Site is not within a designated Drinking Water Safeguard Zone.
- The Site is not within a Groundwater Source Protection Zone.
- There are no designated Water Abstraction Licences within influencing distance.

5 History of the Site

5.1 1877 Edition

A review of the history of the Site has been undertaken by means of research of the various editions of Ordnance Survey maps. The 1877 Edition shows the Site to have been an agricultural enclosure and farmhouse set within a rural landscape with woodland to the east (see *Extract from Ordnance Survey Sheet 1877, drawing no. BC/MB/07.24.05.06*.

5.2 1885 Edition

This Edition shows the Site itself to have undergone no change since the previous edition and confirms the wider rural landscape within which the Site is situated (see *Extract from Ordnance Survey Sheet 1885, drawing no. BC/MB/07.24.05.07*). Margam Abbey is evident 650m east of the Site and the only industrial development is the Great Western Railway 700m south-west of the Site.

/Cont....

5.3 1918 Edition

This Edition shows the Site and the immediately surrounding area to have undergone no change since the previous edition (see *Extract from Ordnance Survey Sheet 1918, drawing no. BC/MB/07.24.05.08*).

5.4 1953 - 1964 Edition

This Edition shows the Site and the immediately surrounding area to have undergone no change since the previous edition (see *Extract from Ordnance Survey Sheet 1953 - 1964, drawing no. BC/MB/07.24.05.09*).

5.5 1968 - 1971 Edition

This Edition shows the Site and the immediately surrounding area to have undergone no significant change since the previous edition (see *Extract from Ordnance Survey Sheet 1968 - 1971, drawing no. BC/MB/07.24.05.10*). In the wider area Margam Steelworks had been developed 750m south-west of the Site together with unspecified 'works' 300m south-west of the Site.

5.6 1979 Edition

This Edition shows the Site itself to have undergone no change since the previous edition (see *Extract from Ordnance Survey Sheet 1979, drawing no. BC/MB/07.24.05.11*). The north-eastern boundary of the Site is with Margam Road (A48(T)), immediately beyond which the M4 Motorway had been constructed.

5.7 1993 Edition

This Edition shows the Site and the immediately surrounding area to have undergone no significant change since the previous edition (see *Extract from Ordnance Survey Sheet 1993, drawing no. BC/MB/07.24.05.12*).

/Cont....

5.8 Present

The Site itself is unchanged from the previous edition and is occupied by an enclosure under grass with a small cluster of buildings, presumably the former farmhouse, with a number of trees mainly located around the perimeter of the Site (see *Aerial Image, drawing no. BC/MB/07.24.05.13*).

The expansive Margam Steelworks is present to the west of the Site and is approximately 780m south-west of the Site at its closest. The Margam Green Energy Plant is present approximately 175m west of the Site, the Western Green Energy Site is approximately 200m south-west of the Site, and the British Oxygen Company (BOC) Gas site is present approximately 360m south-west of the Site

6 Environmental Issues

No part of the Site lies within an area designated as having a sensitive land use, including designated landscape areas (see *Environmental Review Plan, drawing no. BC/MB/07.24.05.14*).

There are no Control of Major Incident Sites (COMAH), explosive sites, Notification of Installations Handling Hazardous Substances status (NIHHS) or planning hazardous substance consents within 250m of the Site. There are also no sites of historic interest/importance within a 250m radius of the Site.

7 Mining History

The area has been subject to fairly extensive coal mining operations dating back to the nineteenth century. Coal seams were accessed by adits driven into the mining horizons near their outcrops supplemented by air shafts; larger shafts gave access to deeper lying coal seams. Mining in the immediate area around the Site was prosecuted from deep mines. The Coal Authority's interactive map also shows that there are no recorded workings underlying the Site, shallow or otherwise, and no 'probable' shallow mine workings in the vicinity of the Site (see Figure 3).

/Cont....

There are no recorded mine entries within the confines of the Site or within 20m of it, and no records of any nearby disused adits that might have provided access to underground workings that could extend beneath the Site. A search of historic Ordnance Survey Sheets identified that are no surface mining features in the vicinity of the Site (see *Extracts from Ordnance Survey Plans, drawing nos. BC/MB/07.24.05.06 to BC/MB/07.24.05.12*). The risk of an unrecorded mine entry being present within the confines of the Site is considered to be low but cannot be completely ruled out given the mining history of the general area.

There are no active coal mines in the locality, either deep mines or opencast, that would affect the structural integrity of the proposed development and the Site has not previously been part of an opencast coal site.

There are no recorded opencast sites, past or present, within 500m of the Site.

8 Radon Gas

Government guidelines recommend that the potential for Radon gas should be assessed for all new developments; the advice has been implemented by obtaining from Public Health England a Radon report for Tyn y Caeau; the report identifies that the Site is not in a Radon affected area.

9 Risk Assessment – Environmental, Tier 1

9.1 Conceptual Model, Environmental

A conceptual model (see chart below) was developed in order to provide a basis for the Risk Assessment; it was based on the source-pathway-receptor approach.

There are no recorded industrial uses of the Site that could present a source of contamination of the soils there.

/Cont....

Figure 3
Print-out of The Coal Authority's Interactive Map
(Accessed 23rd July 2024)



Key to Symbols:

Recorded, disused mine entries, red x.
Recorded shallow old workings shaded blue.
Probable shallow old workings shaded purple.
Opencast mining areas shaded grey.

/Cont....

Conceptual Model

Source	Pathway/Linkage	Receptor	Probability & Consequence	Risk
Soil No identified source	Ingestion/ Dermal Contact	Future on-site users (commercial)	Unlikely/negligible	Very Low
		Construction workers	Unlikely/negligible	Very Low Assumes the use of PPE
		Maintenance workers		
		Adjacent commercial land users	Unlikely/negligible	Very Low
	Permeation	Subsurface plastic water pipes	Unlikely/negligible	Very Low
	Vertical Groundwater Migration	Minor aquifer	Unlikely/negligible	Very Low
Gas No identified source	Horizontal movement through bedrock/soils	Future on-site users (commercial)	Unlikely/negligible	Very Low

9.2 Hydrology and Hydrogeology

The superficial deposits on the Site are classed as high vulnerability Secondary A and the bedrock high vulnerability Secondary A aquifer. The Boulder Clay that is present across the Site will inhibit the downward migration of rainwater.

9.3 Contaminated Soils

There are no identified sources of potential contamination that could present a risk to the users of this development; therefore it is considered that no further action needs to be taken in this respect. If, however, when works commence on the Site, conditions are found to differ from those discussed in this report, this Practice must be informed immediately so that the conceptual model can be updated and necessary action may be taken, if required.

/Cont....

9.4 Landfill Gases

There are no identified potential sources of ground gas; it is therefore considered that no further action needs to be taken in this respect.

9.5 Radon Gas

An assessment of the risk from Radon gas has been carried out by obtaining from Public Health England a Radon report. The report identifies the Site as being within an area that is not affected by Radon; the appropriate response for building control purposes is NONE.

9.6 Mine Gas

An assessment of the risk from mine gases has been carried out based on an assessment of geological and mining data that is available in the public domain and broadly following the guidance offered in CL:AIRE. The CL:AIRE document offers useful advice based on the views of the authors, although it does not have the benefit of input from The Coal Authority and does not specifically address in detail the effect of coals being of low rank such as are present in South Wales.

When coal is mined methane is released and may accumulate in the voids left by the mining operations, other mine gases (carbon dioxide, carbon monoxide and depleted oxygen) may subsequently accumulate in mining voids as a result of various chemical processes. These gases may later vent to atmosphere or be displaced by mine water flooding the mining voids and forced to the surface. Mine gases may, in certain circumstances, accumulate within dwellings and pose a risk of asphyxiation, fire or explosion.

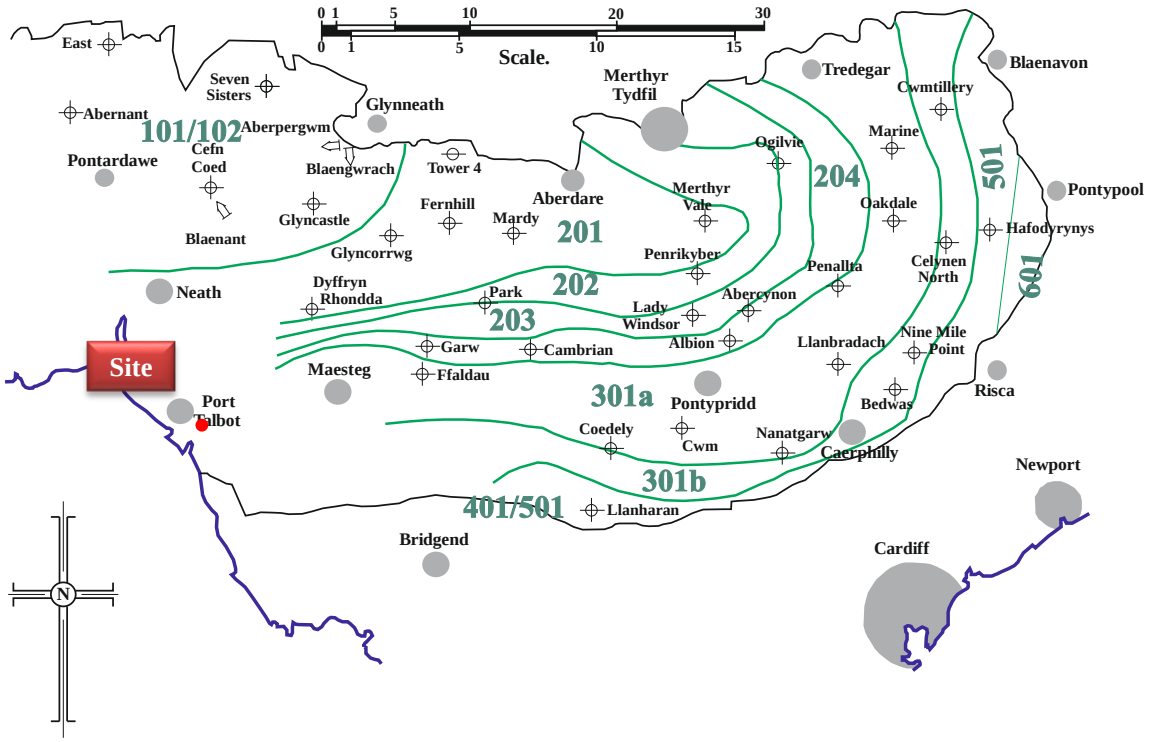
The principal release of methane occurs when the coal is cut with a decreasing quantity of methane venting over time. The process declines over a number of decades and tends to have ceased within 50 years of the coal being cut. The coal seams present across the South Wales Coalfield have a poorly developed cleat that inhibits the lateral passage of methane gas through the body of the coal and may be a contributing factor to the absence of mine gases noted in site investigations carried out across South Wales.

