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Windel Solar 8 Ltd
Suite 10 (Ground Floor)
Q11 Quorum Business Park
Benton Lane
Newcastle Upon Tyne
NE12 8BU

Date: 11th June 2025

Our Ref: C10389/10939/AMG

Dear Sirs,

Re: C10389 – COAL MINING RISK ASSESSMENT (CMRA) FOR PROPOSED ELY VALLEY SOLAR FARM

Windel Solar 8 Ltd instructed Sirius Geotechnical Ltd to carry out a review of desk-based information in relation to a proposed solar farm at land north of Ynysmaerdy, Rhondda Cynon Taf, to establish risks to site stability from coal mining.

This report is based on the Model Report Template within the *Mining Remediation Authority's Risk Based Approach to Development Management – Guidance for Developers* (Version 4 - 2017).

Site Location

The site is located c. 0.4km north of Ynysmaerdy and c. 0.8km east of Coedely in the Rhondda Cynon Taf County Borough Council local authority area, as shown on Sirius Planning Ltd Drawing No. WN1011/04/01, dated 23/05/25, a copy of which is included in Appendix A. The National Grid Reference of the site is 303100, 185100.

The total application site area including the cable run is c. 20.92 hectares.

Proposed Development

The proposed development layout is shown on Sirius Planning Drawing No. WN1011/04/03, dated 23/05/2025, a copy of which is included in Appendix A.

It is understood that the site is under consideration for development for a solar farm; vehicular access will be from the south, via the existing farm track leading off the A4119 Ely Valley Road. A DNO substation, customer cabin and spares cabin are proposed in the southern part of the site, with an underground cable run extending to the south.

Scope of Works

The scope of this document is intended to:

- Present a desk-based review of available information on the coal mining issues which are relevant to the application site;
- Assess the anticipated risks to the proposed development from coal mining legacy;
- Set out appropriate mitigation measures to address the coal mining legacy issues affecting the site, including site investigation and possible remedial works (if necessary), and;
- Demonstrate to the local planning authority that the application site is, or can be made, safe and stable to meet the requirements of national planning policy with regard to development of unstable land.

Sources of Information

The following sources of information have been used in compiling this report:

- Geological Survey of Great Britain 1:50,000 scale geological map Sheet 248, Pontypridd (drift), dated 1975;
- Geological Survey of Great Britain 1:63,360 scale geological map Sheet 248, Pontypridd (solid), dated 1963;
- County Series 1:10,560 scale geological map Sheets Glamorgan 36NW, 36SW, 35NE and 35SE, dated 1957 - 1984;
- Geological memoir: *The Geology of the South Wales Coalfield Part IV: The Country Around Pontypridd and Maesteg (Explanation of One-inch Geological Sheet 248)* (Third Edition, 1964);
- Mining Remediation Authority (MRA) Consultants Mining Report (copy in Appendix B);
- Historical Ordnance Survey (OS) maps available to view online on the National Library of Scotland website:
 - six-inch to one mile scale, dated 1830-1880;
 - six-inch to one mile scale, dated 1888-1915;
 - 25-inch to one mile scale, dated 1892-1914;
 - 1:25,000 scale, dated 1937-1961;
 - 1:1,250 / 2,500 scale, dated 1944-1974.

Mapped Historical Coal Mining Features (within 500m of the Site)

Review of historical mapping available to view online on the National Library of Scotland website did not identify any historical coal mining features within the site boundary.

The six-inch 1830-1880 series mapping shows two Trial Shafts, located c. 300m to the south-west of the site. The 1888-1915 series mapping shows that these are two Old Trial shafts. The 25-inch 1892-1914 and 1:25,000 scale series mapping shows a third Old Trial Shaft in proximity to the aforementioned two shafts.

Identification and Assessment of Site-Specific Coal Mining Risks

Geological Setting

The geological mapping records that the solid strata underlying the large majority of the site to comprise the Hughes Member (sandstone) of the Pennant Sandstone Formation (Carboniferous age).

