COAL MINING RISK ASSESSMENT AND MINERAL ASSESSMENT

Maes Mawr, Pontypridd

Elgin Energy EsCo Ltd

JER8521
Maes Mawr Solar Farm
1
2
24 February 2022

rpsgroup.com

Quality Management

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Contents

Tables

Drawings

Appendices

1 INTRODUCTION

1.1 Scope of Works

1.1.1 RPS Consulting Services Ltd (RPS) was commissioned by Elgin Energy EsCo Ltd to undertake a Coal Mining Risk Assessment and Minerals Assessment at a proposed development site at Maes Mawr, to the southeast of Pontypridd, Rhondda Cynon Taf (herein referred to as the Application Site or Site). It is proposed to develop the Site as a solar photovoltaic park, with associated ancillary development, for which a provisional masterplan has been produced (*Drawing JPW1546-DNS-002*).

1.1.2 The Site is located at approximate National Grid Reference (NGR) 309975 E, 185496 N, with a location plan provided as *Drawing JPW1546-DNS-003.* At present, the Site comprises treelined undeveloped fields with an unnamed access road running north to south through the centre, off Maesmawr Road in the north. The Site is bounded to the west by the A473, and off the main central track, an unnamed road runs east towards an existing adjacent solar farm and Johnson L and Son Farm.

1.1.3 It should be noted that the Site boundary, as presented in *Drawing JPW1546-DNS-003,* narrows in the north along Maesmawr Road to the north east, beneath the railway and into the industrial estate to join Willowford Road and onto Tonteg Road, where it terminates at an electrical sub-station. It is understood that this is the route the cable will be routed below ground to connect the solar farm to the electrical sub-station.

1.1.4 Planning for the development has not currently been sought. Reference to The Coal Authority confirms that the development is within a Coal Mining High Risk Area. Under the provision of the Rhondda Cynon Taf County Borough Local development plan (Adopted 2011) parts of the site are within an area designated as requiring securing of an adequate supply of minerals (Sandstone Resources) (Policy AW-14).

1.2 Objectives

1.2.1 This report presents a desk-based assessment of the risk from coal mining, and a high level assessment of potential mineral reserves affected by the development of the Site. RPS shall undertake a review of the potential mineral safeguarding status of the Site.

1.2.2 The objective of the report is to use all available desk-based information to assess potential risk to the proposed solar farm development from past coal mining activities undertaken at or directly adjacent to the Site, and to identify constraints associated with mineral safeguarding policies applicable to the Site (principally policy) that may require further consideration by mineral planners.

1.3 Limitations

1.3.1 This report is limited to the information available at the time of production, including Coal Authority Non-Residential Mining Report (51002680293001), Coal Authority Non-Residential Coal Mining Consultants Report (51002713871001), Coal Authority Shaft Plan and Data Sheets (51002713871003), the 1:10,000 scale Geological Maps (ST18NW and ST08NE) plus other additional research including internet resources.

2 SITE SETTING

2.1 Site Description

2.1.1 The designated location of the Application Site is on land off the A473, east of Church Village, Tonteg, Rhondda Cynon Taf, CF38 1SL. The Application Site lies approximately 150 m east of Church Village and adjacent to a current solar farm to the southeast of the Application Site boundary (immediately beyond Pound Farm Lane).

2.1.2 The Ordnance Survey National Grid reference (NGR) for the centre of the Application Site is approximately 309975 E, 185496 N.

2.1.3 As discussed in paragraph 1.1.2 (Section 1), the Application Site comprises undeveloped fields surrounded by hedgerows and a tarmacadam road providing access to Pound Farm Lane, running north to south through the centre of the Application Site. Sporadic woodland areas are identified to the north and south of the Application Site including ancient woodland bounding the site boundary to the northeast and a series of drains are present across the Application Site. Overhead electricity cables run north to south across the western region of the Application Site with pylons located in the centre west and on the northern boundary. A pond is located in the central section of the Application Site but is not included within the site boundary and will not be discussed in the remainder of this report.

The Site

2.1.4 A targeted site walkover was undertaken at the Application Site following review of the available historical maps, on 10th November 2021. The walkover targeted the potential historical location of a mine shaft to the centre of the Application Site and a former old tramway that once ran along the north boundary of the Site, all west of Pound Farm Lane.

General Observations and Topography

2.1.5 The Application Site mainly comprised undeveloped fields separated by forested ditches and streams, with the exception of an area of hardstanding directly opposite Maes Mawr Farm.

2.1.6 Generally the topography is greatest east of Pound Farm Lane and slopes towards the centre of the Application Site. Beyond a large pond (not included as part of the Application Site), the topography then plateaus westerly

2.1.2 The Site slopes from approximately 134mAOD in the northeast to approximately 95mAOD in the southwest, with the eastern flank of the Site sloping more steeply to the east towards the River Taff at the base of the valley.

Central Area - Potential Mine Shaft and Watercourse

2.1.1 A 2-metre wide meandering watercourse which eventually narrows in the north of the Application Site is located running through the central region of the Application Site.

2.1.2 The Coal Authority records a shaft in the vicinity of the central pond (mine shaft 310105-001). The RPS Coal Mining and Mineral Risk Assessment should be consulted for further details on the historical coal mining activities at the Application Site. The workings date back to the 1870s and no visual evidence of an abandoned or treated shaft was identified during the walkover. No obvious depressions were identified across the field where the shaft is recorded to be located or the field adjacent (to the north).

Northwestern Boundary – Old Tramway

2.1.3 From review of the historical maps, there is evidence an old tramway ran along the northwestern boundary of the Application Site. The tramway was disused by 1875 however seems to have

connected westwards with the Llantrisant and Taff Vale Junction Railway line. It appears to terminate at Maes Mawr Colliery (before reaching Taff Vale Railway) and is likely to have been a mineral tramway.

2.1.4 No evidence of the old tramway was identified during the site walkover however the cutting within which the tramway ran was still present and planted with trees. The base of the cutting is roughly 3 to 4 m below ground level, becoming gradually shallower towards the west to between 1 and 2 metres below ground level and narrows to a stream as it reaches the A473 (former route of the Llantrisant and Taff Vale Railway). Areas of the cutting were submerged below water and also contained a stream.

2.1.5 A historical borehole which had been fenced off was identified in the northwestern section however there does not appear to be evidence of a borehole at this position on the BGS online information system. The borehole has an installation cover and does not appear to correspond with any historical shafts identified by the Coal Authority.

North Area – Hardstanding and Stockpiles

2.1.6 Although no historical evidence of a contamination source in the north was identified from the historical maps, part of the Application Site (immediately south of the cable route, west off Pound Farm Lane) comprises the southern tip of the landowners laydown area. It comprises a compacted gravel track with several wrapped hay bales and raised ground up to approximately 1.50 m above natural ground level with rubble materials including tarmacadam blocks and concrete slabs. The area of hardstanding appears to be a holding area for farm machinery and old storage tanks (unknown former contents).

The Surrounding Area

2.1.7 The site is located in an area of mixed rural and industrial land uses. At the time of the site inspection, neighbouring land consisted of the following:

Table 2-1 Neighbouring Land Uses

Direction	Description
North:	Agricultural land and isolated farm complexes.
East:	Agricultural land and Treforest Estate Railway Station beyond, associated with the Cardiff to Merthyr Tydfil railway running north to south. East of the rail line is Treforest Estate Industrial Park and an electrical sub-station to the north of the industrial park, off Tonteg Road. Maes Bach solar park is located to the south-east of the Application Site immediately beyond Pound Farm Lane.
South:	Undeveloped fields and sporadic isolated warehouse/small industrial sites off access routes.
West:	Immediately west is the A473 and beyond, the villages of Tonteg and Church Village.