/Cont....

Carbon monoxide may accumulate in mine workings as a result of spontaneous combustion that may be triggered, for example, by the use of air flush when drilling boreholes into old workings. The Coal Authority has published a list of coal seams that are prone to spontaneous combustion, none of the coal seams found on the South Wales Coalfield appear on the list.

A number of site investigations of old workings across South Wales and dating back to the mid to late twentieth century have shown that there is little risk from mine gases, although some risk may be present. This may be as a result of the nature of the coal seams or because the shallow old workings have vented most of the mine gases to atmosphere or is as a result of the combination of the two.

Figure 4
The Variation of Coal Rank Across The South Wales Coalfield.
- Based on the Nine Feet Seam -
(Blandford 1986.)



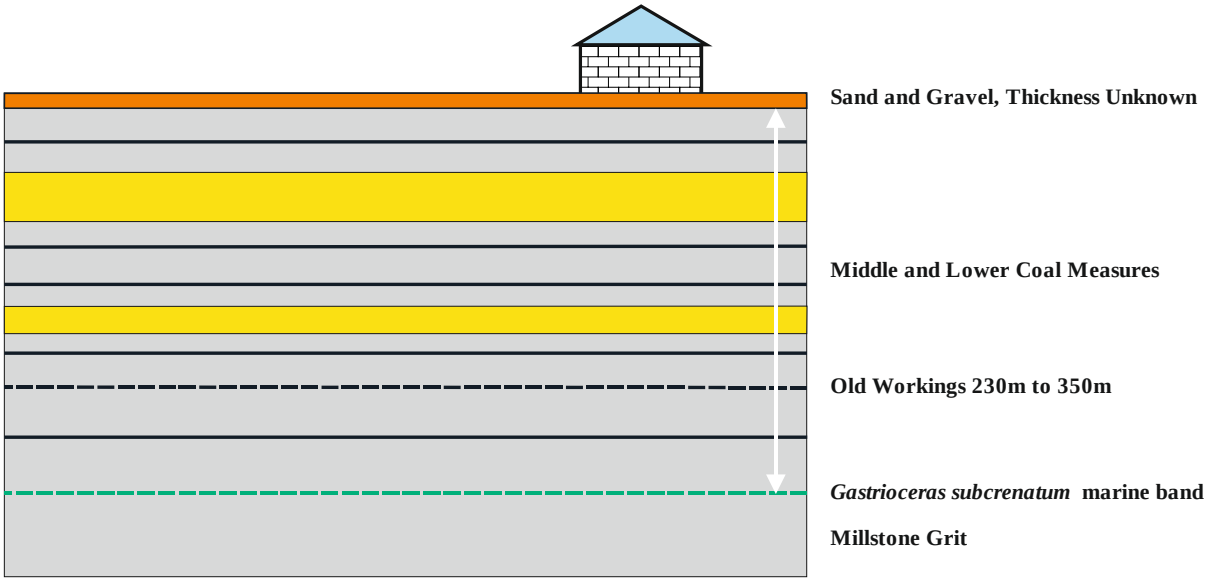
The Site is situated towards the southern margins of the South Wales Coalfield where the coal seams underlying the Site are moderately low coal rank (301a/301b) coking coals,

/Cont....

such coal seams offer a lower risk of generating a number of mine gases as a result of their lower volatile content (see Figure 4).

A conceptual model has been prepared for the development (see Figure 5). The published geological sheet identifies that the superficial deposits across the locality are sand and gravel deposits, the thickness of the deposits is not known.

Figure 5
Conceptual Model



The Coal Authority's interactive on-line map identifies that there are no shallow nor probable workings affecting the Site.

The Coal Authority's mining report identifies that there are no shallow spine roads and no records of any past mining operations affecting the Site.

There are no old workings that could be in hydraulic continuity with coal seams that are generating acid mine water.

There have been no recorded mine gas incidents within 500m of the Site.

/Cont....

The Coal Authority's mining report identifies that there are no mine entries recorded within 100m of the Site.

There are no operating collieries in the area.

There are no recorded opencast sites within 500m of the Site.

There are no faults affecting the Site and no workings that might create a preferential pathway allowing mine gases to reach the surface.

There is a low risk of mine gases affecting the development, a categorisation that requires no further investigation.

10 Discussion and Recommendations

There is no recognised recorded risk to the proposed development arising as a result of the mining history of the area.

The risk of an unrecorded mine entry being present within the confines of the Site is considered to be low but cannot be completely ruled out given the mining history of the general area. All excavations on the Site should be carefully monitored and if any unusual features are observed the excavations must be stopped and advice sought from a Consultant Geologist or from The Coal Authority.

There are no recorded industrial uses of the Site or within 250m of the Site that could present a source of contamination of the soils there. No further study is required in this respect.

11 Qualifications of Authors of the Report

Dr Malcolm Blandford is a Consultant Geologist and Fellow of the Geological Society of London and has over 40 years' experience of studying the geology of and mining operations across South Wales. Dr Blandford worked in the coal mining industry for 16 years before entering private

/Cont....

practice where, amongst other matters, he was responsible for the exploration for opencast sites, colliery extensions and proposed new collieries, for assessing methane emissions from coal seams, methane transmission through strata and the potential for in situ coal seam combustion. Dr Blandford has advised on Coal Bed Methane licence applications and has extensive experience of exploration practice, of interpreting coal mining records, and of assessing the occurrence and movement of coal mine gases. Dr Blandford has variously undertaken and/or project managed a large number of site investigation programmes and environmental assessments.

David Blandford has a Master's degree in Environmental Risk Management and a Batchelor's degree in applied industrial science with particular regard to the environmental implications of the paper making processes. Since graduating with his Master's degree, David Blandford has been employed full time undertaking environmental assessments and the related site investigation works.

David Blandford,
Environmental Consultant.

Dr Malcolm Blandford,
Consultant Geologist.

Report Date: 26th July 2024.

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PLANS

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Geologists Working With The Environment....

**Study on Land at Tyn-y-Caeau,
Margam Road, Port Talbot.**

General Location Plan.

Plan Scale: 1:50,000.



Key to Symbols:

Approximate Position of Site.

Note:

North is at top of plan.

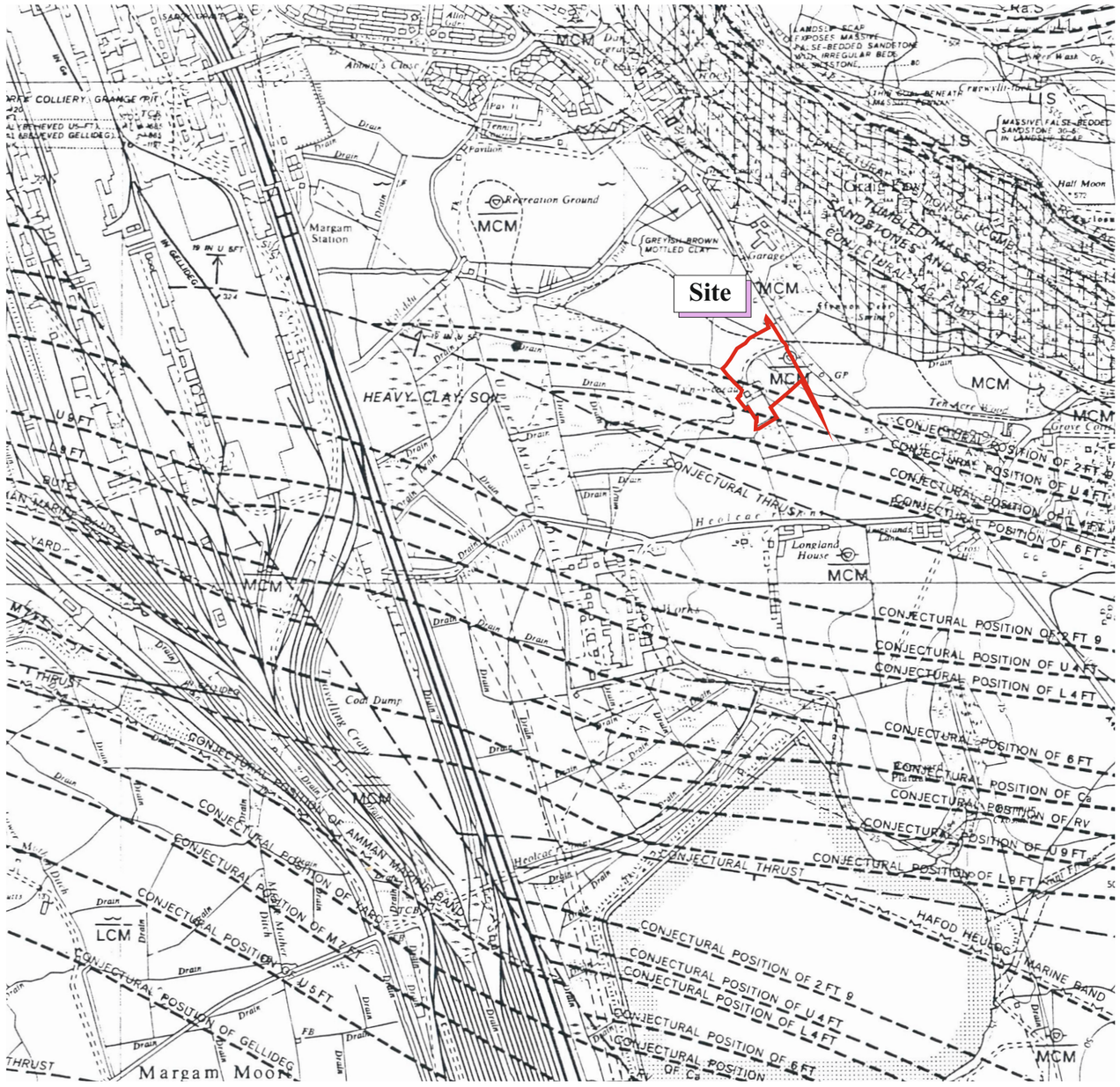
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Study on Land at Tyn-y-Caeau, Margam Road, Port Talbot.