In the southern margin of the site, the Hughes Member strata are shown to be underlain by Brithdir Member strata (also part of the Pennant Sandstone Formation), mostly comprising sandstone, although the County Series map shows a thin band of undifferentiated Brithdir Member strata immediately below the Cefn Glas coal seam outcrop.

A dip reading shown on the County Series map, c. 700m to the south of the site and within the same fault block as the majority of the site, shows that the strata dip 26 degrees to the north-east.

The Tyn-y-Nant Fault is shown to cross the northern end of the site from east to west. The southern side of the fault is shown to be downthrown.

Superficial deposits comprising Glacial Till (boulder clay) are shown to overlie solid strata in the large majority of the site. The proposed cable run in the southern end of the site is shown to be underlain by superficial deposits comprising Glaciofluvial Deposits (sand and gravel). The northern tip of the site is shown to be unaffected by superficial deposits.

There are no BGS borehole records within the site, or relevant records in close proximity to the site.

Coal Seams

The MRA Consultants Mining Report states that the following coal seams are conjectured to outcrop / subcrop within the site boundary:

- Darren Ddu (sufficient thickness and / or quality to be workable);
- Glyngwillyn (sufficient thickness and / or quality to be workable);
- Un-named coal seam (sufficient thickness and / or quality to be workable);

In addition, the Brithdir Rider Group (sufficient thickness and / or quality to be workable) is stated to outcrop c. 35m south-west of the site (and hence may underlie at least part of the site at shallow depth).

It should be noted that the plan within the MRA Consultants Mining Report shows the trace of conjectured coal seam outcrops / subcrops within the site, but does not label which trace corresponds to which seam. Furthermore, the outcrop / subcrop traces do not directly correspond to those shown on the geological maps reviewed.

The County Series geological maps reviewed shows that the Cefn Glas coal seam subcrops within the south of site, to the north of Dyffryn Farm. The thickness of this seam is given as 2ft / 2ft 6 inches (0.61m / 0.76m) on the County Series geological maps. The Cefn Glas seam is considered likely to be the Un-named Seam mentioned on the MRA Consultants Mining Report. Two other coal seams are conjectured to outcrop / subcrop to the north and south of the Cefn Glas seam on the plan within the MRA Consultants Coal Mining Report; however, these seams are not shown on any of the geological maps reviewed.

The geological memoir states that the Brithdir Rider in the area of the site comprises two thin seams (6 and 8 inches (0.15m and 0.20m)), separated by 6ft 8 inches (2.0m) of coal measures at Cwm Colliery, and that a thin coal seam, possibly the Glyngwilyn, occurs 100ft (30.5m) above the Brithdir Rider.

The thickness of the Darren Ddu seam is given as 2 ft (0.61m) on the County Series geological map.

Based on the review of all information sources as summarised above, the following sequence of coal seams appears to be potentially present at shallow depth below that part of the site to the south of the Tyn-y-Nant Fault (from youngest to oldest):

- Darren Ddu
- Cefn Glas;
- Glyngwilyn;
- Brithdir Rider (subcrops south-west of site, but may underlie south of site at shallow depth).

Based on assessment of geological mapping, no coal seams are likely to underlie the site at shallow depth to the north of the Tyn-y-Nant Fault.

Drawing No. C10389/01, in Appendix A, shows the current understanding of the location of the coal seam outcrops / subcrops and fault referred to in this report.

Recorded Mine Workings

There are no recorded mine workings underlying the site, either shallow (i.e., <30m bgl), or deep, recorded within the MRA Consultants Mining Report.

Unrecorded Shallow Mine Workings

The MRA Consultants Coal Mining Report states that the site is not in an area where the MRA believes that there are potential unrecorded shallow coal mine workings (i.e., 30m bgl or shallower), despite the recorded conjectured outcrops / subcrops of several coal seams.

The MRA Interactive Viewer records the coal outcrops (only) as being Development High Risk Areas.

Mine Entries

The MRA Consultants Coal Mining Report notes that there are no recorded coal mine entries known to the MRA within, or within 100m of, the site boundary.

However, there may be unrecorded mine entries in the local area that do not appear on MRA records.

