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COAL MINING RISK ASSESSMENT

Margam Connection

LAING O'ROURKE REFERENCE: **30004240-BHK-XX-XX-RP-C-0004**

NATIONAL GRID REFERENCE: **TBC**

REVISION: **P03**

Prepared for:

National Grid

22 August 2025

BakerHicks.

DOCUMENT VERIFICATION.

Project title:	Margam Connection
Project number:	30004595
Document title:	Coal Mining Risk Assessment
Document reference:	30004240-BHK-XX-XX-RP-C-0004
NG Document reference:	TBC
Status:	S3 for review and comment

Rev	Date				
P01	29/01/2024	**File name**	30004240-BHK-XX-XX-RP-C-0004		
		Description	First Issue – For information		
			Prepared by	**Checked by**	**Approved by**
		Signature	HG	VB	PDH
		Date	29/01/2024	29/01/2024	29/01/2024
P02	12/03/2024	**File name**	30004240-BHK-XX-XX-RP-C-0004		
		Description	Second Issue Following addition of Margam Substation Option 4.		
			Prepared by	**Checked by**	**Approved by**
		Signature	JT	VB	PH
		Date	08/03/2024	08/03/2024	11/03/2024
P03	22/08/2025	**File name**	30004240-BHK-XX-XX-RP-C-0004		
		Description	Third Issue Following finalisation of the site layout.		
			Prepared by	**Checked by**	**Approved by**
		Signature	CS	JH	JS
		Date	19/08/2025	21/08/2025	22/08/2025

CONTENTS.

1. Introduction

1.1. Scope and Objectives of the Report

An area of land adjacent to the existing Margam substation, Port Talbot (the site) is being considered for development by National Grid (the Client). It is understood that the proposals for the site comprise the construction of a new substation together with associated infrastructure including a flood wall.

This report was originally issued by BakerHicks to the Client in January and March 2024 as revisions P01 and P02 respectively, when the proposals at that time comprised two options to the positions of the substation. Revision P03 of this report acknowledges the finalisation of the site location. At the time of updating this report, an intrusive ground investigation has been completed which includes investigation of legacy mining features and the results are reported in a Ground Investigation Report (ref: MARPT-BHK-01-XX-RP-G-090001 Rev P03, dated August 2025).

BakerHicks was appointed by National Grid to undertake a Coal Mining Risk Assessment for the proposed development in order to provide the Local Planning Authority with information on coal mining legacy and an assessment of its impact, if any, on land stability at the site.

The purpose of the Coal Mining Risk Assessment is to:

- Present a desk-based review of available information on the coal mining issues which are relevant to the application site;
- Use that information to identify and assess the risks to the proposed development from coal mining legacy including the cumulative impact of issues;
- Demonstrate to the Local Planning Authority that the application site can be made safe and stable to meet the requirements of National Planning Policy with regards to development on unstable land and thereby support a future Planning Application.

This report is not a geotechnical and geo-environmental desk study. A separate desk study report has been produced (ref: 30004240-BHK-01-DC-RP-C-0003 P02, dated March 2024) which includes a full review of Envirocheck reports and historical maps.

1.2. Summary of Proposed Works

The current drawing revision showing the proposed substation layout is MARPT-COE-01-ZZ-DG-A-130023 Rev P05, dated July 2025, a copy of which is included in Appendix A. A summary of the proposed works at the site, as currently understood, are expected to comprise construction of the following components:

- GIS Hall;
- Overhead Line Gantries;
- MSCDN Compound;
- Busbars connecting existing;
- Amenity Building;
- Flood Wall;
- Fencing;
- Drainage; and
- Pavement areas and walkways.

1.3. Site Location and Description

The site comprises a parcel of land adjacent to the existing Margam substation, Margam, approximately 4.3km southeast of Port Talbot town centre. The National Grid reference for the approximate centre of the site is SS 78580 86373, as shown on the site location plan in Figure 1.1.

The site is broadly rectangular in plan shape with dimensions of approximately 500m by 300m, covering an area of roughly 15Ha. In addition, a portion of the access road beyond Cefn Gwrgan Road to the north of the site is also included in the red line boundary drawing (ref: MARPT-BHK-01-ZZ-DG-A-130020 Rev 04, dated July 2025) included in Appendix A.