Geology Plan.

Plan Scale: 1:10,560.

Key to Symbols:

Approximate Site Boundary.

Note:

North is at top of plan.

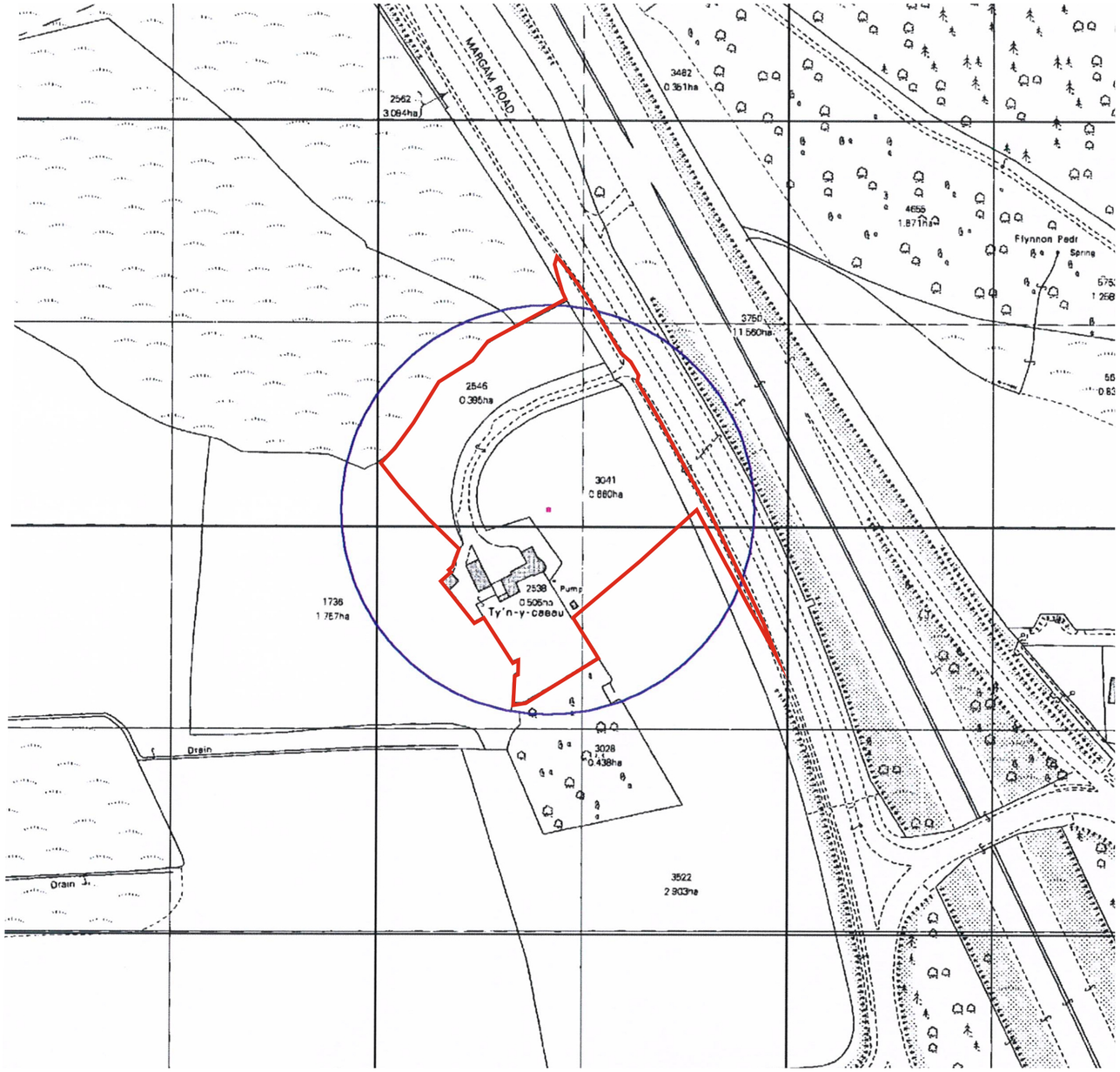
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Study on Land at Tyn-y-Caeau, Margam Road, Port Talbot.

Detailed Location Plan.

Plan Scale: 1:2,500.

Key to Symbols:

Approximate Site Boundary.

Note:

North is at top of plan.

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Study on Land at Tyn-y-Caeau, Margam Road, Port Talbot.

Flood Risk Plan: Rivers/Sea.

Plan Scale: 1:10,000.

Key to Symbols:

- **Approximate Site Boundary.**
- 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

Notes:

North is at top of plan.

Locations are approximate and should not be scaled.

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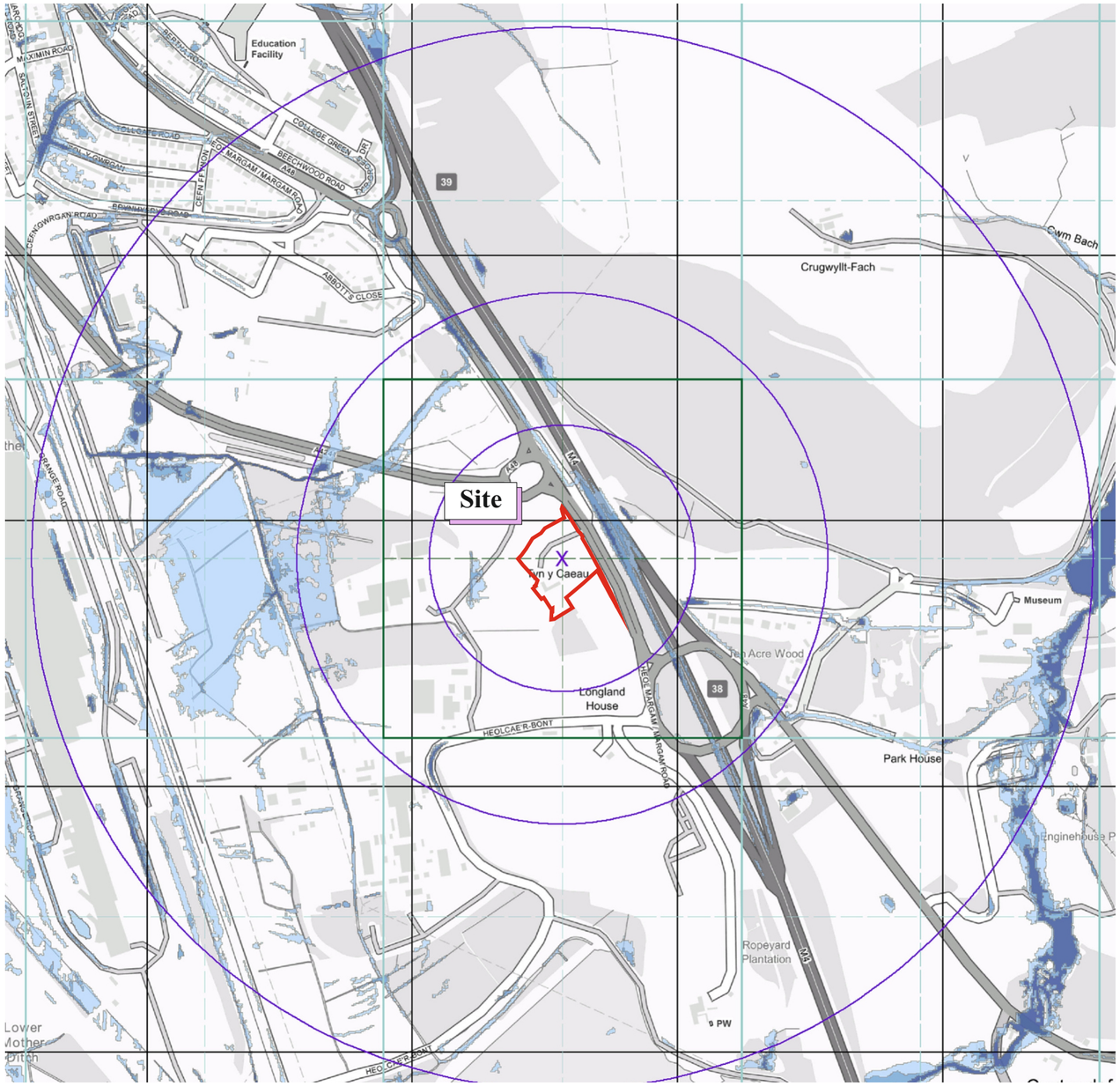
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Study on Land at Tyn-y-Caeau,
Margam Road, Port Talbot.

Flood Risk Plan: Surface Water.

Plan Scale: 1:10,000.



Key to Symbols:

Approximate Site Boundary.

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

Notes:

North is at top of plan.

Locations are approximate and should not be scaled.