Opencast Coal Mining and MRA Managed Tips

The MRA Consultants Coal Mining Report states that there are no recorded historical or current opencast mines or MRA managed tips within 500m of the site.

Previous Site Intrusive Investigation Findings

Sirius is not aware of any previous intrusive ground investigation having been undertaken at the site.

Summary of Coal Mining Risks:

The following table below summarises the potential risks associated with coal mining legacy for the proposed development:

Coal Mining Issue	Yes	No	Risk Assessment
Underground Coal Mining (recorded at shallow depths)		✓	No shallow coal mine workings are recorded by the MRA below the site.
Unrecorded underground Coal Mining (potentially at shallow depth)		✓	Up to four coal seams are conjectured to potentially lie at shallow depth at the site, which are all said to be of sufficient thickness and / or quality to have been worked. However, there are no indications of historical coal mining infrastructure or features within or in proximity to the site (e.g., railways, mine shafts, etc.).
Mine entries (shafts and adits)		✓	There are no recorded mine entries in, or within 100m of, the site. There are no recorded deep coal mine workings below the site. Therefore, the probability of unrecorded mine entries being present is considered to be low, but cannot be fully dismissed.
Coal mining geology (fissures)		✓	A geological fault is recorded within the site. However, no coal mine workings (which may reactivate fault movement) are recorded beneath the site.
Record of past mine gas emissions		✓	There is no record of a mine gas emission requiring action by the MRA within the boundary of the site, or within 500m of the site.
Recorded coal mining surface hazard		✓	The MRA states that the property has not been subject to remedial works under its Emergency Surface Hazard Call Out procedures.
Surface Mining (opencast workings)		✓	There are no opencast workings recorded by the MRA or BGS within the site or surrounding area.

Conclusions and Recommendations

This assessment has identified that there are several coal seams of workable thickness / quality that may lie at shallow depth at the site. There are no recorded shallow coal mine workings or entries at the site however, nor any evidence of potential unrecorded shallow mine workings.

The risk from mine workings to surface stability is currently considered as low. To confirm this tentative conclusion, which is based on desk study information only, we recommend some limited rotary probe drilling to corroborate the stratigraphy and the absence of any workings at the proposed locations of settlement-sensitive structures, e.g., substations.

It is hoped that the above is adequate for your present needs. If you should require clarification of any points or would like to discuss the next course of action, please do not hesitate to contact us.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Adrian Grant', with a stylized, flowing script.

Adrian Grant
Principal Engineer

For and on behalf of Sirius Geotechnical Ltd

Encs:

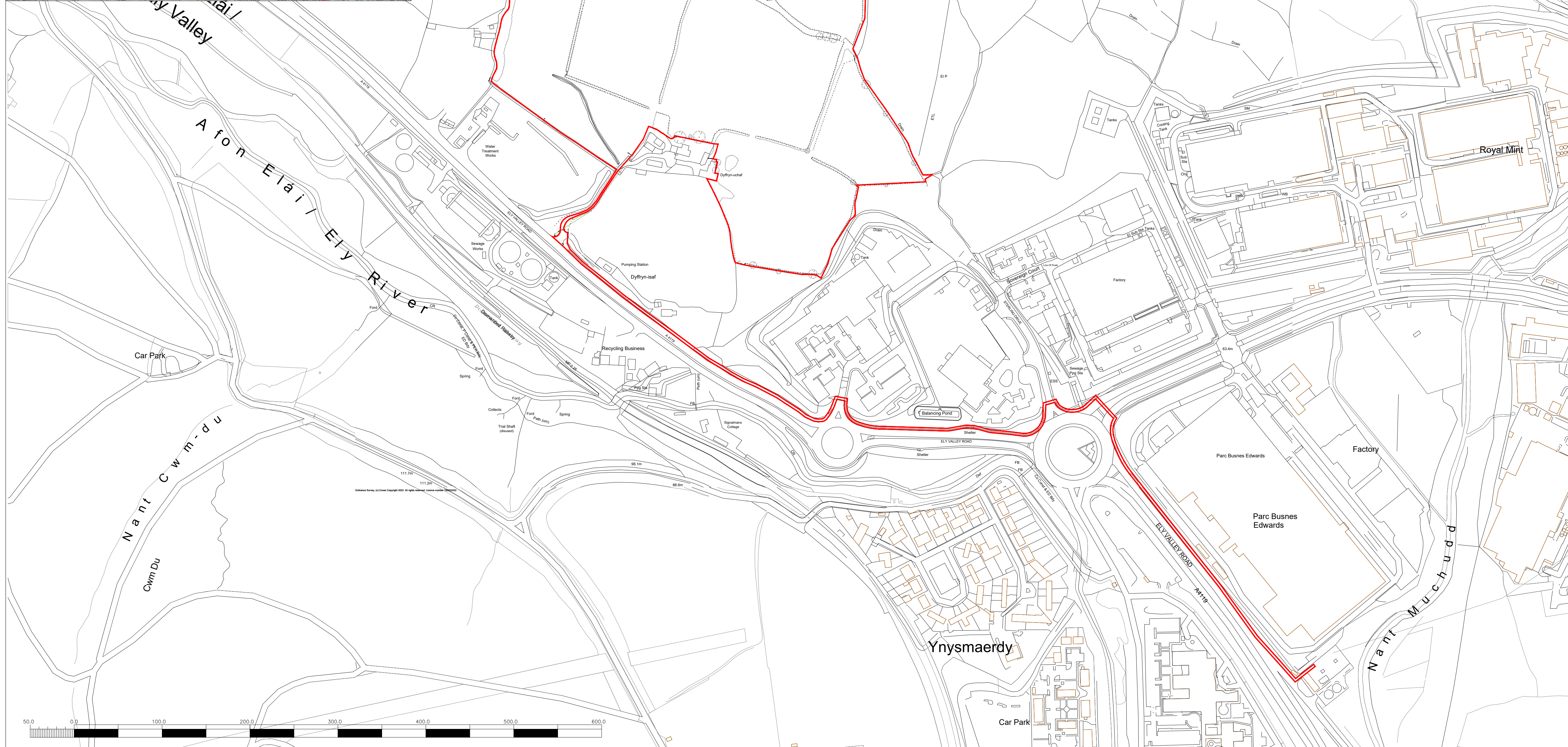
Appendix A: Drawings

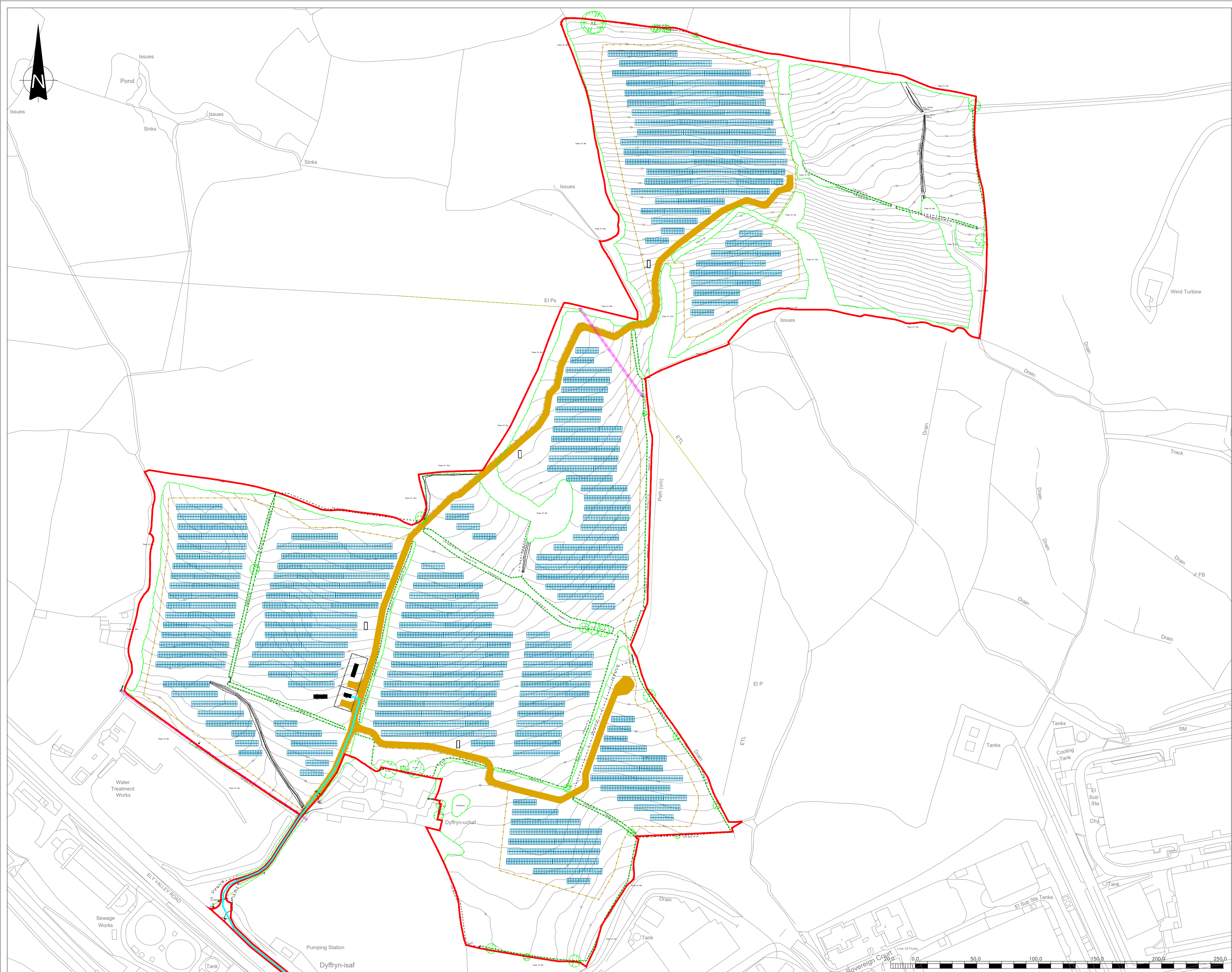
Appendix B: MRA Consultants Mining Report



APPENDIX A

DRAWINGS

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - PROPOSED PERIMETER DEER FENCE
 - PROPOSED PALISADE SECURITY FENCE
 - PROPOSED CABLE ROUTE
 - PROPOSED ACCESS TRACK
 - PROPOSED PV PANELS
 - PROPOSED SPARES CABIN
 - PROPOSED TRANSFORMER
 - PROPOSED DNO SUBSTATION
 - PROPOSED CUSTOMER CABIN

REV	DESCRIPTION	DATE	BY
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CLIENT