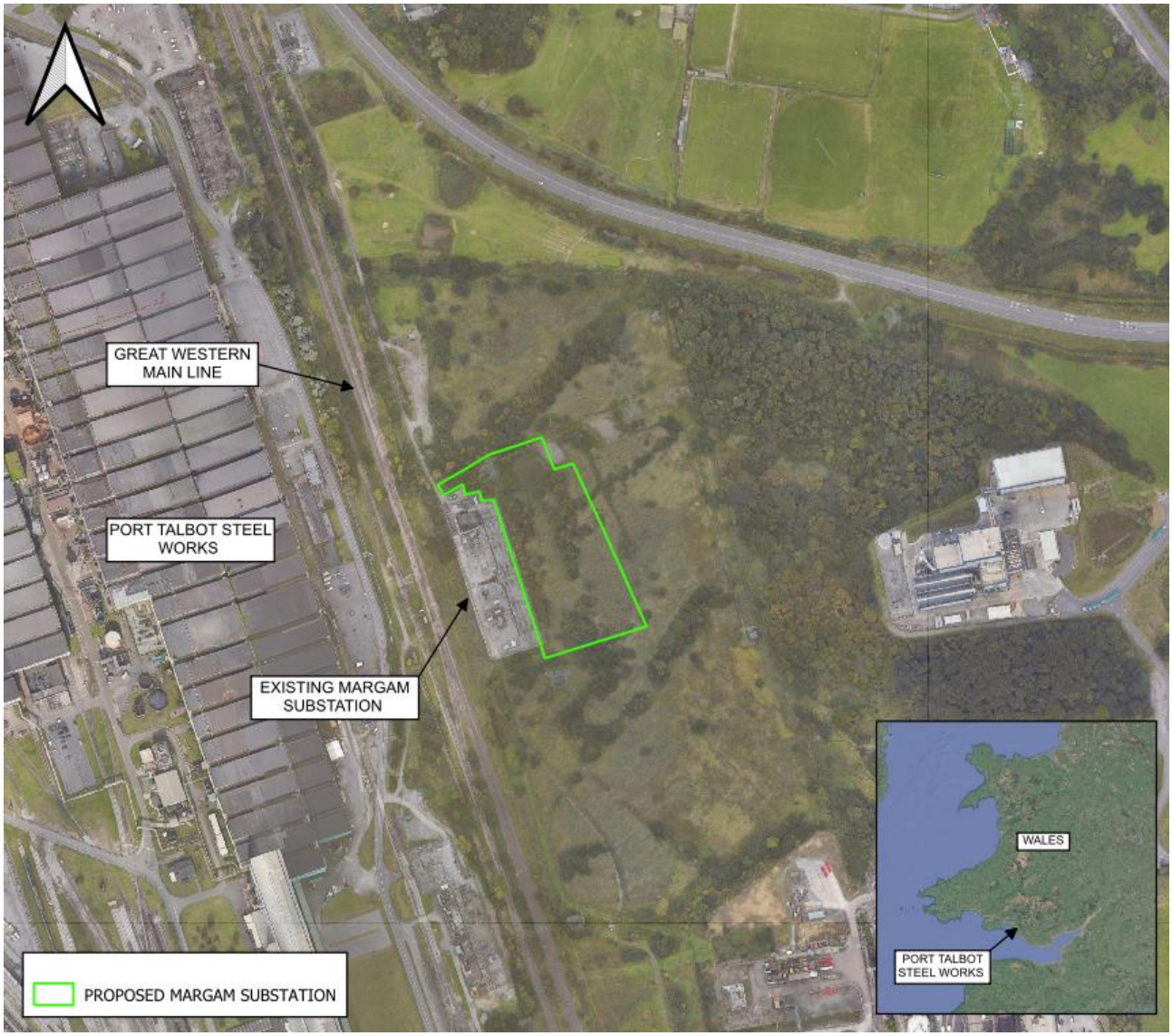


Figure 1.1. Site Plan showing proposed substation location in relation to surrounding features.

1.4. Sources of Information

Information has been obtained from the following sources:

- British Geological Survey (BGS) – published information & on-line borehole database;
- Coal Authority Consultants Coal Mining Report (ref: 51003518298001);

- Coal Authority Interactive Map Viewer;
- Envirocheck historical Ordnance Survey mapping;
- Port Talbot Council Planning Portal;
- Jacobs, Margam Prenergy, Interpretive Report, B2901531/R/001, March 2009.

1.5. Assumptions and Limitations

BakerHicks is responsible for selecting and summarising the data supplied by the Client or other parties but cannot be held responsible for any mistakes or inaccuracies or the completeness of third-party data on which it has relied.

This report has been prepared solely for National Grid in connection with the Margam Connection scheme. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party. The report has considered publicly available information and databases, conditions and features may exist that have not been included within such databases; therefore, features may be present that have not been considered as part of the study.

The Coal Authority maintain records of known mine workings. There remains the possibility of unrecorded mine workings for there are no records are available to review.

The scope of this report considers the Coal Mining Risk Assessment only and does not consider other ground or environmental risks. Liaison with third parties such as local councils is outside the scope of this report.

2. Desk Study Data

2.1. Site History

The earliest available OS map dated 1885 indicates that much of the site was undeveloped and occupied by multiple fields divided by numerous interconnected ditches. The ditches are orientated broadly north-south and northeast-southwest, flowing to the north/northeast into the Upper Mother Ditch which flows north along the eastern boundary of the site, before changing flow direction to the west, along the north of the site boundary. A northeast-southwest orientated track was present in the northern portion of the site with 'Wal Ddu' labelled parallel. In the 1940's the site is shown to be covered generally by marshland. In 1952 overhead electricity lines are shown in the eastern portion of the site orientated north to south and connecting into an electrical substation to the northwest of the site and, in 1960, a second set of overhead electricity lines are shown present in parallel. By 1989, the Margam substation and associated infrastructure, including a north-south access track, two electricity transmission pylons to the north and one to the south, and a track between northern pylons have been developed. Since this time, the site is shown to have remained relatively unchanged.

From 1885, the surrounding areas are shown to be occupied by agricultural land, with a northwest-southeast railway immediately to the western boundary – the "Great Western Railway'. A large pond is shown roughly 500m to 1000m to the west of the site and the Grange and Abbot Pits are shown at Morfa Colliery, between 800m and 1200m to the west. In 1938 the pits at Morfa Colliery are no longer shown to be present and residential development has taken place from 500m to the north. By 1949 the wider area to the west, beyond the railway, is being prepared for development which by 1965 has been developed to the present-day Tata Steel UK facility. Electrical substations have been developed either side of the access road and railway, to the north of the main portion of the site.

2.2. Anticipated Geology

A summary of the geological conditions at the site is provided within this section. The following published BGS data has been geological reviewed, alongside the information detailed in Section 1.4:

- BGS 1:10,000 scale map Sheet SS78NE Glamorgan (Bedrock & Superficial), 1970
- BGS 1:50,000 scale map Sheet 247 Swansea (Bedrock), 2011
- Geology of the Swansea district: a brief explanation of the geological map Sheet 247, 2011

2.2.1. Artificial Geology

In general, artificial ground is not mapped to be present beneath the site. However, a small parcel of artificial ground is shown to be present in the north of the red line site boundary beneath Cefn Gwrgan Road and Harbour Way. Across the wider region, artificial ground is shown immediately west of the existing Margam substation, relating to reclaimed ground beneath the Tata Steel UK facility. This is likely to comprising Made Ground (built-up ground), Engineered Fill and Worked Ground (such as cuttings).

Made Ground is likely to be present in some areas associated with the existing Margam substation and access tracks created during the development of the pylons noted in the 1970's.

2.2.2. Superficial Geology

BGS GeoIndex indicates the whole site is underlain by Tidal Flat Deposits of silt and clay with marshland shown present on the historical mapping. The BGS 1:10,000 Sheet SS78NE identifies these deposits as Marine or Estuarine Alluvium with marshland shown at surface. The available data also shows Glacial Deposits of sand and gravel in close proximity to the east of the site, which are likely to lie beneath the Tidal Flat Deposits on site.