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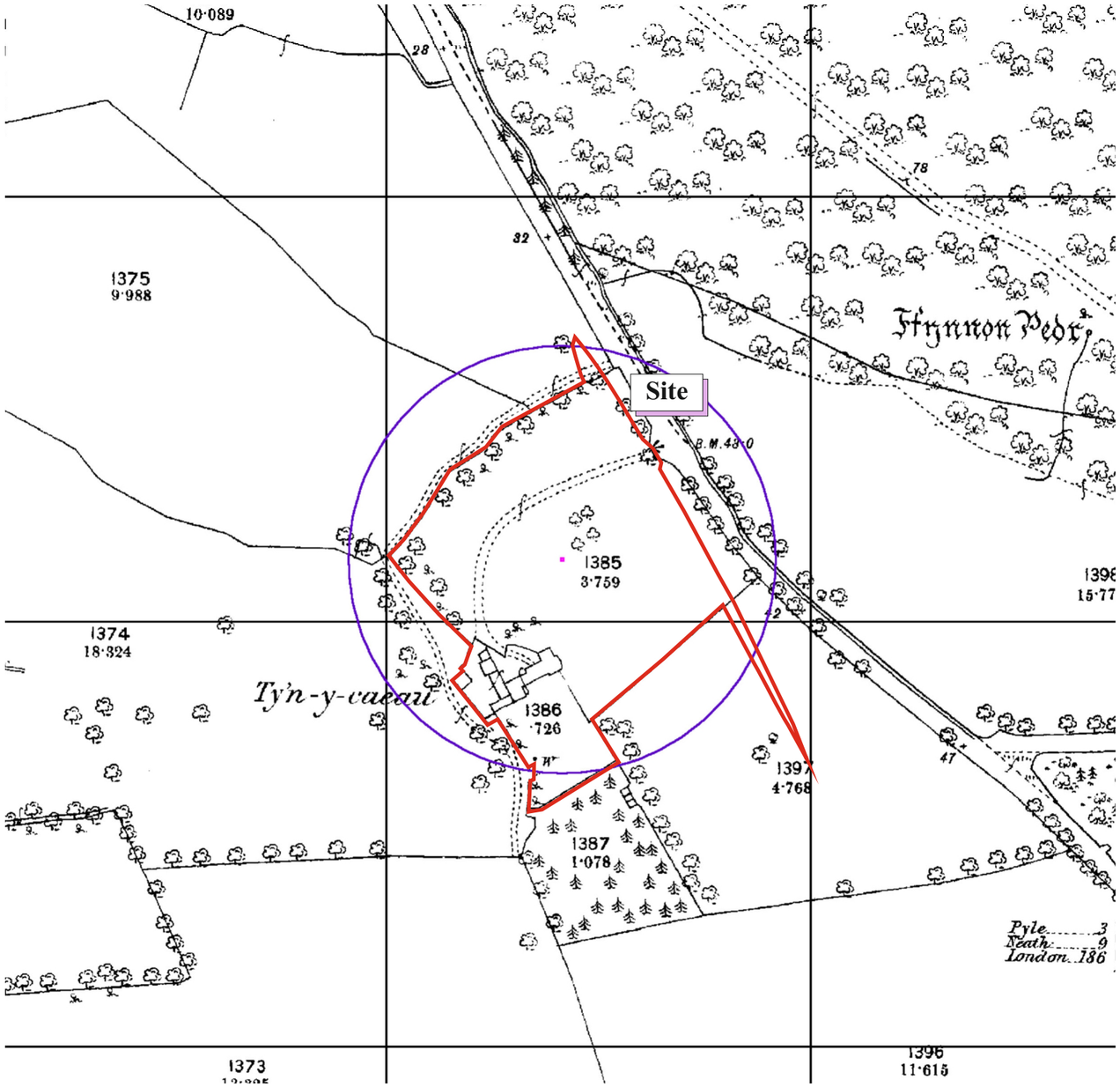
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Drawing No: BC/MB/07.24.05.05.

Study on Land at Tyn-y-Caeau,
Margam Road, Port Talbot.

Extract from Ordnance Survey Plan: 1877 Edition.

Plan Scale: Approx. 1:2,500.



Key to Symbols:

Approximate Site Boundary.

Notes:

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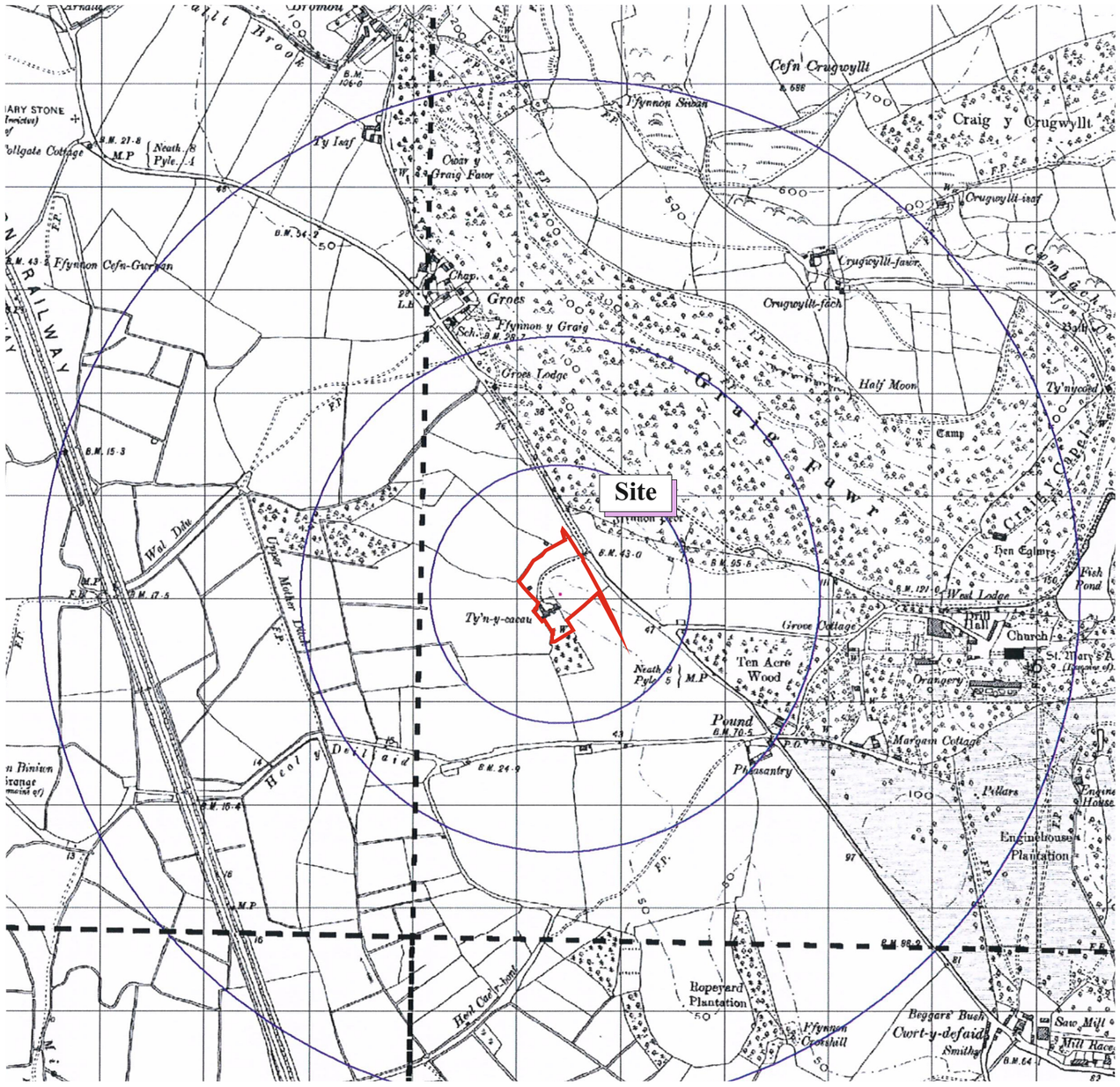
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Drawing No: BC/MB/07.24.05.06.



Study on Land at Tyn-y-Caeau, Margam Road, Port Talbot.

Extract from Ordnance Survey Plan: 1885 Edition.

Plan Scale: Approx. 1:10,000.

Key to Symbols:

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Notes:

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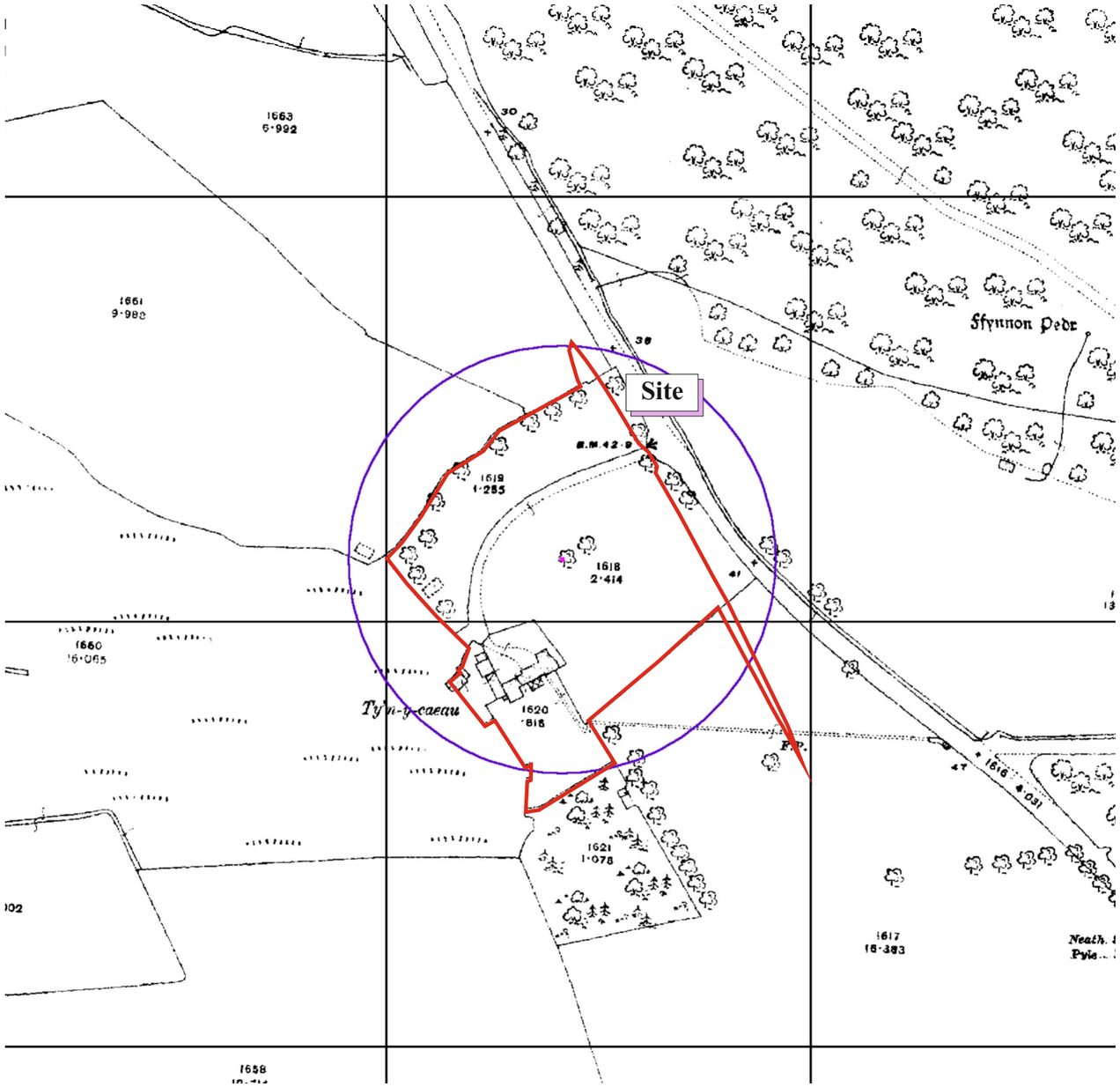
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Drawing No: BC/MB/07.24.05.07.



Study on Land at Tyn-y-Caeau, Margam Road, Port Talbot.

Extract from Ordnance Survey Plan: 1918 Edition.

Plan Scale: Approx. 1:2,500.

Key to Symbols:

Approximate Site Boundary.

Notes:

North is at top of plan.

Locations are approximate and should not be scaled.

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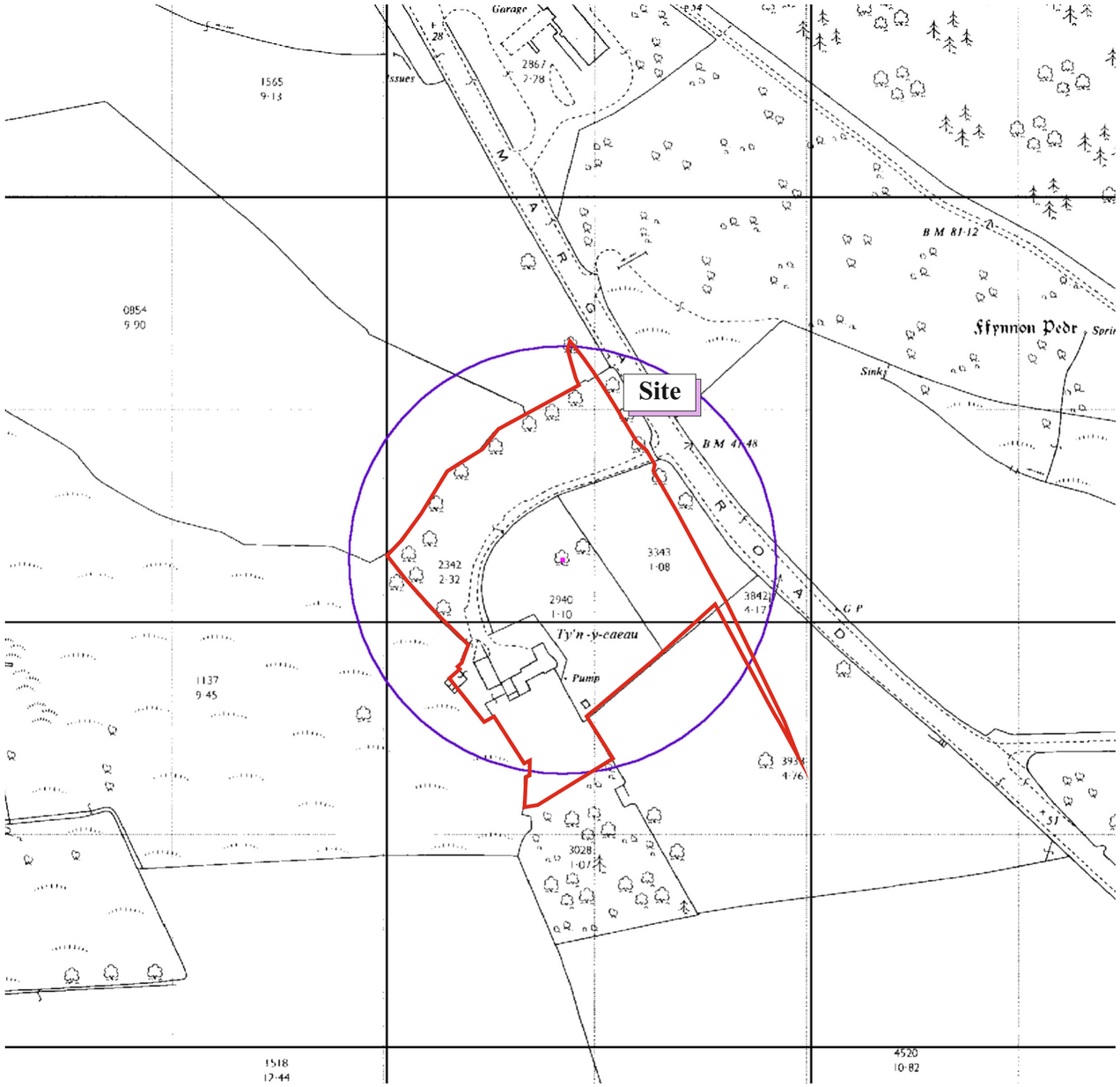
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Drawing No: BC/MB/07.24.05.08.

Study on Land at Tyn-y-Caeau,
Margam Road, Port Talbot.

Extract from Ordnance Survey Plan: 1953-1964 Edition.

Plan Scale: Approx. 1:2,500.



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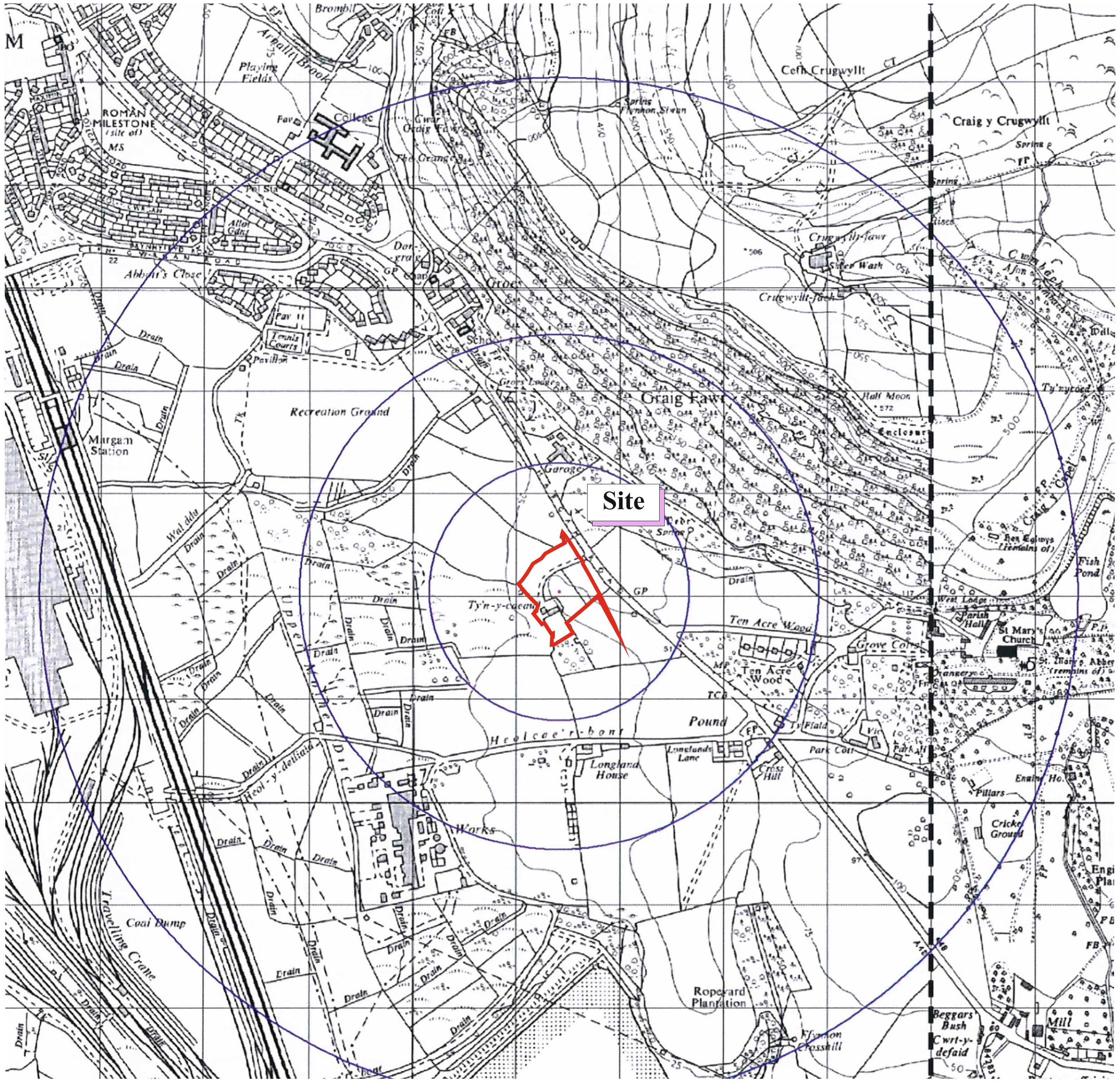
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Drawing No: BC/MB/07.24.05.09.