**WINDEL
SOLAR 8 LTD**


4245 Park Approach, Thorpe Park, Leeds. LS15 8GB. 0113 264 9960

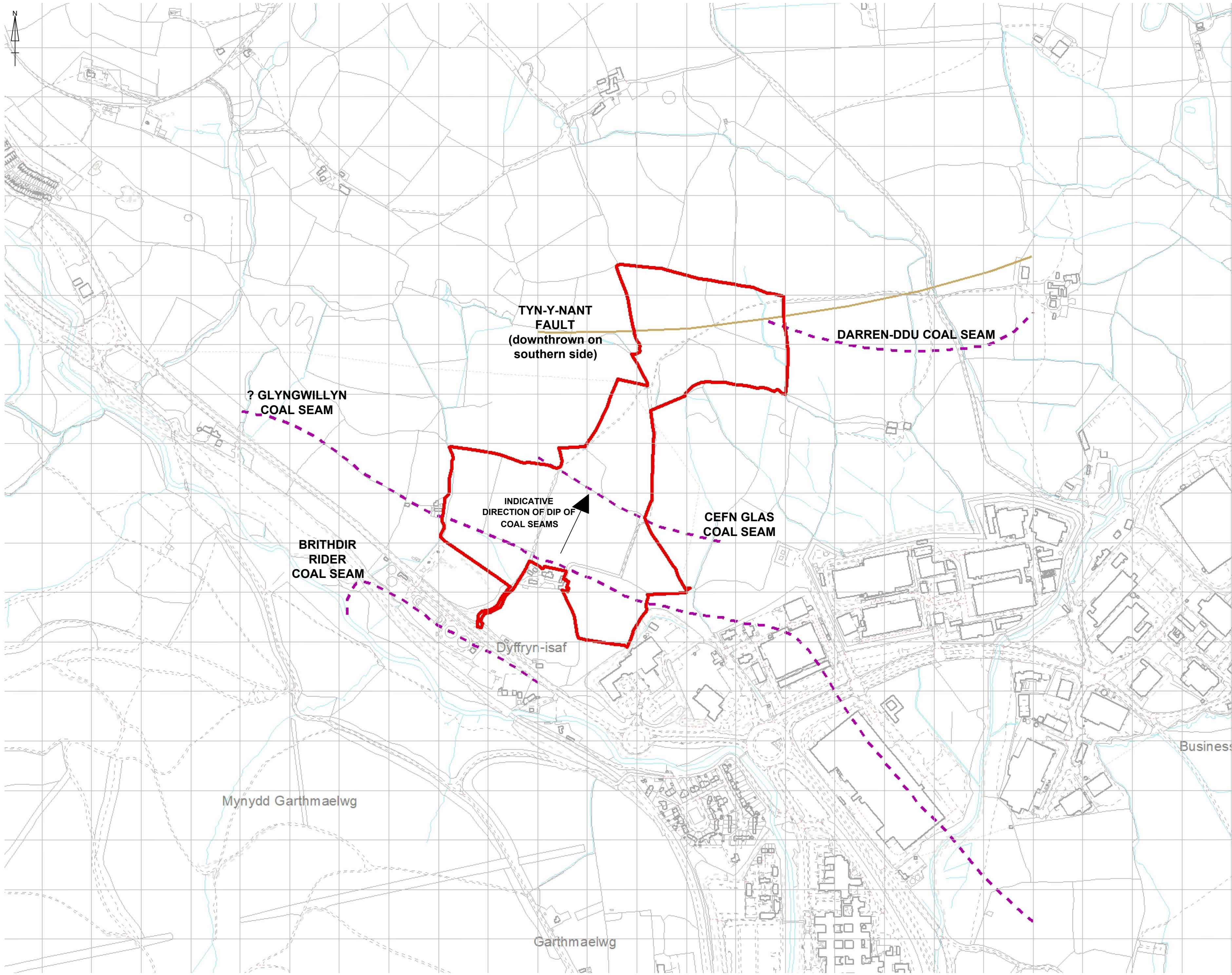
JOB TITLE

ELY VALLEY SOLAR FARM

DRAWING TITLE

SITE LAYOUT

DRAWN	DATE	APPROVED	DATE
S.T	23/5/2025	J.C	23/5/2025
SCALE	SHEET	DRAWING NUMBER	REVISION
1:2000	A2L	WN1011/04/03	0



KEY

Approximate Site Boundary

Outcrop and Seam Names (Conjectured)

Geological Faults

Trace of Conjectured Outcrops and Geological Faults are Taken from the MRA Consultants Coal Mining Report


Notes

1. This drawing should not be viewed in isolation from the accompanying report.

2. All marked site features (including historical features, mining features, potential contaminant constraints, and any other potential constraint or feature of note) shown on this drawing are given for indicative purposes only. This drawing should not be underlaid in isolation to determine proposed development layouts. Reference should be made to the accompanying report for commentary on the potential location of these features including coordinates if available and any further works required to locate features if required.