2.1.8 The River Taff is approximately 470 m east of the main Application Site and approximately 15 m east of Tonteg Road where the cable route is proposed.

2.1.9 Several industrial land uses have been identified at Treforest Estate Industrial Park. A number of active facilities identified within 50 m of the Application Site include but are not limited to: Griffin Mill car dealers immediately off the proposed cable route through the industrial estate; Hutchings car dealers approximately 26 m to the southeast; Socket Store electrical goods sales some 29 m to the southeast; Esso Petrol Filling Station circa 33 m to the southeast; Cardiff Engineering and Fabrications circa 43 m to the southeast.

2.2 Proposed Development

2.2.1 The proposed development is to comprise a temporary 35 MW photovoltaic solar farm with ancillary development. At the time of writing, RPS has been provided a draft masterplan layout for the proposed development to include seven interceptor substations, one primary interceptor and

access roads associated with the solar park. A draft masterplan layout is presented in *Drawing JPW1546-DNS-002* (dated October 2021).

2.3 Geological Setting

2.3.1 The 1:50,000 geological map for the area (Sheet 249) has been reviewed to establish the geology at the Application Site and in the surrounding area. In addition, borehole records held by the BGS have been reviewed (BGS Geoindex Onshore). A summary of the expected geology on the Application Site is provided in Table 2.2. It should be noted that the geology has been divided into the main solar farm site and cable route area.

Table 2-2 Geological Sequence on the Site

Stratum	Formation & Description	Units / Coal Horizons	Thickness
Main Solar Farm Site			
Made Ground	Not expected to be present across the majority of the Site. Potentially present within a worked out coal seams area as identified below.	N/A	
Glacial Till	Glacial Till (Diamicton) underlies much of the Site comprising poorly sorted clay, silt, sand and gravel in a matrix of silt/clay or sand. BGS borehole logs* identify Glacial Till as loose and medium dense orange and grey clayey silty sand with cobbles and boulders or cohesive firm to stiff orange and brown sandy silty clay/clayey silt with occasional gravel.	N/A	2.10 m – 4.95 m
Glaciofluvial Deposits (central eastern part of Site)	Unconsolidated sand and gravel. Indicated to be potentially a worked out coal seams area.	N/A	
Bedrock	The main Site is underlain by Grovesend Formation – mudstone, siltstone and sandstone and older Grovesend Formation – sandstone, and towards the north of the Site, by Hughes Member – mudstone, siltstone and sandstone and older Hughes Member – sandstone. This is due to a number of normal fault lines trending N-NW – S-SE.	The following coal seams and sandstone units are Big Rider (No 1 Llantwit) 1m thick in 3 coals) Thin coals Small Rider (No 2 Llantwit) 1m thick in 2 coals Mynyddislwyn – (No 3 Llantwit) 1m	
Cable Route			
Made Ground	It is anticipated that the access road, Maesmawr Road, is underlain by general fill comprising clay with brick) and road base material. Based on aerial photography, there does not appear to be a tarmacadam cover along this road. Supported evidence from BGS historical logs: ST18NW199, ST18NW201.	N/A	0.15 – 0.20 m, up to 1.50 m thick within industrial estate
Superficial Deposits	Glacial Till (Diamicton) underlying Maesmawr Road to the east of the railway – poorly sorted clay, silt, sand and gravel in a matrix of silt/clay or sand. Outlier of glaciofluvial deposits (RTD) along the railway – unconsolidated sand and gravel Alluvium (ALL) is indicated to the east of the railway – clay, silt, sand and gravel overlying river terrace deposits (sands and gravels)	N/A	1.70 – 2.15 m 0.10 m (ALL) 9.75 m - 17.10 m (RTD)
Bedrock	Hughes Member sandstone is identified to the west of the railway as green-grey lithic arenites within thin mudstone/siltstone and seatearth interbeds with mainly thin coals. Narrow band of Hughes Member mudstone, siltstone and sandstone as an outlier.		

Stratum	Formation & Description	Units / Coal Horizons	Thickness
	Grovesend Formation – mudstone, siltstone and sandstone: argillaceous, comprising mudstone and siltstone with well-developed coals with minor lithic sandstones.		
	Brithdir Member – sandstone: green grey lithic arenites with conglomerate lenses at base of unit, thin mudstone/siltstone and seatearth interbeds and mainly thin coals.		

2.3.2 The 1:10,000 geological maps (ST18NW and ST08NE) shows that the Site is underlain as outlined in the bedrock description above.

2.3.3 Geological faults are indicated to be present across the Assessment Site trending generally north-north-west to south-south-east. The downthrown side is indicated to be on the east.

2.3.4 BGS online available mapping indicates that the majority of the Site is underlain by superficial deposits comprising Glacial Till with sporadic areas of Glaciofluvial Deposits and Alluvium associated with the River Taff. The bedrock is identified as a number of blocks (due to a series of faults in the region) belonging to various age Grovesend and Hughes Formations of the Upper Coal Measures. The Brithdir Member is also identified to underlie the road routes in the north of the Assessment Site within the vicinity of the electrical sub-station.

2.3.5 Dip arrows indicate beds dip 26° to the southeast and 30° to the south in the southern central area of the Site. It is unclear as to whether the beds are folded within the faulted blocks.

2.3.6 Available BGS borehole logs immediately to the southwest of Maes Mawr (farm) indicate the superficial deposits to be approximately up to 2.50-4.00 m. The bedrock is proven to 34-36m depth with no coal seams noted.

2.3.7 Made Ground is generally not anticipated to be present at the ground surface of the main Assessment Site owing to its undeveloped nature. Made Ground may be present within an area indicated to potentially be a worked out coal seams area. Made Ground in the form of fill and sub-base is expected along the northern road routes including the farm track, and to a considerable thickness within the industrial estate, as evidenced by the BGS borehole logs in the vicinity of this area.

2.3.8 Within the Grovesend and Hughes Members, there are numerous coal seams identified on the geological map. The geological map shows that named coal seams ‘No. 1 Llantwit, No. 2 Llantwit, No. 3. Llantwit and the Daren-Ddu sub-crop (i.e. outcrop at the base of the superficial deposits) within the Assessment Site boundary as shown in Table 2-2.

3 DATA REVIEW

3.1 General

3.1.1 In the context of the site setting described in Section 2 the following data is reviewed in this section:

- Coal Authority Non-Residential Mining Report (*Ref. 1*);
- Coal Authority Non-Residential Coal Mining Consultants Report (*Ref. 2*);
- Coal Authority Mine Entry Plans and Data Sheets (*Ref. 3*);

3.2 Coal Authority Non-Residential Mining Report (*Ref. 1*)

3.2.1 A copy of the Coal Authority Non-Residential Mining Report (CON29M) was obtained for the Site and is provided within *Appendix A*.

3.2.2 The report states that the Site is recorded in an area that could be affected by underground mining in 2 seams at shallow depth to 230m, last worked in 1871.

3.2.3 The report states that the Site is not recorded to be within a surface area that could be affected by present underground mining or where there are plans to grant a licence to remove coal. The report does state that reserves of coal exist in the local area which could be worked at some time in the future.

3.2.4 The Coal Authority report identifies that there are 4 mine entries within the boundary plot. This includes a mine shaft (310185-001) in a central location in the northern half of the solar park. There is an additional mine shaft and two mine adits on the cable route. One adit is located to the north of the solar park (310186-023) and an adit and shaft are located on the northeast side (310186-016) and southwest side (310186-025) of the railway respectively, where the cable crosses. The presence of an adit commonly indicates relatively shallow mine workings. The adits are shown to face southwest, away from the centre of the Assessment Site.