Study on Land at Tyn-y-Caeau,
Margam Road, Port Talbot.

Extract from Ordnance Survey Plan: 1968-1971 Edition.

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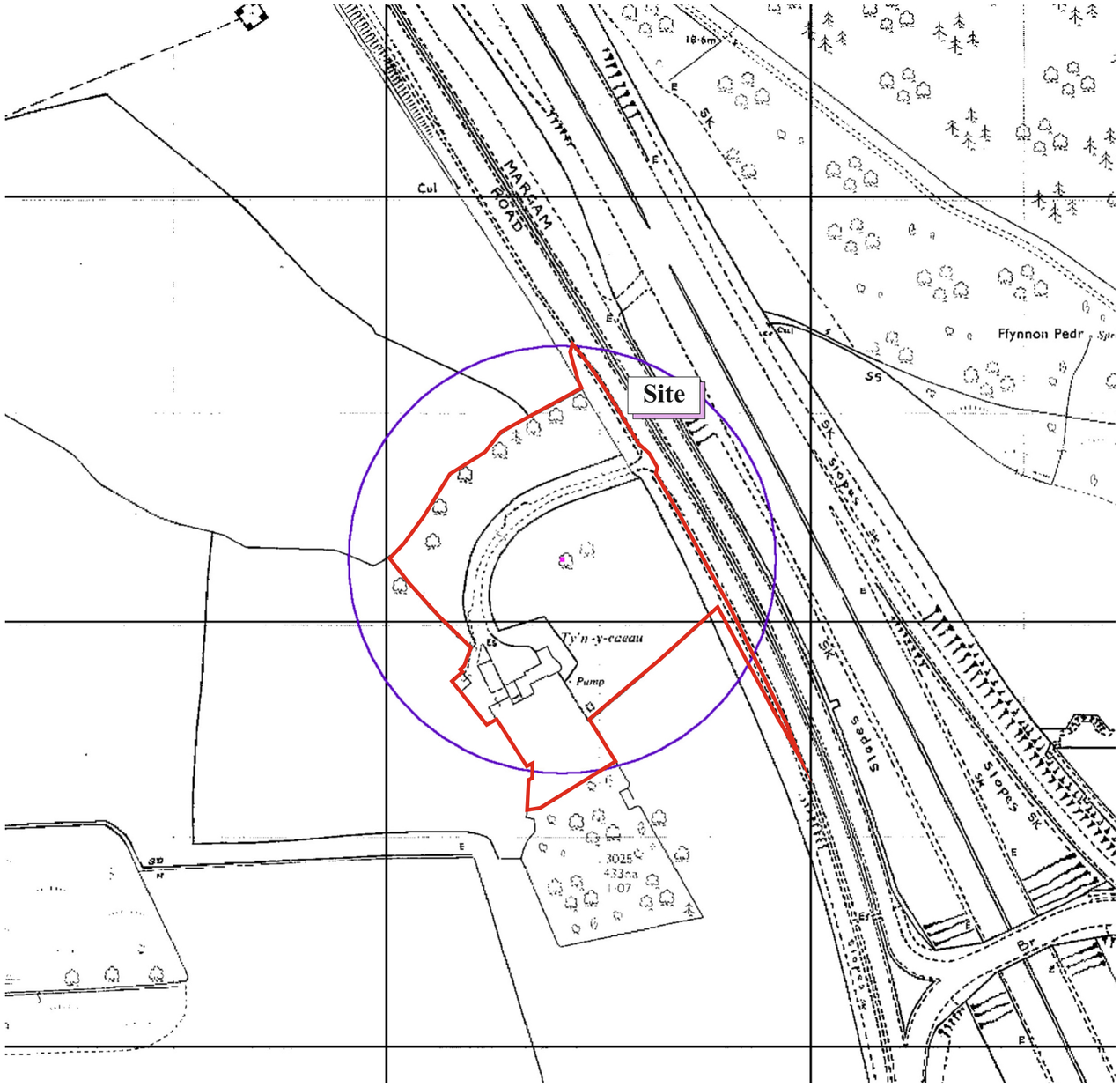
Geologists Working With The Environment....

Drawing No: BC/MB/07.24.05.10.

Study on Land at Tyn-y-Caeau,
Margam Road, Port Talbot.

Extract from Ordnance Survey Plan: 1979 Edition.

Plan Scale: Approx. 1:2,500.



Key to Symbols:

Approximate Site Boundary.

Notes:

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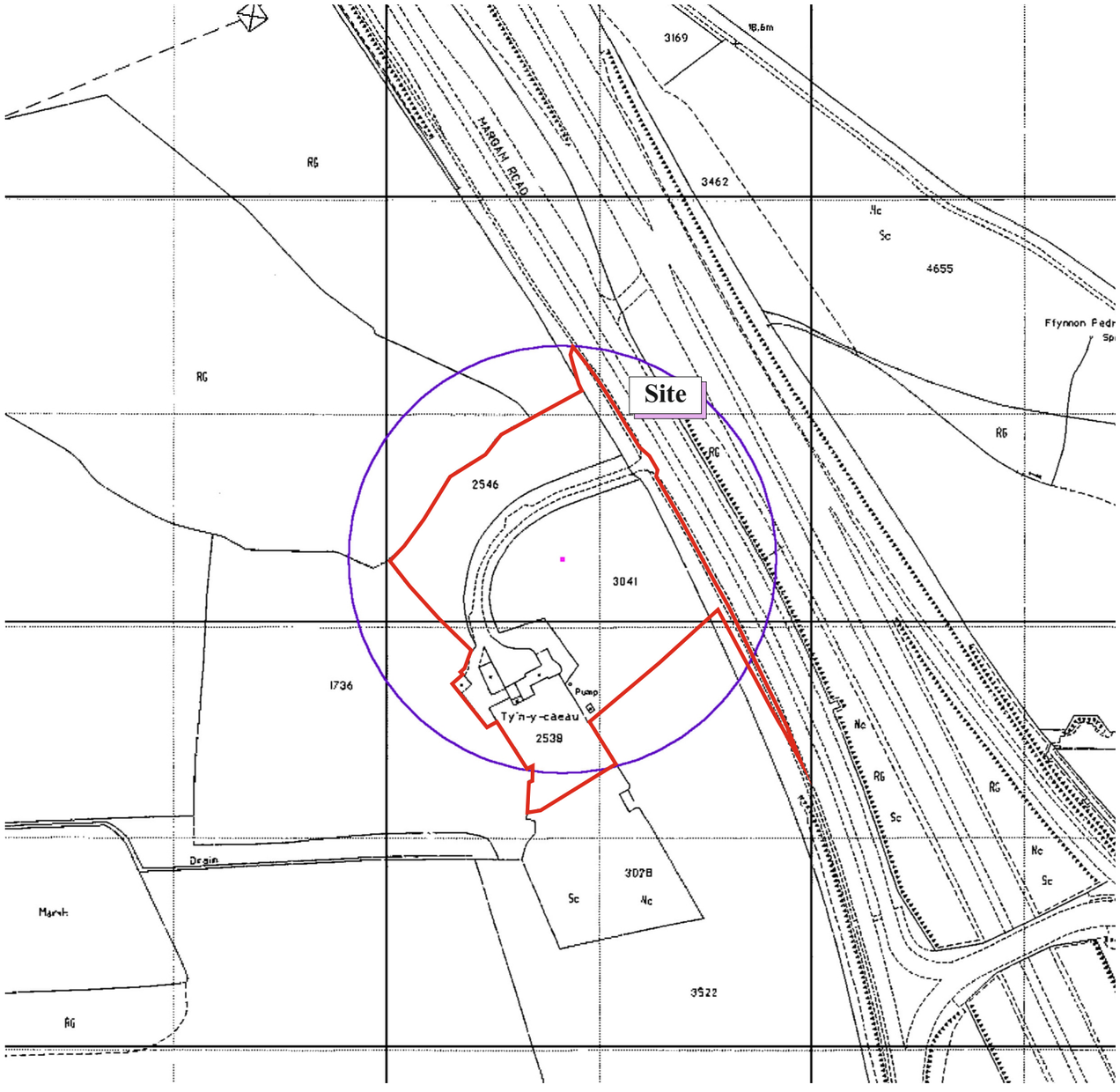
Geologists Working With The Environment....

Drawing No: BC/MB/07.24.05.11.

Study on Land at Tyn-y-Caeau,
Margam Road, Port Talbot.

Extract from Ordnance Survey Plan: 1993 Edition.

Plan Scale: Approx. 1:2,500.



Key to Symbols:

Approximate Site Boundary.

Notes:

North is at top of plan.

Locations are approximate and should not be scaled.