REVISION		BY	DATE
0	For Information	MF	17/03/25
A	>>	>>	>>
B	>>	>>	>>
C	>>	>>	>>
D	>>	>>	>>

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CLIENT

Windel Solar 8 Ltd

SITE

Ely Valley Solar Farm

DRAWING TITLE

Coal Mining Features Plan

DRAWING NO. C10389/01		REVISION NO. 0	
DRAWN BY MF		APPROVED BY AMG	
DATE March 2025	SCALE 1:5,000	PAPER SIZE A2	






APPENDIX B

MRA CONSULTANTS MINING REPORT

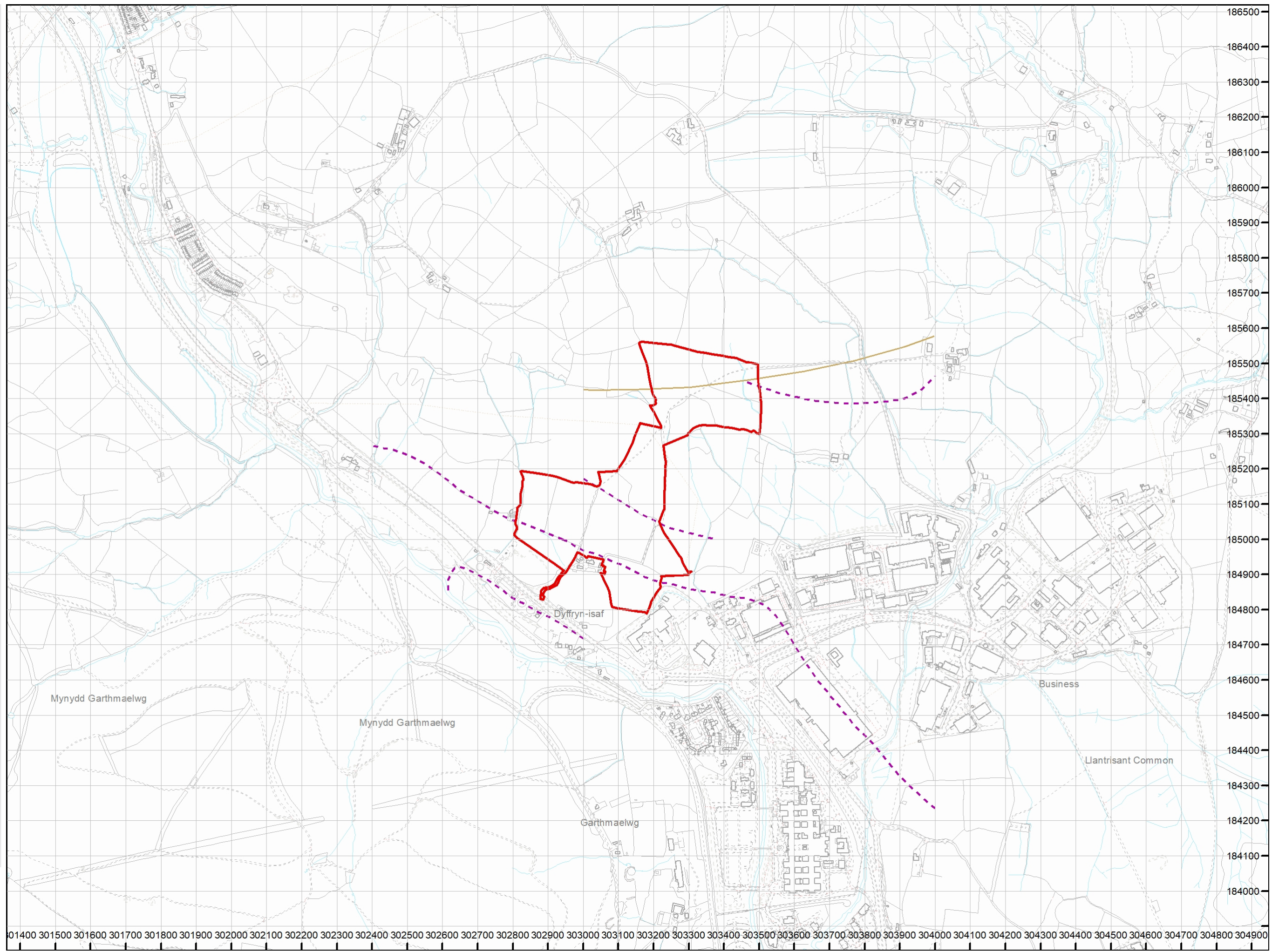
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