3.2.5 The Site is not within or adjacent to the boundary of an opencast coal site and there are no current licence requests to remove coal from the property by opencast methods, according to the Coal Authority report.

3.2.6 The Coal Authority has no records available that indicate there are subsidence issues at the property due to geological faults. Note that in Coal Authority reports, ‘property’ refers to the Site. The Coal Authority has not received a damage claim related to coal mining subsidence for the property since October 1994. However, the report does state that the property has been subject to remedial works, by or on behalf of the Coal Authority under its Emergency Surface Hazard Call Out procedures.

3.2.7 The Coal Authority has no records to indicate the Site is affected by the release of mine gas from historic workings.

3.3 Coal Authority Non-Residential Coal Mining Consultants Report (*Ref. 2*)

3.3.1 A copy of the Coal Authority Coal Mining Consultants Report (CMCR) is presented within *Appendix A*.

3.3.2 The CMCR provides additional details as to the names and thicknesses of the principal coal seams and surrounding collieries that mined these resources. The details of the two named seams present (and known to have been worked) beneath the property are summarised as follows:

- **Mynyddislwyn Lower Leaf (3 records) -** extracted by an unnamed Colliery, last worked 1871. The coal seam is reportedly 1.00 m in thickness and is located approximately between 5 m, 35m and 90m below ground level (bgl). To the east of the site the same seam is recorded to be dipping 15.6° to the south-east;
- **Swansea 3ft (1 record) -** extracted by an unnamed Colliery, last mined 1871. The coal seam is reportedly 1.0 m in thickness and is located approximately 143 mbgl;

3.3.3 The CMCR states that geological faults are present under or close to the property. The geological mapping confirms that faults are known to be present in the west and east of the Site.

3.3.4 The CMCR indicates several mine entries within or close to the boundary of the site and along the cable route. 310185-001 is the shaft within the northern area of the Application Site. which is assumed to intersect the Llantwit No 2 seam. The report states that there is no record of treatment and that extensive excavations completed in 1985 in an attempt to locate it were unsuccessful. 309185-003 on the southwest boundary has no treatment recorded.

3.3.5 310186-023 and 310186-016 are adits where no treatment is indicated.

3.3.6 There are proven outcrops across the centre (likely associated with the shaft on Site) and in the southwest of the site. The former likely to be the Llantwit No 2 seam, the latter unnamed coal seams.

3.4 Coal Authority Shaft Plan and Data Sheets (*Ref. 3*)

3.4.1 A copy of the Coal Authority Mine Entry Plans and Data Sheet is presented within *Appendix A.*

3.4.2 The Coal Authority Mine Entry Plan and Data Sheet provides further details on the shafts and adits within the Application Site as they appear on abandonment plans.

3.4.3 No information regarding names, dates or depths is given in the Mine Entry Plan and Data Sheet.

3.4.4 The approximate positions of the shafts and adits in relation to the Site boundary are depicted within the figure presented within *Appendix A.*

3.5 Summary of Relevant Information

3.5.1 The data review corroborates the expected geological setting set out in *Section 2.2*.

3.5.2 The geological sequence comprises superficial glacial Boulder Clay, and the Upper Coal Measures comprising the Grovesend Member across the majority of the site with the Hughes Member to the north. The closest BGS borehole logs are not available for the Site itself, nearby available borehole logs for the area indicate the superficial deposits in the local area are likely to be < 5m thick. The bedrock Coal Measures are expected to be over 450 m thick.

3.5.3 Numerous coal seams are known to be present below the Site within the Coal Measures, with many of them having been worked from underground mines in the past. The shallowest of the known worked seams sub-crops in the northern half of the site where greatest mining activity is indicated.

3.5.4 Shallower coal seams identified within the Coal Authority reports sub-crop within the Site (as shown on the geological map). Whilst there are no records that these shallow coal seams have been worked, the presence of unrecorded workings cannot be discounted.

3.5.5 Two adits and one shaft identified along the cable route have no records to confirm if they have been subject to either treatment or capping. The shaft ref 310185-001 located in a central location on Site is noted on abandonment plans but excavations to locate this were not successful. There are no obvious indications on site of the shaft location.

3.5.6 There is no information regarding historical open cast coal mining; although the geological sequence does identify shallow coal seams.

4 MINERALS ASSESSMENT

4.1 Introduction

4.1.1 Under the provision of the Rhondda Cynon Taf Local Development Plan (adopted March 2011), developments within the wider area must consider the safeguarding of minerals (coal and/or aggregate), where present.

4.1.2 This section forms an assessment of the requirements for mineral safeguarding at the Site.

4.2 Regulatory Context

4.2.1 Policy CS10 – Minerals states that "The Council will seek to protect resources and to contribute to the local, regional and national demand for a continuous supply of minerals, without compromising environmental and social issues, by;

1. Maintaining a minimum 10 year landbank of permitted rock aggregate reserves throughout the plan period (to 2021), together with an extended landbank in the form of a Preferred Area of Known Mineral Resource;
2. Defining safeguarding areas for mineral resources, including coal, high quality hard rock, limestone and sand and gravel, taking into account the range, quality and extent of resources and environmental, planning and transportation considerations;
3. Where proven resources are under threat from sterilisation by necessary development, the pre-working of the mineral resource will be encouraged;
4. Ensuring that appropriate restoration and aftercare measures are incorporated;
5. Promoting efficient usage, minimising production of waste, and promoting alternatives to primary won aggregates;
6. Ensuring that impacts upon residential areas and sensitive land uses from mineral operations and the transportation of minerals are limited to an acceptable proven safe limit.

4.2.2 Policy AW 14 -Safeguarding of Minerals defines resources of Sand and Gravel, Sandstone, Limestone and Coal that shall be safeguarded from any development. *Drawing JER8521 Figure 4.1* shows the southern end and the western flank of the site within safeguarded Sandstone Resources.

4.2.3 Permanent development and land uses that would be considered unsuitable within the safeguarding area would include residential development, hospitals and schools, or where an acceptable standard of amenity should be expected.

4.2.4 Current planning guidance on Renewable and Low Carbon Energy, issued on 18th June 2015 by the government, states that "solar farms are normally temporary structures and planning conditions can be used to ensure that the installations are removed when no longer in use and the land is restored to its previous use".

4.3 Mineral Resource Assessment

4.3.1 Parts of the site do lie within an area designated for protection of Sandstone Resources and would therefore temporarily sterilise the this "Resource" for the duration of its use as a solar photovoltaic park. These effects will be temporary and will not result in a permanent loss of the mineral resource.

5 COAL MINING RISK ASSESSMENT

5.1 Risk from Recorded Existing Workings

5.1.1 The available Coal Authority records indicate that at least four records exit for coal seams which have been worked directly underneath the Site, the shallowest depth recorded at 5 m and their thickness in the region of 1.00 m. On this basis the risk from the known workings is considered high.

5.2 Risk from Unrecorded Existing Workings

5.2.1 The 1:10,560 scale geological map indicates the shallow Llantwit No1, Llantwit No 2 trend approximately northeast to southwest through the Site, and there are several other conjectural seam outcrops. The Coal Authority does not report these being mined beneath the site. The Mynyddislwyn Lower Leaf, outcropping in the north of the site is indicated to be mined between 5 and 90m beneath the site.

5.2.2 The Coal Authority Mining Report (*Ref. 1*) indicates that the Site is within an area where the Coal Authority believes there is coal at or close to the surface which may have been worked at some time in the past.