2.2.3. Solid Geology

The bedrock geology beneath the site consists of the South Wales Middle Coal Measures Formation. The South Wales Coal Measures Formations are described by BGS Lexicon as “coal-bearing mudstones/siltstones, with seatearths and minor sandstones”.

The BGS mapping shows several coal seams within the South Wales Middle Coal Measures Formation to subcrop beneath Superficial deposits at the site. It shows the dip of the Five Foot seam (named Upper Five Foot), which is present within the northeast of the site, to be 19 degrees to the north.

2.2.4. Structural Geology

An unnamed northwest-southeast orientated thrust fault, thrust to the northeast, is located to the northeast of the proposed Margam substation.

2.3. Previous Site Investigations

Ground investigation works were undertaken within the northern portion of the red line boundary in 2009 by Jacobs. It comprised five boreholes and eight trial pits. Tidal flat deposits comprising soft to firm silt and clay with layers and pockets of peat, was encountered to a maximum depth of 4.0m bgl, underlain by glacial deposits comprising medium dense to very dense gravel followed by stiff clay. Bedrock of very weak mudstone was encountered between 12.7m and 14.5m bgl. Non-intact coal was recovered as gravel in BH2 at 15.55m bgl (0.57m thick), which was 1.95m below rockhead. It is possible that this coal is non-intact due to weathering of the rock rather than the seam having been worked. Other than this, no other occurrences of coal or workings were noted during the ground investigation.

BGS borehole records were also reviewed using BGS GeoIndex, however, there are no recorded boreholes of relevance to the deeper stratigraphy within 150m of the site.

2.4. Ground Model

The site is expected to be underlain by superficial deposits of peat, clay, silt and gravel to depths of approximately 15m bgl, underlain by Coal Measures bedrock. Seams of coal are present in the shallow bedrock, as evidenced by the previous boreholes. Localised Made Ground is anticipated related to the existing site development and infrastructure.

3. Mining Assessment

3.1. Coal Mining History

Reference to the Coal Authority Interactive Map Viewer indicates the site is located in the Coal Authority Consultation area with several coal subcrops recorded and, as such, these coal subcrops are designated as Coal Authority Development High Risk Areas (DHRA). A Coal Authority Consultants Coal Mining Report (ref: 51003518298001), dated 13th August 2025 was obtained for the site and is included in Appendix A.

The Coal Authority interactive map indicates that the site is crossed by five coal subcrops which are each shown as Development High Risk Areas. These coal subcrops are also shown and named with recorded thicknesses on the BGS 1:10,000 Sheet SS78NE. The coal seams in order subcropping from north to south, are named as:

- Two Foot Nine – Mid Leaf (1.35m thick)
- Four Foot (1.2m)
- Two Foot Nine (1.5m)
- Upper Four Foot (1.2m)
- Lower Four Foot (1.35m)

The Four Foot coal seam noted above is likely to be the Upper Four Foot, based on the information presented on the 1:10,000 BGS map. The Two Foot Nine – Mid Leaf and Four Foot coal seams are mapped subcropping to the northeast of the thrust fault, while the Two Foot Nine and Upper/Lower Four Foot coal seams are to the south of the proposed Margam Substation.

No surface mining and no past or probable shallow coal mining was indicated at the site by the interactive map.

3.2. Consultants Coal Mining Report

A Consultants Coal Mining Report (ref 51003518298001) was obtained from the Coal Authority on 13th August 2025 which can be found in Appendix A.

3.2.1. Underground Coal Mining

The Coal Authority Consultants Coal Mining Report indicates that the site is subject to past underground workings in three seams between depths of 153m and 223m below ground level (bgl). The shallowest recorded works relating to the 'Lower Nine Foot - Top Leaf' and was last worked in 1906. The recorded workings are summarised in the table below.

Colliery	Seam	Mineral	Depth (m)	Dip of Seam (degrees)	Extraction Thickness (cm)	Year Last Mined
Unnamed	Lower Nine Foot - Top Leaf	Coal	153	26.4	210	1906
	Five Foot		181	21.5	330	1906
	Gellideg		223	26.6	240	1913

The BGS 1:10,000 map shows the dip of the Upper Five Foot seam (assumed here to be the same as the Five Foot based on the separation from the Gellideg seam) to be 19 degrees to the north. Based on the regional

geology, the site sits on the southern perimeter of the South Wales coalfield syncline, which dips to the north. As such, it is assumed that all the above seams dip within this range (19 to 26.6 degrees northwards).

The Consultants Coal Mining Report states that there are no probable unrecorded shallow workings and no spine roadways recorded at shallow depths.

The site does not lie within an area likely to be affected by present underground mining. There is no coal mining licence recorded within 200m of the site.

There is no future underground mining expected, and no coal mining licensing within 200m of the site according to the Consultants Coal Mining Report.

3.2.2. Opencast Coal Mining

The Consultants Coal Mining Report states that there are no recorded opencast mines within 500m of the site.

3.2.3. Recorded Mine Entries

The Consultants Coal Mining Report indicates that there are no mine shafts and adits located within 100m of the site.

3.2.4. Coal Mining Records

Figure 3.1 shows the conjectured and proven seam subcrops in the area from the Consultants Coal Mining Report in Appendix B. The locations of these conjectured subcrops match those on the BGS 1:10,000 map.