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

How to contact us

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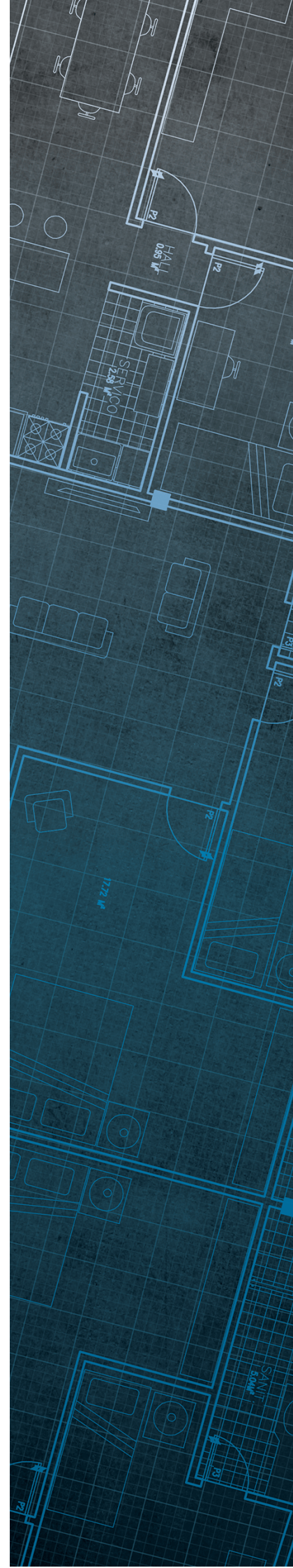
The Coal
Authority

Consultants Coal Mining Report

Duffryn Farm
Ely Valley Road
Pontyclun
Rhondda Cynon Taff

Date of enquiry:	11 March 2025
Date enquiry received:	11 March 2025
Issue date:	11 March 2025

Our reference:	51003484968001
Your reference:	371868721_1



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

NLIS Hub

Enquiry address

Duffryn Farm
Ely Valley Road
Pontyclun
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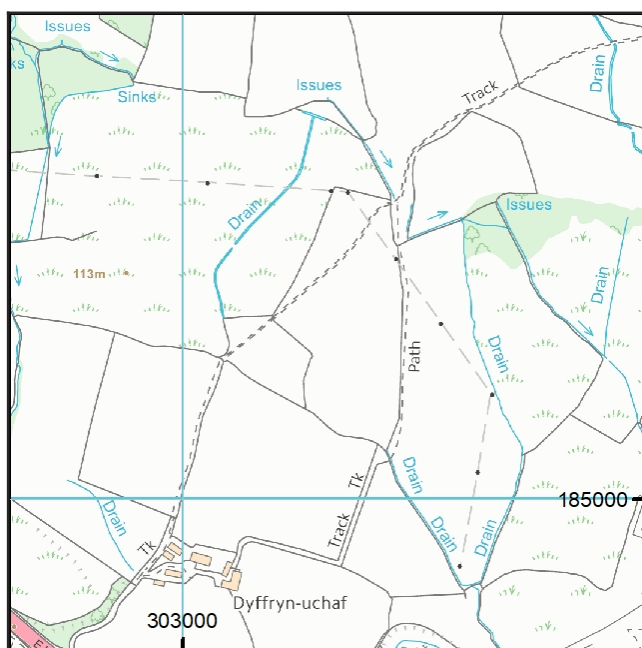
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 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

No past mining recorded.

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:

PO0		
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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
BRITHDIR RIDER GROUP	Coal	Yes	35.4	South-West	121
DARREN DDU	Coal	Yes	Within	N/A	116
GLYNGWILLYN	Coal	Yes	Within	N/A	99
GLYNGWILLYN	Coal	Yes	Within	N/A	108
GLYNGWILLYN	Coal	Yes	Within	N/A	119
UNNAMED	Coal	Yes	Within	N/A	108

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

None recorded within 50 metres of the enquiry boundary.

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 in an area where notices to withdraw support were given in 1945.

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

Based on the responses in this report, no further information has been highlighted.

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.

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.