5.2.3 Adits extending towards the south and southwest to the north of the main Site and at the base of the valley, indicate that shallow unrecorded coal working may have been undertaken in the past. These adits are unlikely to have been treated and there is the potential for collapse, particularly at shallow depths.

5.2.4 Therefore the risk from unknown workings is considered to be moderate to high.

5.3 Risk from Recorded and Unrecorded Mine Entries

5.3.1 One shaft, 310185-001, is recorded by the Coal Authority within the Site boundary. Another two shafts are shown on the geological mapping to be within 50-75m of the north boundary or immediately adjacent to the southwest boundary.

5.3.2 Given the mining activity within the area, the presence of further mine entries on the Site cannot be discounted. The risk from known and unknown mine entries is therefore considered to be moderate to high.

5.4 Conclusion

5.4.1 Whilst the risk from recorded and unrecorded mine workings is high at the Site, the nature of the development does not increase this risk over the majority of the site once complete. The solar arrays are lightly loaded, have minimal foundation (land anchors in very shallow deposits) and require limited site attendance (period inspections). The exception to this relates to the locations of mine entries and the infrastructure associated with the solar arrays such as transformers which will generate heavier loadings.

5.4.2 Specifically at the location of mine shafts, and in the areas of more heavily loaded or enclosed structures further investigation is recommended to:

- Confirm the location of the mine entries.
- Determine the presence of worked seams.
- Determine the gas risk to these structures.
- Provide geotechnical information in support of design.

5.4.3 This is considered a proportionate risk management approach to address the risk in the highest risk areas of the site. To fully mitigate the risk a comprehensive site wide investigation will be required followed by potential grouting works.

5.4.4 It should be noted that consultation with and approval by the Coal Authority will be required for any intrusive investigation of mine entries or former mine workings/coal assets.

5.4.5 The above recommendations are based on the premise that the proposed development, once complete, will not increase the risks associated with voids and therefore the development does not materially increase the level of risk of catastrophic collapse. The developer should consider the risks during the redevelopment process in accordance with the CDM regulations and take precautions as appropriate.

6 CONCLUSIONS

6.1.1 RPS Planning & Development was commissioned by Elgin Energy EsCo Ltd to undertake a Coal Mining Risk Assessment and Minerals Assessment at a proposed development site at Maes Mawr, Pontypridd, Rhondda Cynon Taf, South Wales. It is understood that this assessment is required to support a planning application for the redevelopment of the Site as a solar photovoltaic park and associated ancillary development.

6.1.2 The Coal Mining Risk Assessment comprised a review of available records in relation to the mining history of the Site.

6.1.3 The review identified recorded mine workings in relation to a number of coal seams beneath the Site, and it also identified shallower coal sub-crops across the Site.

6.1.4 The review identified two adits and a shaft within / close to the proposed cable route, one shaft within the main area of the Site and several shafts or adits within close proximity of the northern and south-west boundaries. The Coal Authority confirmed that they do not hold records to confirm if these shafts/adits have been infilled or treated, and no information is available regarding diameter or shaft depths.

6.1.5 A risk assessment was undertaken to identify the risk from recorded and unrecorded mine workings and mine entries. The risk assessment identified a high level of risk from recorded mine workings and a moderate to high level of risk from unrecorded mine workings. The risk associated with recorded and unrecorded mine entries was considered to be moderate to high.

6.1.6 Whilst the risk from recorded and unrecorded mine workings is high at the Site, the nature of the development does not increase this risk over the majority of the site once complete. The solar arrays are lightly loaded, have minimal foundation (land anchors in very shallow deposits) and require limited site attendance (period inspections). The exception to this relates to the locations of mine entries and the infrastructure associated with the solar arrays such as transformers which will generate heavier loadings.

6.1.7 Specifically at the location of mine shafts, and in the areas of more heavily loaded or enclosed structures further investigation is recommended to:

- Determine the gas risk to these structures.
- Provide geotechnical information in support of design.
- Confirm the location of the mine entries.
- Determine the presence of worked seams.

6.1.8 This is considered a proportionate risk management approach to address the risk in the highest risk areas of the site. To fully mitigate the risk a comprehensive site wide investigation will be required followed by potential grouting works.

6.1.9 It should be noted that consultation with and approval by the Coal Authority will be required for any intrusive investigation of mine entries or former mine workings/coal assets.

6.1.10 The above recommendations are based on the premise that the proposed development, once complete, will not increase the risks associated with voids and therefore the development does not materially increase the level of risk of catastrophic collapse. The developer should consider the risks during the redevelopment process in accordance with the CDM regulations and take precautions as appropriate.

6.1.11 The investigation should include a geophysical survey to confirm the location of known or suspected mine entries followed by ground truthing using trial pits or boreholes. Rotary boreholes should be advanced at the locations of heavily loaded or enclosed structures to establish the presence of coal seams and workings and the risk from ground gas.

6.1.12 Whilst the Site does lie within an area designated for protection of sandstone reserves, it is considered that this is unlikely to restrict development of the Site for the proposed use as a solar photovoltaic park. This is due to the defined temporary nature of the proposed development.