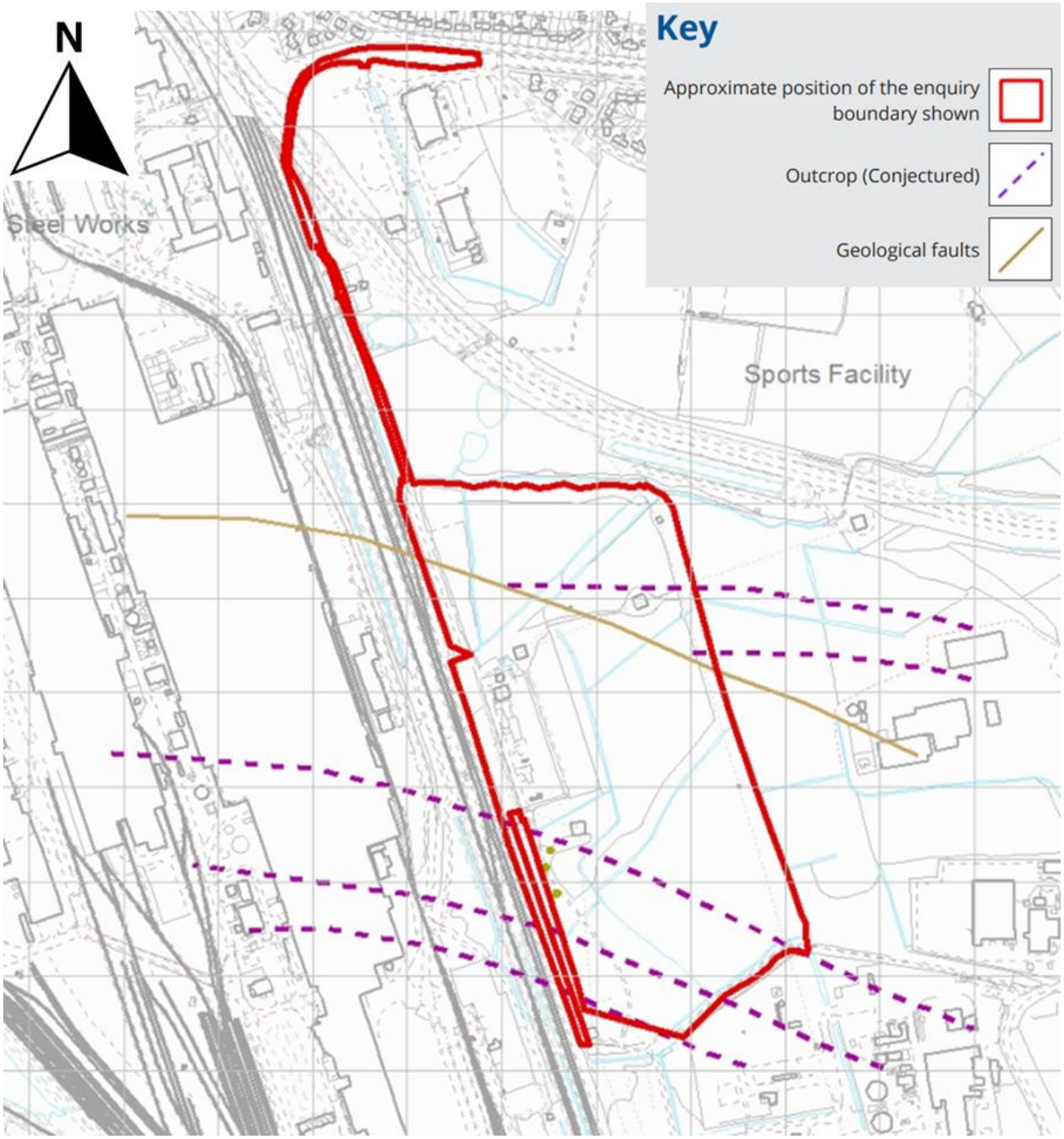


Figure 3.1: Coal Authority plan showing coal subcrops in the area.

3.2.5. Coal Mining Abandonment Maps

The Consultants Coal Mining Report gave five abandoned mine plan catalogue numbers for the site. A search request was made to the Coal Authority Abandoned Mines Catalogue for seams up to a depth of 110m beneath the site. However, no records within this range were available.

The requirement to keep plans of abandoned coal mine workings was not enforced until 1st January 1873 (the Coal Mines Regulation Act 1872). Therefore, there remains the possibility that there may be historical unrecorded mine workings in the dominant seams beneath or within a short range of the site.

3.2.6. Hazards

A summary of the geotechnical and geo-environmental hazards associated with coal mining are summarised below.

Subsidence

Subsidence may occur in relation to mine workings where collapsed mine shafts or seams do not have sufficient cover to 'bridge' weak material and the failure extends upwards toward the ground surface. Depressions in the ground level are often indicative of subsidence.

The Coal Authority has not received a damage notice or claim for the site, or any property within 50 metres of the site, since 31 October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the area. No notices have been given under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Mine Gas

Abandoned mine workings may be prone to accumulation of natural ground gases released from the coal. There are different types of mine gases, 'firedamp - elevated methane concentrations, and 'blackdamp' - oxygen deficient air with elevated concentrations of carbon dioxide. Under certain conditions, mine gases can be forced to the surface along conduits such as broken ground associated with geological faults or collapsed mine workings at shallow depth or mine shafts.

The Coal Authority has no record of a mine gas emission requiring action or recorded within 500m of the site.

4. Risk Assessment

4.1. Assessment Criteria

The framework conditions for a Coal Mining Risk Assessment are outlined in the Table 4.1.

Table 4.1: Risk Assessment Framework

RISK STATUS	ACTION
No Risk	Identified feature(s) not considered to pose any risk to proposed development. No further action required
Low Risk	Identified feature(s) are unlikely to pose a risk to any future proposed development and further action may be required such as intrusive site investigation works.
Medium risk	Identified feature(s) may present a risk to any future proposed development due to the presence of shallow mine workings. Further actions are likely to be required including but not limited to an intrusive site investigation works and potentially ground improvement works. The potential for unrecorded mine workings and mine shafts cannot be discounted.
High Risk	Identified feature(s) present a risk to any future proposed development due to the presence of shallow mine working and mine shafts. Further actions are required including but not limited to an intrusive site investigation works to locate voids and shafts and potentially ground stabilisation works.

4.2. Mining Summary

The risk of former underground mine workings resulting in residual mining settlement/subsidence is a function of a number of factors. These include the depth and original thickness of the seam, the extracted thickness, the method and extent of extraction, the nature of the roof materials and the thickness of overlying Solid and Superficial (where present) strata. Instability at the surface can arise when voids within and above mined horizons collapse and migrate to the surface, creating either a relatively narrow crown hole or a wider area of general subsidence. The potential for crown holes is significantly reduced where there are no significant voids following abandonment of workings.