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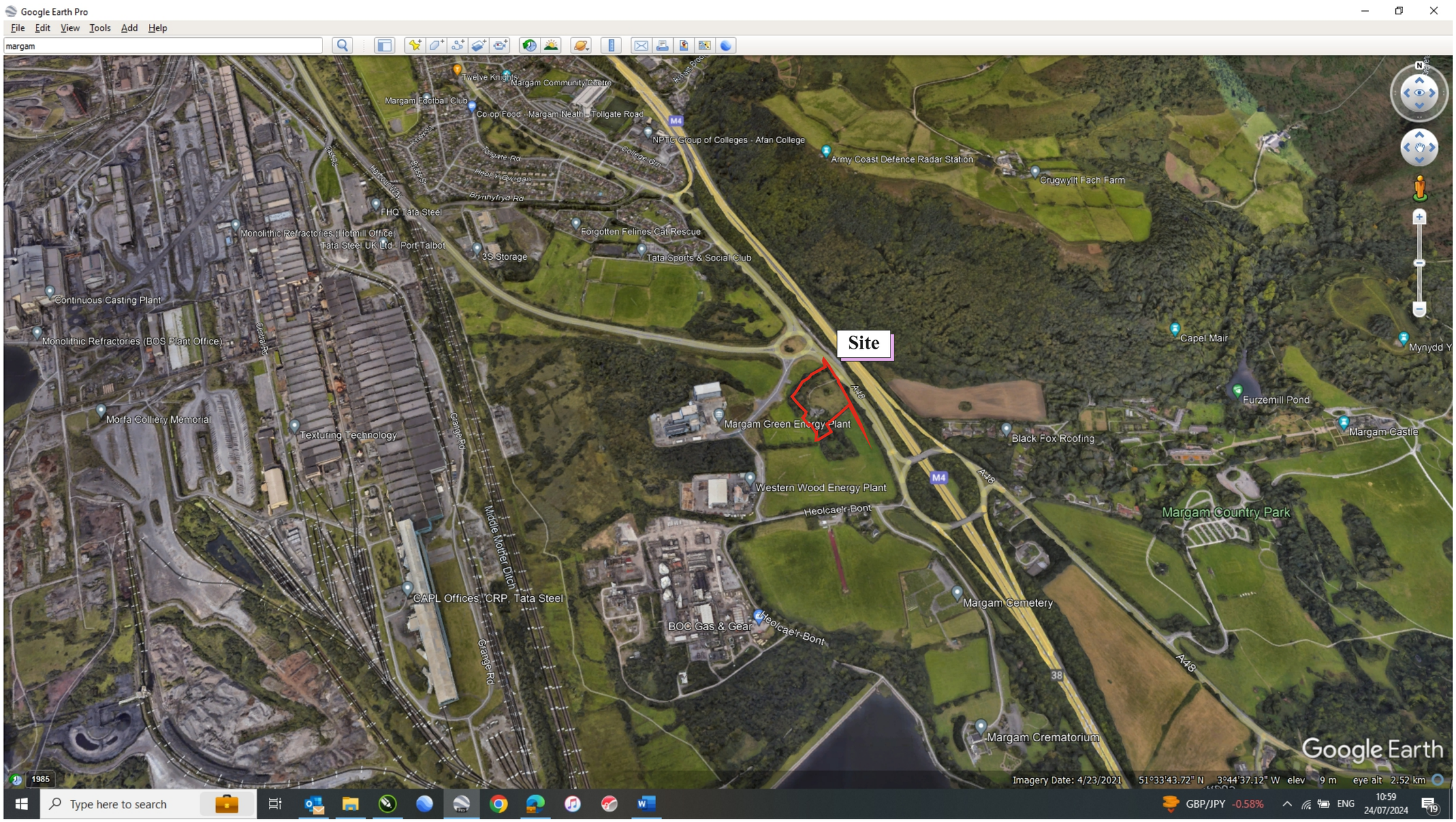
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Drawing No: BC/MB/07.24.05.12.



Notes:

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Image captured from Google Earth Pro.

Study on Land at Tyn-y-Caeau, Margam Road, Port Talbot.

Aerial Image.

Plan Scale: N/A

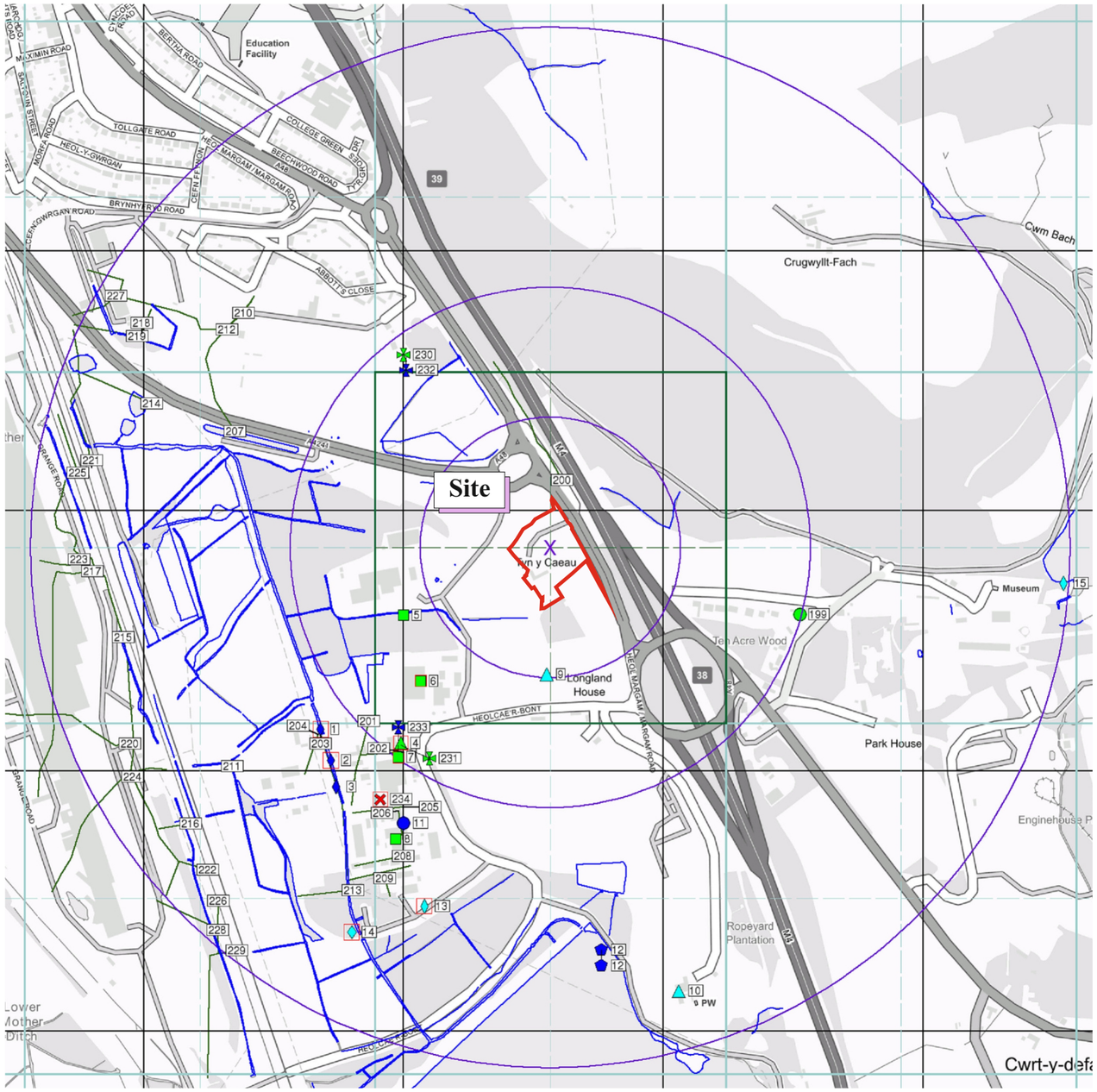
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Study on Land at Tyn-y-Caeau, Margam Road, Port Talbot.

Environmental Review Plan.

Plan Scale: 1:10,000.

Key to Symbols:

Approximate Site Boundary.

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)
- 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

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Drawing No: BC/MB/07.24.05.14.

Appendix I

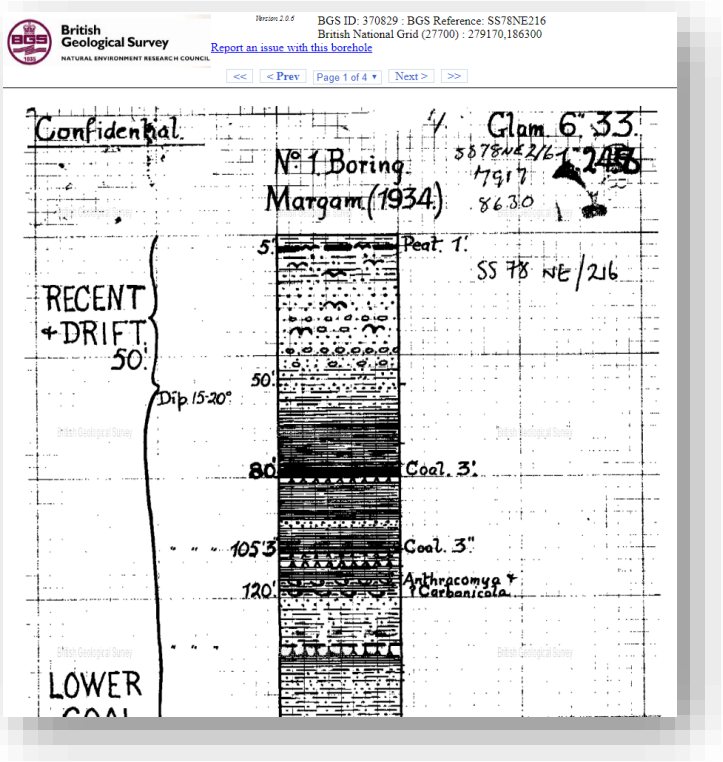
Extracts of Margam Borehole Graphic Logs.