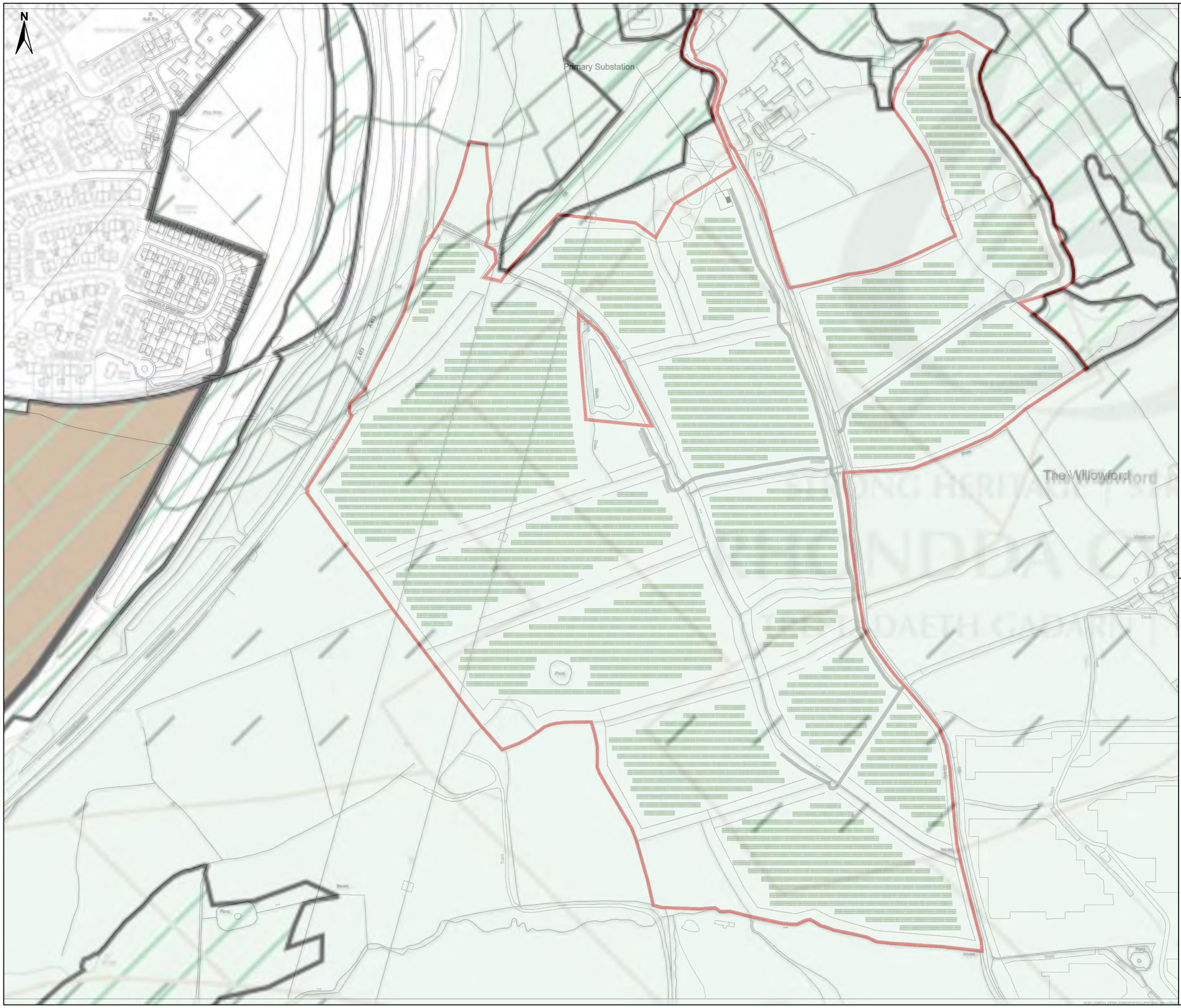
REFERENCES

1) 51002680293001 - The Coal Authority CON29M Coal Mining Report, Centre of Pond 28m from Maes Mawr Farn, Road to Maes Mawr Farm, Ton-Teg, Rhondda Cynon Taf CF38 1SL

2) 51002713871001 - The Coal Authority Consultants Coal Mining Report, Centre of Pond 28m from Maes Mawr Farn, Road to Maes Mawr Farm, Ton-Teg, Rhondda Cynon Taf CF38 1SL

3) 51002713871003 - The Coal Authority Shaft Plan and Data Sheets, Centre of Pond 28m from Maes Mawr Farn, Road to Maes Mawr Farm, Ton-Teg, Rhondda Cynon Taf CF38 1SL

DRAWINGS



Notes

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2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

LEGEND

- SITE BOUNDARY
- 2 x 12 = 24 MODULE PANEL (12m)
- 2 x 24 = 48 MODULE PANEL (24m)
- 3.5m ACCESS TRACK
- INVERTER SUBSTATION
- SECURITY FENCE
- 5m -10m BUFFER FROM VEGETATION, WATER BODY OR TREE CANOPY
- Sandstone Resource (in line with Rhondda Cynon Taff Proposals Plan).

MAKING COMPLEX EASY

5 New York Street, Manchester, M1 4JB

T: +44(0) 161 228 1800 W: rpsgroup.com

Client Elgin Energy

Project Maes Mawr Solar

Title Sandstone Resource

Status	Drawn By	PM/Checked by
Draft	TF	CW
Job Ref	**Scale @ A3**	**Date Created**
JER8521	NTS	DEC 2021
Figure Number		**Rev**
4.1		00

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0 25 50 100 200

Rev	Description	By	CB	Date

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T: 02920 668 662 E: rpsca@rpsgroup.com

Client ELGIN ENERGY EsCO LTD

Project MAES MAWR SOLAR

Title SITE BOUNDARY PLAN

Status	Drawn By	PM/Checked by
DNS	GG	DW
Job Ref	**Scale @ A0**	**Date Created**
JPW1546	1:2500	NOV 2021
RPS Drawing/Figure Number		**Rev**
JPW1546-DNS-003		-

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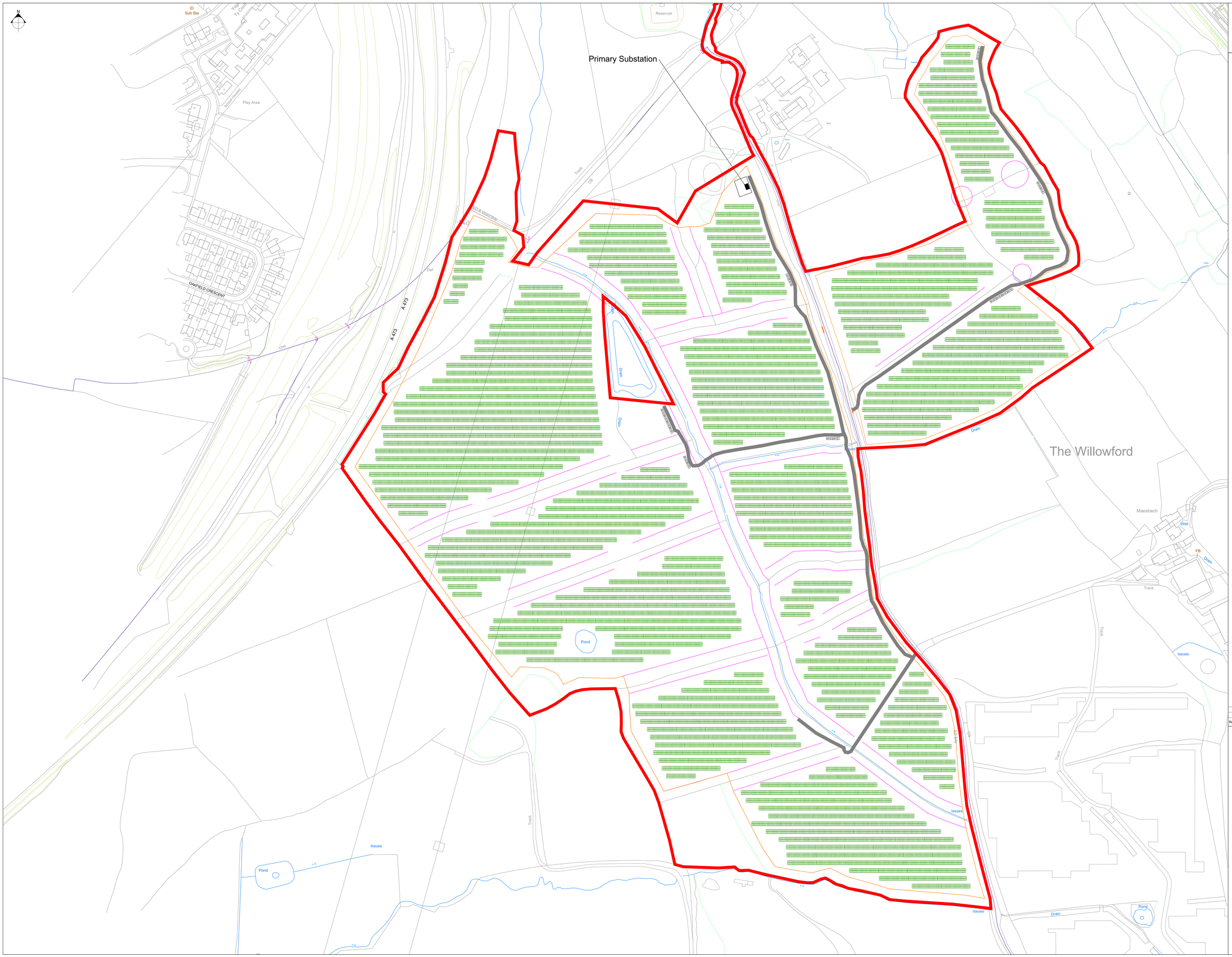
O:\04 JOBS\01 OPEN JOBS\JPW15xx\JPW1546 - Maes Mawr Solar Farm (GG)\4. Drawings\1. RPS Drawings\DWG\JPW1546-DNS-003_20211105_(Maesmawr Site Boundary Plan).dwg