The zone of influence of areas of subsidence is also related to where the depth in relation to the size of the void exceeds a certain ratio and where the nature of the materials above the worked horizon is competent such as thick competent sandstone. As a basic rule of thumb, where the thickness of rock cover above a void is less than ten times the seam or workings thickness (e.g., roadways can be thicker than a seam) there is potential for void migration at surface to occur. The thickness of the Superficial deposits at the site may mitigate some crown hole collapse but for initial assessment purposes, this has been ignored.

The worst-case scenario for the site is considered to be the area of site where rock cover is less than ten times the seam or working thickness (to the base of the Superficial deposits) or, if piles were utilised, within the range of the pile toe.

From the available borehole logs, the depth to rockhead has been obtained. No voids or workings of the coal were identified in the boreholes; however, these only penetrate 3-4m into bedrock and therefore it is possible for voids to be present below this depth. The Coal Authority states there are no probable unrecorded shallow workings, and the shallowest recorded worked seam is at a depth of 153m. The extraction thickness is reported as 2.1m so the minimum cover required to achieve a 10:1 ratio is 21m. Bedrock was encountered in the boreholes at depths of up to 15.9m bgl. This gives >100m of rock cover above the worked seam. Therefore,

the bedrock provides sufficient cover to the worked seam. If piles into bedrock are required for the substations, bedrock cover of at least 10 times the seam thickness should be provided beneath the pile toe level, however this will need to be confirmed with additional ground investigation.

There are no mine entries within 100m of the site.

The Coal Authority Mining Information team performed a search for mine plans beneath the site, however, there were no records within 110m of surface.

4.3. Risk Classification

Considering all of the factors discussed above, although there is evidence of coal extraction below the site, the available information indicates this was at depths of 153m or greater, as such, there is a low risk relating to vertical void migration from worked seams to the ground surface. However, given the potential for shallow subcropping coal seams to be present, and based on the risk assessment criteria outlined in Table 4.1, a low risk of potential unrecorded shallow mine workings has generally been identified across the site. This is based on the assumption that no piling is to be adopted as the foundation solution, in which case, the southern portion of the site would be classified as a medium risk.

Based on the mapped subcrop positions, the highest risk from potential unrecorded workings is associated with the Two Foot Nine coal seam, which is anticipated to subcrop approximately 45m to the south/southwest of the proposed substation, dipping to the north/northeast at an angle of c.19 degrees beneath the site. Assuming a depth to bedrock of 12m bgl, this would place the Two Foot Nine coal seam in the region of 27m bgl by the southern boundary of the proposed substation. At this point, the coal seam would be interpreted as ‘shallow’ in relation to ground level, but within 15m of rockhead.

Given the recorded seam thickness is 1.5m, allowing an extra 0.5m for potential over dig or roadways etc, this would place the southern c.10m of the site within a depth range of less than ten times the working thickness (i.e., in this case, less than 20m of rock cover with the over dig included). Therefore, unless a piled solution is implemented, the risk of void migration across the substation platform decreases the further north away from the southern boundary. To cater for this possibility, a conservative assumption has been made that a pile is socketed at 22m bgl into bedrock (i.e., 10m length to allow for 5m of weathering). On this basis, the risk of void migration to the base of the pile would be up to 42m bgl, which would be 87m laterally from the subcrop of the Two Foot Nine seam and c.30m into the substation.

Based upon the available information, intrusive ground investigation is recommended at the proposed substation location to confirm the stratigraphy, the depth to bedrock, and the nature and presence of shallow coal seams.

5. Conclusions

This coal mining risk assessment concludes a low risk of recorded coal workings at a depth that would affect the proposed development.

The published geology for the site indicates localised Made Ground over tidal flat deposits with layers and pockets of peat, cohesive and granular glacial deposits, over bedrock of the South Wales Middle Coal Measures. Previous ground investigations at the site encountered bedrock in the region of approximately 12m to 15m bgl. Geological mapping indicates five coal seams subcrop beneath the site. However, the Consultants Coal Mining Report states the shallowest worked coal seam to be the Five Foot at a depth of 153m with a thickness of 2.1m. This provides bedrock cover of over 10 times the worked seam thickness to prevent vertical migration of voids to the surface.

The Consultants Coal Mining Report stated there are no recorded shallow workings and no probable unrecorded shallow workings beneath the site. Boreholes from the previous ground investigation in the northern portion of the site encountered coal between 15.5m and 16.12m bgl at a single location, which was within 2m of rockhead. The boreholes did not encounter evidence of shallow mining activity; however, these only go up to approximately 10m into bedrock, and voids could be below this depth. Therefore, unrecorded mine workings at shallow depths beneath the site cannot be completely ruled out, particularly with regard to the Two Foot Nine coal seam, which has been identified as the shallowest coal seam beneath the site. Overall, the risk of historical coal mining activities on the proposed development is considered to be low, although there remains a medium risk of potential unrecorded shallow mine workings across the site. In order to mitigate the risk from shallow mine workings, intrusive ground investigation at the proposed substation location is required to determine the presence of any shallow coal workings or to investigate the depth of bedrock cover to coal beneath the site.

APPENDIX A – DRAWINGS

1 Location Plan_Planning Application
Scale:1 : 2500

N

20 0 20 40 60 80 100
SCALE 1:2500 m

For Planning

GENERAL NOTES

ALL BAKERHICKS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE GENERAL NOTES DRAWINGS, THE RELEVANT BAKERHICKS SPECIFICATIONS AND ALL RELEVANT ARCHITECTS AND SERVICE ENGINEER'S DRAWINGS AND SPECIFICATION.

ALL LEVELS ARE IN METRES ABOVE ORDINANCE DATUM.

ALL DIMENSIONS ARE IN MILLIMETRES (U.N.O)

DO NOT SCALE ANY ENGINEERING DRAWINGS OR DIGITAL DATA. IF IN DOUBT ASK. WORK TO FIGURED DIMENSIONS ONLY. ANY DISCREPANCIES IN DIMENSIONS ARE TO BE REFERRED TO ENGINEER BEFORE WORK IS PUT TO HAND.