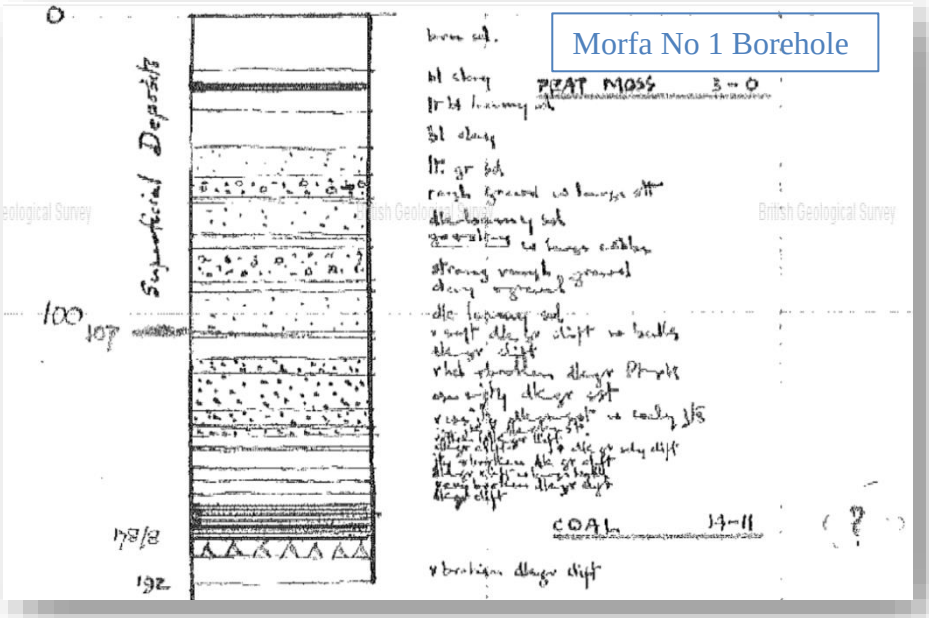
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Appendix I
Extracts of Deep Borehole Records
(Supplied by the British Geological Survey)





Appendix II

Copy of The Coal Authority's Report, Ref No: 51002276499001.

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The Coal Authority

CON29M
coal mining report

TYN-Y-CAEAU, MARGAM ROAD, MARGAM, NEATH PORT TALBOT, SA13 2NW

Known or potential coal mining risks

Past underground coal mining	Page 4
Future underground coal mining	Page 4
Mine entries	Page 5

Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit www.groundstability.com

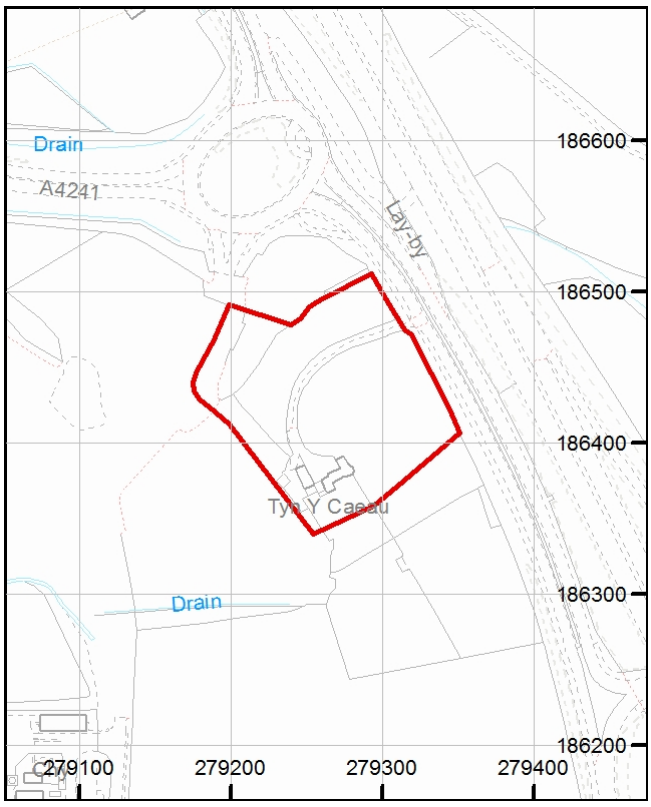
Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see page 3 for further details on Future development.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is **on the coalfield**

Map data

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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Professional opinion

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on 0345 762 6848 or email cmra@coal.gov.uk.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

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1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 1 seam of coal at 230m to 350m depth, and last worked in 1913.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

In addition the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk. Your attention is drawn to the Professional opinion sections of the report.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

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.

9 Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13 Working facilities order

The property is not in an area where 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.

14 Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Statutory cover

Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.
www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form

Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call 01623 646 333. Further information can be found on our website: www.gov.uk/coalauthority.

Glossary

Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

Appendix III

Copy of Public Health England's Radon Gas Report.

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Geologists Working With The Environment....

Public Health England

Report of address search for radon risk

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Radon Risk Report for addresses in England and Wales

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Address searched: Tyn Y Caeau, Margam Road, Margam, Port Talbot, SA13 2NW
Date of report: 21 May 2020

Guidance for existing properties

Is this property in a radon Affected Area? - No

A radon Affected Area is defined as where the radon level in at least one property in every hundred is estimated to exceed the Action Level.

The estimated probability of the property being above the Action Level for radon is: 0-1%

The result may not be valid for buildings larger than 25 metres.
If this site if for redevelopment, you should undertake a GeoReport provided by the British Geological Survey.

This report informs you of the estimated probability that this particular property is above the Action Level for radon. This does not necessarily mean there is a radon problem in the property; the only way to find out whether it is above or below the Action Level is to carry out a radon measurement in an existing property.

Radon Affected Areas are designated by the Public Health England. PHE advises that radon gas should be measured in all properties within Radon Affected Areas.

If you are buying a currently occupied property in a Radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were above the Radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and the results of re-testing confirmed the effectiveness of the measures.

Further information is available from PHE or https://www.ukradon.org

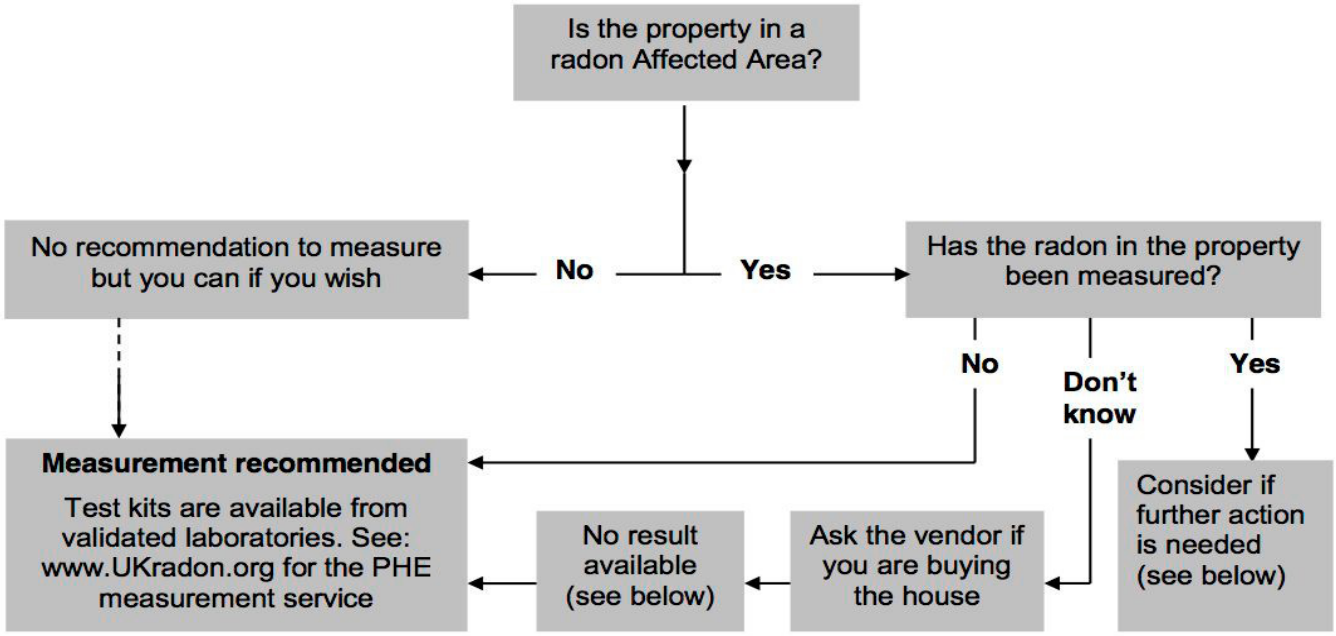
Guidance for new buildings and extensions to existing properties

What is the requirement under Building Regulations for radon protection in new buildings and extensions at the property location? - None

If you are buying a new property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

See the Radon and Building Regulations for more details.

PHE guidance for occupiers and prospective purchases



Existing radon test results: There is no public record of individual radon measurements. Results of previous tests can only be obtained from the seller. Radon levels can be significantly affected by changes to the building or its use, particularly by alterations to the heating and ventilation which can also be affected by changes in occupier. If in doubt, test again for reassurance.

Radon Bond: This is simply a retained fund, the terms of which are negotiated between the purchaser and the vendor. It allows the conveyance of the property to proceed without undue delay. The purchaser is protected against the possible cost of radon reduction work and the seller does not lose sale proceeds if the result is low. Make sure the agreement allows enough time to complete the test, get the result and arrange the work if needed.

High Results: Exposure to high levels of radon increases the risk of developing lung cancer. If a test in a home gives a result at or above the Action Level of 200 Becquerels per cubic metre of air (Bq/m3), formal advice will be given to lower the level. Radon reduction will also be recommended if the occupants include smokers or ex-smokers when the radon level is at or above the Target Level of 100 Bq/m3; these groups have a higher risk. Information on health risks and radon reduction work is available from PHE. Guidance about radon reduction work is also available from some Local Authorities, the Building Research Establishment and specialist contractors.

PHE designated radon website: https://www.ukradon.org
Building Research Establishment: http://www.bre.co.uk/page.jsp?id=3137

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