Notes

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LEGEND

- SITE BOUNDARY
- 2 x 12 = 24 MODULE PANEL (12m)
- 2 x 24 = 48 MODULE PANEL (24m)
- 3.5m ACCESS TRACK
- INVERTER SUBSTATION
- SECURITY FENCE
- 5m -10m BUFFER FROM VEGETATION, WATER BODY OR TREE CANOPY

Rev	Description	By	Chk	Date
A	Revised Red line boundary	GG	AL	08/11/2021

MAKING COMPLEX EASY

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T: 02920 668 662 E: rpsca@rpsgroup.com

Client ELGIN ENERGY EsCO LTD

Project MAES MAWR SOLAR

Title DRAFT SOLAR PV LAYOUT

Status	Drawn By	PM/Checked by
DNS	GG	DW

Job Ref	Scale @ A0	Date Created
JPW1546	1:1250	OCT 2021

RPS Drawing/Figure Number: JPW1546-DNS-002

Rev: A

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APPENDICES

Appendix A

Coal Authority Reports

The Coal Authority

CON29M
coal mining report

CENTRE OF POND 28M FROM MAES MAWR FARM, ROAD TO MAES MAWR FARM, TON-TEG, RHONDDA CYNON TAF, CF38 1SL

Known or potential coal mining risks

Further action

These additional reports can give further detail on the risks identified:

- Mine entry interpretive report
- Mine entry plan and data sheets

For more information please see our Further action reports on page 10

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

The map image is too large for this page and will be sent in a separate document

We can confirm that the location is
on the coalfield

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

Mine entries

The enquiry boundary shows the approximate location of the disused mine entry/entries referred to in this report. Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage caused by disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by visiting www.coal.gov.uk. Please note this Act is not valid where coal was worked or extracted 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 wish to discuss the relevance of any of the information contained in this report, you should seek the advice of a qualified mining engineer or surveyor. If you or your advisor wishes to examine the source plans from which the information has been taken, these are available to view, at our Coal Authority head office in Mansfield. To book an appointment please call 01623 637 225. Should you or your advisor wish to carry out a physical investigation that may enter, disturb or interfere with any disused mine entry, prior permission must be sought from the owner. For coal mine entries, the owner will normally be the Coal Authority.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency, 24 hour call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries). To report an emergency you can call 01623 646 333.

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.

1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 2 seams of coal at shallow to 230m depth, and last worked in 1871.

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

Within, or within 20 metres of, the boundary of the property there are 4 mine entries, the approximate positions of which are shown on the enquiry boundary plot. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan.

There is no record of what steps, if any, have been taken to treat the mine entries.

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.

For an additional fee, the Coal Authority can provide a Mine Entry Interpretive Report. The report will provide a separate assessment for the mine entry/entries referred to in this report. It gives an opinion on the likelihood of mining subsidence damage caused from ground movement as a consequence of the mine entry/entries. It also gives details of the remedies available for subsidence damage where the mine entry was sunk in connection with coal mining.

Please note that it may not be possible to produce a report if the main building to the property cannot be identified from Coal Authority plans (ie for development sites and new build).

For further advice on how to order this additional information please visit www.groundstability.com.

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 in an area where a notice to withdraw support was given in 1984.

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

Further action reports

Mine entry interpretive report - assesses the risk of ground movement from mine entries in, or within 20 metres of, the property boundary. To order this report, use the same boundary as the CON29M report, then draw the building on the additional map screen.

For more information and to order this report please visit:
https://www2.groundstability.com/interpretive-report

Mine entry plan and data sheets - give additional information on mine entries recorded on a piece of land. To order this report use the same boundary as the CON29M report and a member of our team will contact you to confirm the mine entries to include in this bespoke report.

For more information and to order this report please visit:
https://www2.groundstability.com/plan-and-data-sheets

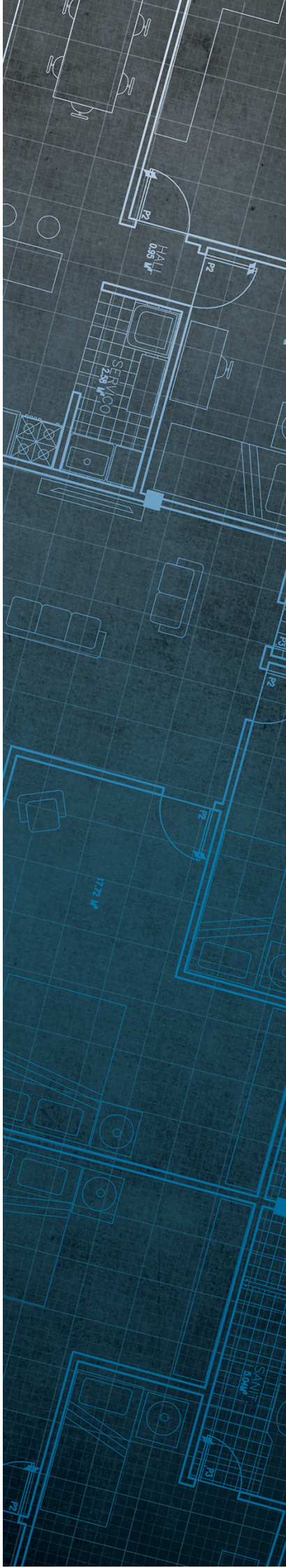
The Coal Authority

Consultants

Coal Mining Report

Centre Of Pond 28m From Maes
Mawr Farm
Road To Maes Mawr Farm
Ton-teg
Rhondda Cynon Taf
CF38 1SL

Date of enquiry:	**2 November 2021**
Date enquiry received:	**2 November 2021**
Issue date:	**3 November 2021**
Our reference:	**51002713871001**
Your reference:	**JER8521**



Consultants
Coal Mining Report

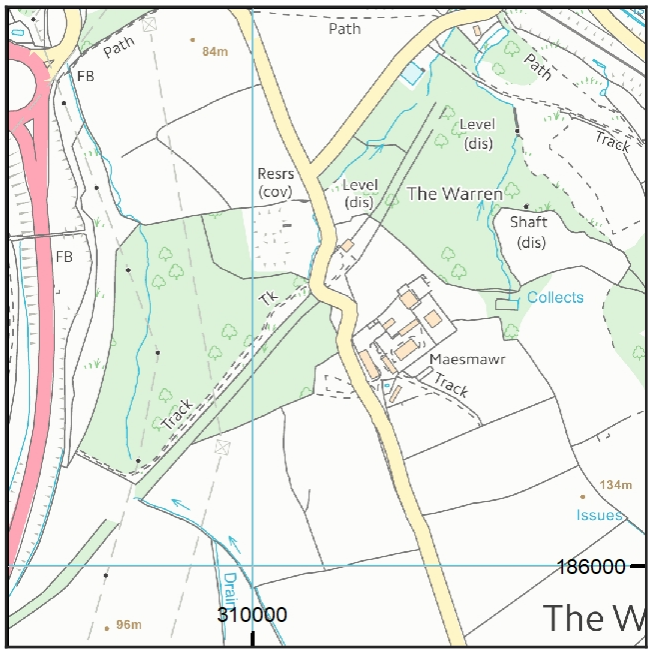
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

RPS CONSULTING SERVICES LTD

Enquiry address

Centre Of Pond 28m From Maes Mawr Farm
Road To Maes Mawr Farm
Ton-teg
Rhondda Cynon Taf
CF38 1SL



Approximate position of property

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Ordnance Survey Licence number: 100020315