THE CONTRACTOR MUST ADVISE THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES BETWEEN THE CONTRACT DRAWINGS AND/OR SITE CONDITIONS / DIMENSIONS AT THE EARLIEST POSSIBLE OPPORTUNITY.

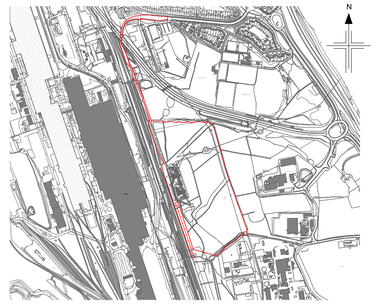
REVISION NOTES ARE FOR GUIDANCE ONLY. FOR SPECIFIC DETAILS, REFER TO CLOUDED AREA ON DRAWINGS FOR MOST RECENT AMENDMENTS.

ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR OR HIS SUBCONTRACTOR PRIOR TO PREPARING ANY WORKING DRAWINGS OR COMMENCING ON SITE.

ALL WORK HAS TO BE CARRIED OUT WITH THE REQUIREMENTS OF THE RELEVANT STATUTORY AUTHORITIES AND REGULATIONS.

ALL METHOD STATEMENTS SHOULD BE SUBMITTED TO THE ARCHITECT / CDM PRINCIPAL DESIGNER AND ENGINEER FOR REVIEW AT LEAST TWO WEEKS BEFORE CARRYING OUT THE SAID WORKS.

ALL PROPRIETARY PRODUCTS TO BE AS SPECIFIED OR EQUAL APPROVED.



KEYPLAN

SITE KEY

SITE BOUNDARY
SITE AREA: (154648.052 m2)
(15.46 Hectares)
(38.20 Acres)

NOTE:

DRAWING TO BE PRINTED IN COLOUR

REFER TO PEAT MANAGEMENT STRATEGY FOR AREAS OF PEAT BURIAL LOCATIONS

Rev	Description	Cre'd	Chk'd / App'd	Date
P04	S3 For Review and Comment: Planning drawings updated following feedback with NPT on 24/07/25	MY	OTr / PC	29/07/25
P03	Issued for planning, comments incorporated following client feedback	GP	OTr / RC	24/04/25
P02	Issued For Planning	DSB	OTr / RW	10/02/25
P01	Issued to Client and Planning Consultant for Comment	MY	OTr / RW	27/01/25

nationalgrid

Master Scheme No:	Sub-Scheme No:	Site:
101677		MARGAM

Scheme Name: Margam Substation

Document Title: Margam GIS Hall - Location Plan

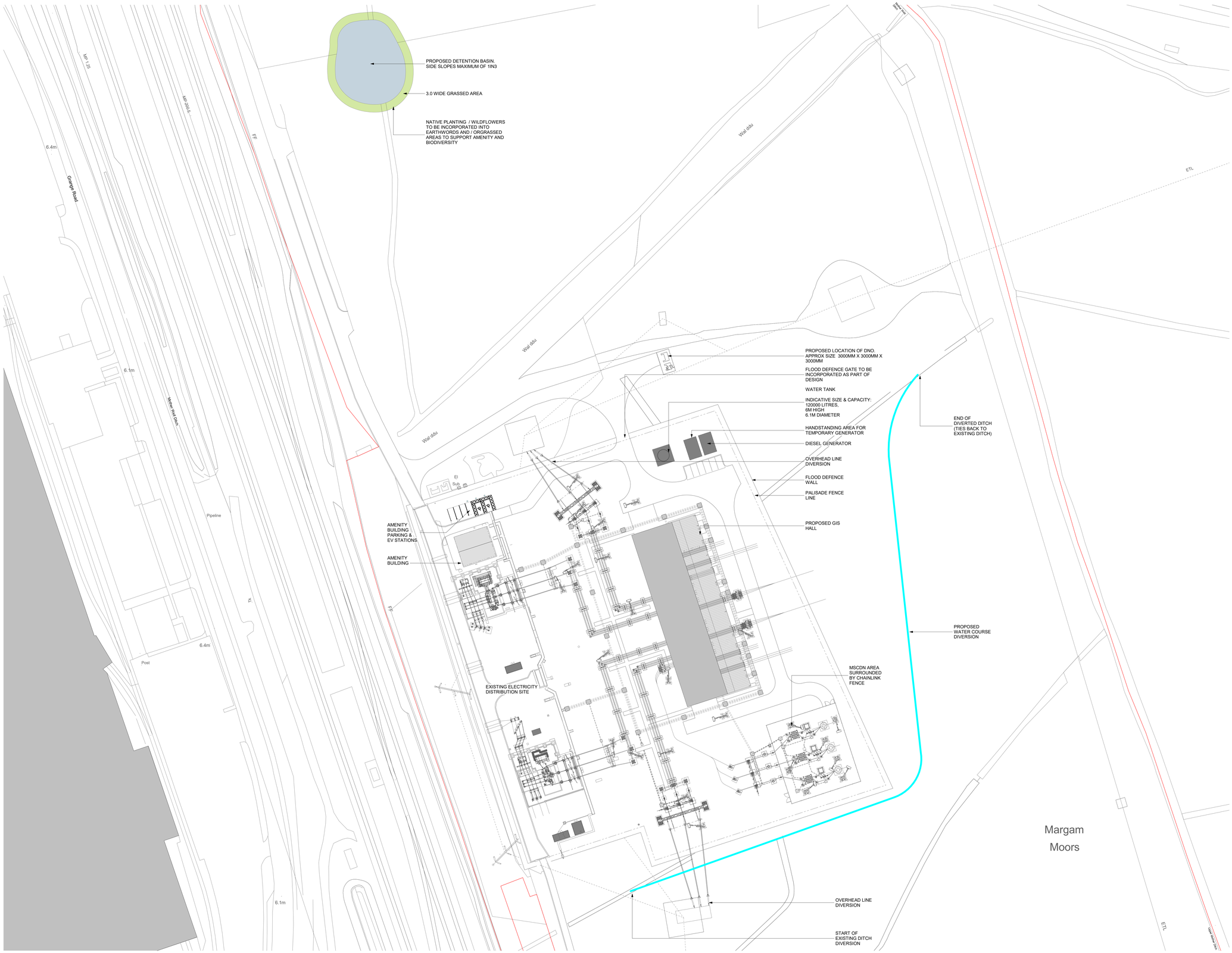
Created by:	Date:	Checked by:	Date:	Approved by:	Date:
MY	07/01/25	OTr	07/01/25	RW	07/01/25