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

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
	MYNYDDISLWYN LOWER LEAF	Coal	A0SQ	5	Beneath Property			100	1871
	MYNYDDISLWYN LOWER LEAF	Coal	A0SP	35	Beneath Property			100	1871
	MYNYDDISLWYN LOWER LEAF	Coal	A0SS	90	Beneath Property			100	1871
	MYNYDDISLWYN LOWER LEAF	Coal	A0ST	93	South-West			100	1871
unnamed	SWANSEA 3FT.	Coal	A0SN	143	Beneath Property			100	1871
	MYNYDDISLWYN LOWER LEAF	Coal	A0S0	190	East	15.6	South-East	100	1868

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	309185-033	309890 185552		Coal	
Shaft	309186-001	309997 186184		Coal	
Shaft	310185-001	310061 185968		Coal	
Shaft	310186-001	310229 186654	We have no record of any treatment afforded to this shaft. Extensive excavations carried out by Wimpeys in September 1985 failed to locate it.	Coal	
Shaft	310186-002	310292 186381		Coal	
Adit	310186-016	310285 186631		Coal	
Adit	310186-017	310342 186528	The entrance to this adit has been sealed with a block wall that incorpo rporates access for bats and a 150mm diameter UPVC pipe for drainage of water made in the workings. The box cut sides have been supported by blo ck stone wing walls extending from the portal.	Coal	
Adit	310186-020	310133 186424		Coal	
Shaft	310186-021	310245 186650	Our records indicate this shaft has been capped with reinforced concrete to an NCB specification.	Coal	
Adit	310186-023	310063 186383		Coal	
Shaft	310186-025	310206 186564		Coal	

Abandoned mine plan catalogue numbers

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

SWR2387	SWR2363	14561
SWR3826	14548	SWR2367
SWR3967	5242	615

Our records show we have more plans than those shown above which could affect the enquiry boundary.

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
DARREN DDU	Coal	Yes	Within	N/A	56
DARREN DDU	Coal	Yes	23.9	North-West	64
DARREN DDU	Coal	Yes	26.4	East	72
DARREN DDU	Coal	Yes	Within	N/A	234
DARREN DDU	Coal	Yes	Within	N/A	261
GLYNGWILLYN	Coal	Yes	25.6	West	259
GLYNGWILLYN	Coal	Yes	Within	N/A	259
MYNYDDISLWYN BIG RIDER NO.1	Coal	Yes	0.4	North-East	145
MYNYDDISLWYN LOWER LEAF	Coal	Yes	Within	N/A	68
MYNYDDISLWYN LOWER LEAF	Coal	Yes	Within	N/A	70
MYNYDDISLWYN LOWER LEAF	Coal	Yes	Within	N/A	76
MYNYDDISLWYN LOWER LEAF	Coal	Yes	Within	N/A	208
MYNYDDISLWYN LOWER LEAF	Coal	Yes	Within	N/A	225
MYNYDDISLWYN LOWER LEAF	Coal	Yes	Within	N/A	290
MYNYDDISLWYN TOP LEAF	Coal	Yes	Within	N/A	78
UNNAMED	Coal	Yes	Within	N/A	39
UNNAMED	Coal	Yes	Within	N/A	53
UNNAMED	Coal	No	Within	N/A	60
UNNAMED	Coal	Yes	Within	N/A	65
UNNAMED	Coal	Yes	Within	N/A	73
UNNAMED	Coal	No	Within	N/A	75
UNNAMED	Coal	Yes	Within	N/A	82
UNNAMED	Coal	No	Within	N/A	92
UNNAMED	Coal	Yes	Within	N/A	107
UNNAMED	Coal	Yes	Within	N/A	233
UNNAMED	Coal	Yes	Within	N/A	263

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.

Faults 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
17.7	South
46.5	East

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 in an area where a notice to withdraw support was given in 1984.

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.

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.

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

Issued by:
The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG
Website: www.groundstability.com Phone: 0345 762 6848

RPS CONSULTING SERVICES LTD
260 PARK AVENUE, PARK AVENUE
AZTEC WEST
ALMONDSBURY
SOUTH GLOUCESTERSHIRE
BS32 4SY

Our reference:	**51002713871003**
Your reference:	**JER8521**
Date of your enquiry:	**02 November 2021**
Date we received your enquiry:	**02 November 2021**
Date of issue:	**03 November 2021**

This report is for the property described in the address below and the attached plan.

Shaft Plan and Data Sheets

CENTRE OF POND 28M FROM MAES MAWR FARM, ROAD TO MAES MAWR FARM, TON-TEG, RHONDDA CYNON TAF, CF38 1SL

I refer to the enquiry dated 02 November 2021, received 02 November 2021, in connection with the above.

As requested I enclose the mine entry data sheet(s) held for the mine entry/entries referred to.

Mine Entry Data

Shaft/adit:	Adit
Reference:	310186-016
Source:	Ab. Plan 5242
Colliery name:	Unknown
Entry name:	Warren Llantwit / Maes Mawr
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	212
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	310285
Northing:	186631
Other information:	None

Mine Entry Data (continued)

Shaft/adit:	Shaft
Reference:	310186-025
Source:	Ab plan SWR2367
Colliery name:	Unknown
Entry name:	Unknown
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	Not Applicable
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	310206
Northing:	186564
Other information:	None

Mine Entry Data (continued)

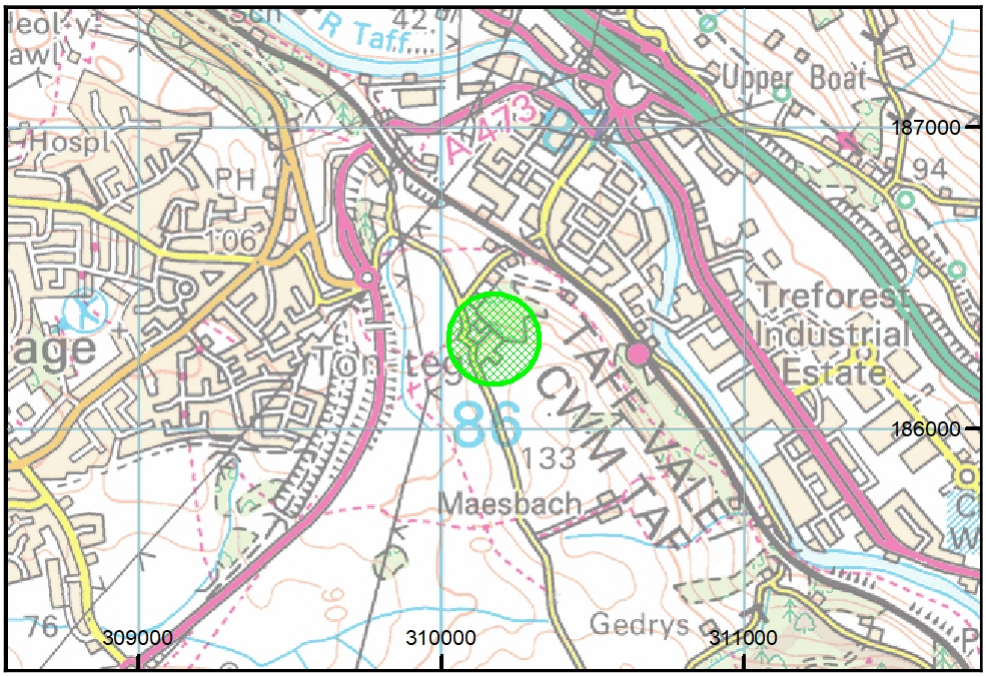
Shaft/adit:	Shaft
Reference:	310185-001
Source:	Ab plans 615 SWR2363 SWR2367 East Wales 6 inch Records ST18NW Other: D.Thomas Collection Glamorgan County Archives Ref 182
Colliery name:	Unknown
Entry name:	Unknown
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	Not Applicable
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	310061
Northing:	185968
Other information:	None