Development Eng:	Document Type:	Scale:	Format:	Sheet(s):	Rev:
	DWG	1 : 2500	A1	1 OF 1	P04

National Grid Document Number: 13_LOR_0063

FEED Document Number: MARPT-BHK-01-ZZ-DG-A-130020

THIS IS A TP500 STAGE 4.2 DRAWING AND IS FOR DEVELOPMENT PURPOSES ONLY



1 Margam Site Plan - Proposed
Scale: 1 : 500

SCALE 1:500 (5 0 5 10 15 20 25 m)

For Planning

GENERAL NOTES

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SITE KEY

SITE BOUNDARY

SITE AREA: (154648.052 m2) (15.46 Hectares) (38.20 Acres)

BUILDINGS

PROPOSED WATERCOURSE DIVERSION

NOTE:

DRAWING TO BE PRINTED IN COLOUR

REFER TO PEAT MANAGEMENT STRATEGY FOR AREAS OF PEAT BURIAL LOCATIONS

P05	S3 For Review and Comment: Planning drawings updated following feedback with NPT on 24/07/25	MY	OTr / PC	29/07/25
P04	S3 - For Review & Comment. Updated Proposed Site Layout following Planning Consultant Feedback	OTr	OT/RC	30/06/25
P03	Issued for planning, comments incorporated following client feedback	GP	OTr / RC	24/04/25
P02	Issued For Planning	DSB	OTr / RW	10/02/25
P01	First Issue	DSB	RW / JK	03/02/25
Rev.	Description	Cre'd	Chk'd / Appr'd	Date

nationalgrid

Master Scheme No:	Sub-Scheme No:	Site:
101677		MARGAM

Scheme Name: Margam Substation

Document Title: Margam GIS Hall - Proposed Site Plan

Created by:	Date:	Checked by:	Date:	Approved by:	Date:
DSB	30/01/25	RW	30/01/25	JK	30/01/25

Development Eng:	Document Type:	Scale:	Format:	Sheet(s):	Rev:
	DWG	1 : 500	A0		P05

National Grid Document Number: 13_LOR_0066

MARPT-BHK-01-ZZ-DG-A-130023

APPENDIX B – CONSULTANTS COAL MINING REPORT

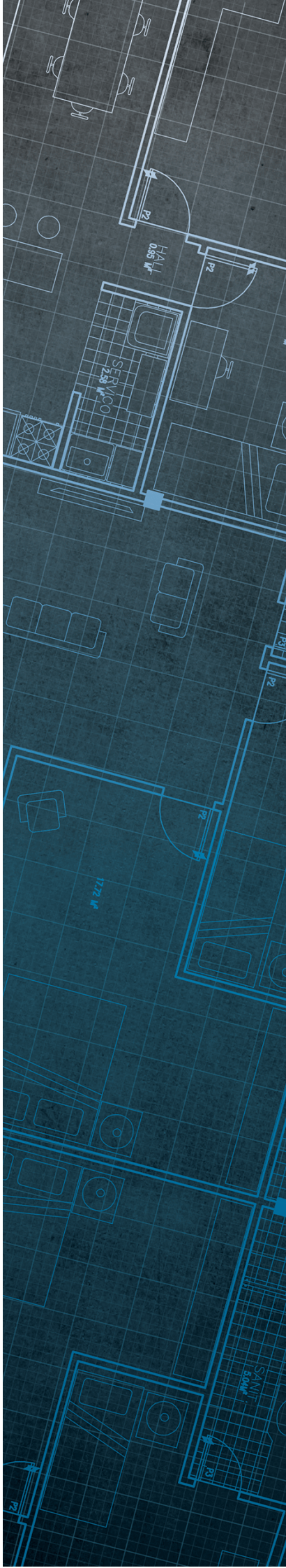
The Coal Authority

Consultants

Coal Mining Report

Margam
Neath Port Talbot
SA13 2BZ

Date of enquiry:	**13 August 2025**
Date enquiry received:	**13 August 2025**
Issue date:	**13 August 2025**
Our reference:	**51003518298001**
Your reference:	**GS-WGC-6U8-UTH-4L2**



Consultants

Coal Mining Report

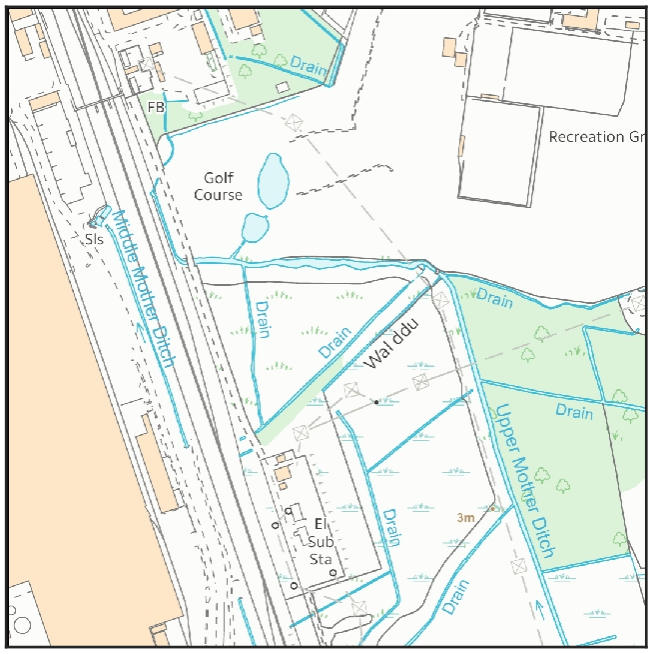
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GROUNDSURE LIMITED

Enquiry address

Margam
Neath Port Talbot
SA13 2BZ



Approximate position of property

Map data

How to contact us

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200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	LOWER NINE FOOT TOP LEAF	Coal	4Z2O	153	Beneath Property	26.4	North-East	210	1906
unnamed	FIVE FOOT	Coal	4Z2P	181	Beneath Property	21.5	North	330	1906
unnamed	GELLIDEG	Coal	4ESL	199	South	18.4	North	180	1913
unnamed	GELLIDEG	Coal	4Z2W	223	Beneath Property	26.6	North-East	240	1913
unnamed	FIVE FOOT	Coal	4Z2Q	250	West	17.9	N/A	200	1911
unnamed	GELLIDEG	Coal	4Z2S	252	West	19.4	North	240	1865
unnamed	FIVE FOOT	Coal	4Z2G	274	West	20.5	North-East	330	1906
unnamed	GELLIDEG	Coal	4Z2U	297	South-East	26.6	North-West	240	1913
unnamed	GELLIDEG	Coal	4Z2V	325	East	26.6	North-West	240	1913
MORFA	FIVE FOOT	Coal	4ECT	388	West	18.5	North	330	1911
MORFA	GELLIDEG	Coal	4ECX	429	West	18.4	North	240	1905
MORFA	GELLIDEG	Coal	4ECQ	512	West	18.5	North	240	1908

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

SWR3735	6252	PO0
3654	5851	

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
2FT NINE MID LEAF	Coal	Yes	Within	N/A	89
FOUR FOOT	Coal	Yes	Within	N/A	111
LOWER FOUR FOOT	Coal	Yes	Within	N/A	113
TWO FOOT NINE	Coal	Yes	Within	N/A	116
UPPER FOUR FOOT	Coal	Yes	Within	N/A	90

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

Distance to site investigation (m)	Direction
Within	N/A
Within	N/A
Within	N/A

See Section 4 for further information.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

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.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

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

Withdrawal of support notices
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.

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.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

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.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. 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. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines
Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips
Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations
Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites
Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence
Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

Mine water treatment schemes
Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining
Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing
Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders
Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices
Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

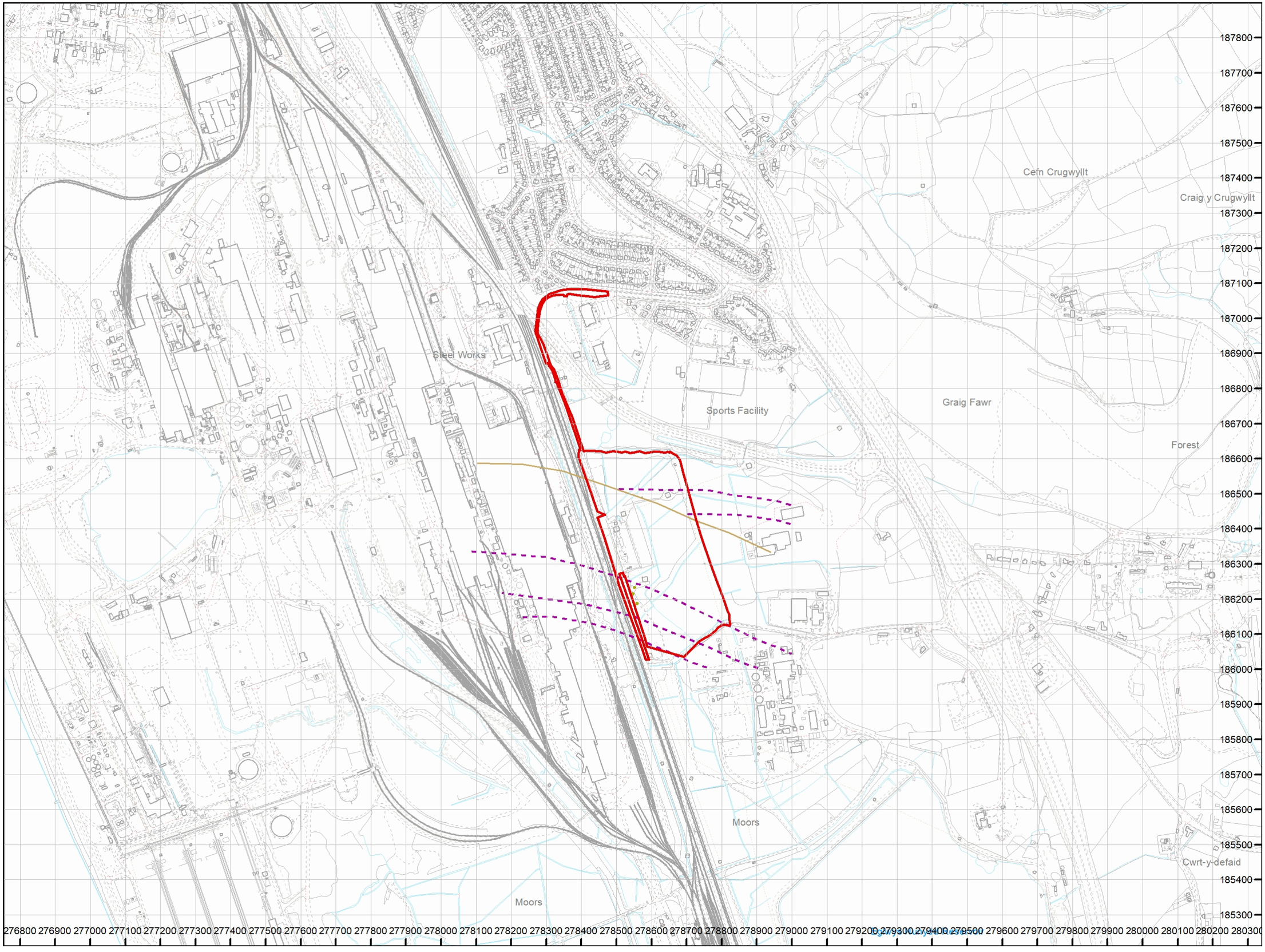
The Coal Authority

Summary of findings

The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown
- Outcrop (Conjectured)
- Geological faults
- Site investigations



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