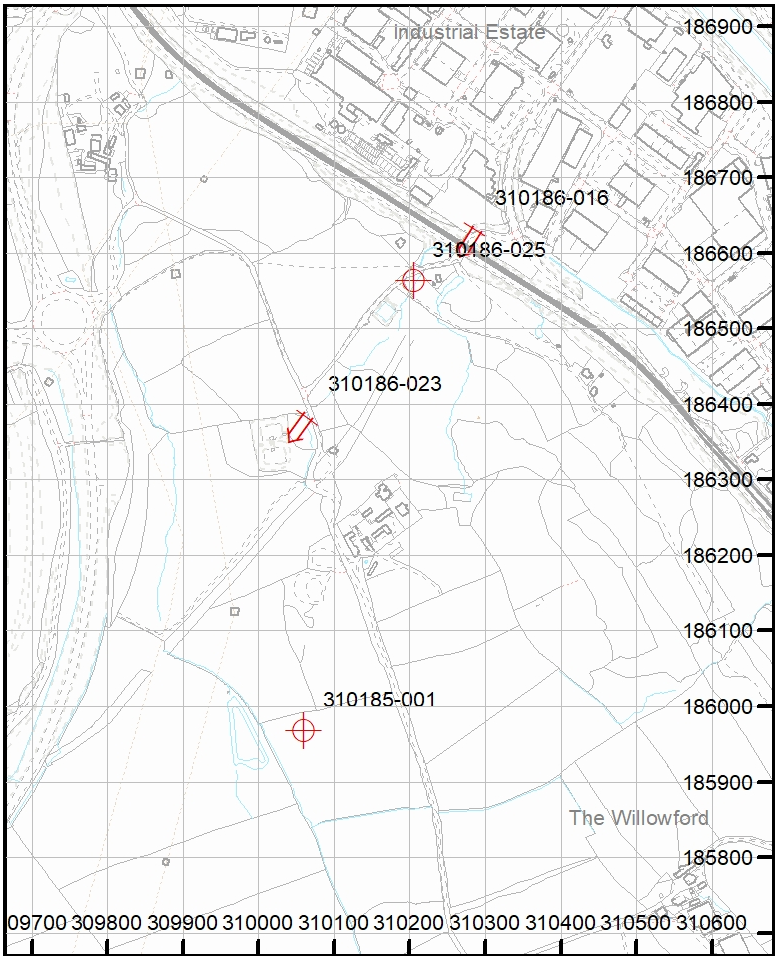
Mine Entry Data (continued)

Shaft/adit:	Adit
Reference:	310186-023
Source:	Ab plan SWR2376
Colliery name:	Unknown
Entry name:	Unknown
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	216
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	310063
Northing:	186383
Other information:	None

Location map

Approximate position of enquiry





This plan shows the approximate location of the disused mine entry / entries referred to in the attached mining report. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by visiting www.groundstability.com.

If you wish to discuss the relevance of any of the information contained in this report, you should seek the advice of a qualified mining engineer or surveyor. If you or your advisor wish to examine the source plans from which the information has been taken, these are available to view, free of charge, at our Head Office in Mansfield. To book an appointment please ring 01623 637225. Should you or your advisor wish to carry out a physical investigation that may enter, disturb or interfere with any disused mine entry, prior permission of the owner must be sought. For coal mine entries, the owner will normally be the Coal Authority.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries).

Our emergency telephone number is 01623 646333.

Key

Disused Adit or Mineshaft

Mapping sourced from Ordnance Survey

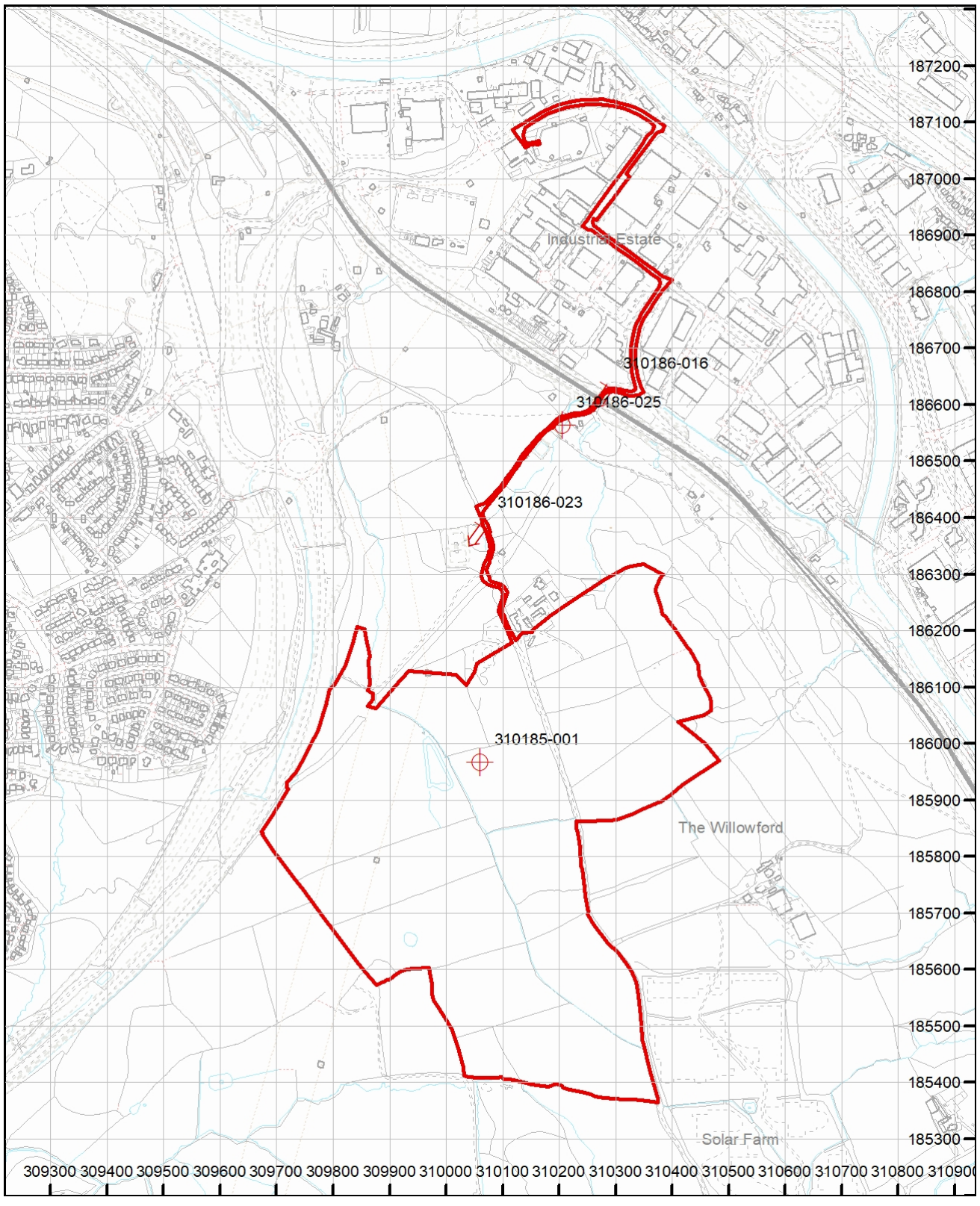
Enquiry boundary

Key

Approximate position of enquiry boundary shown

Disused adit

Disused mineshaft



How to contact us

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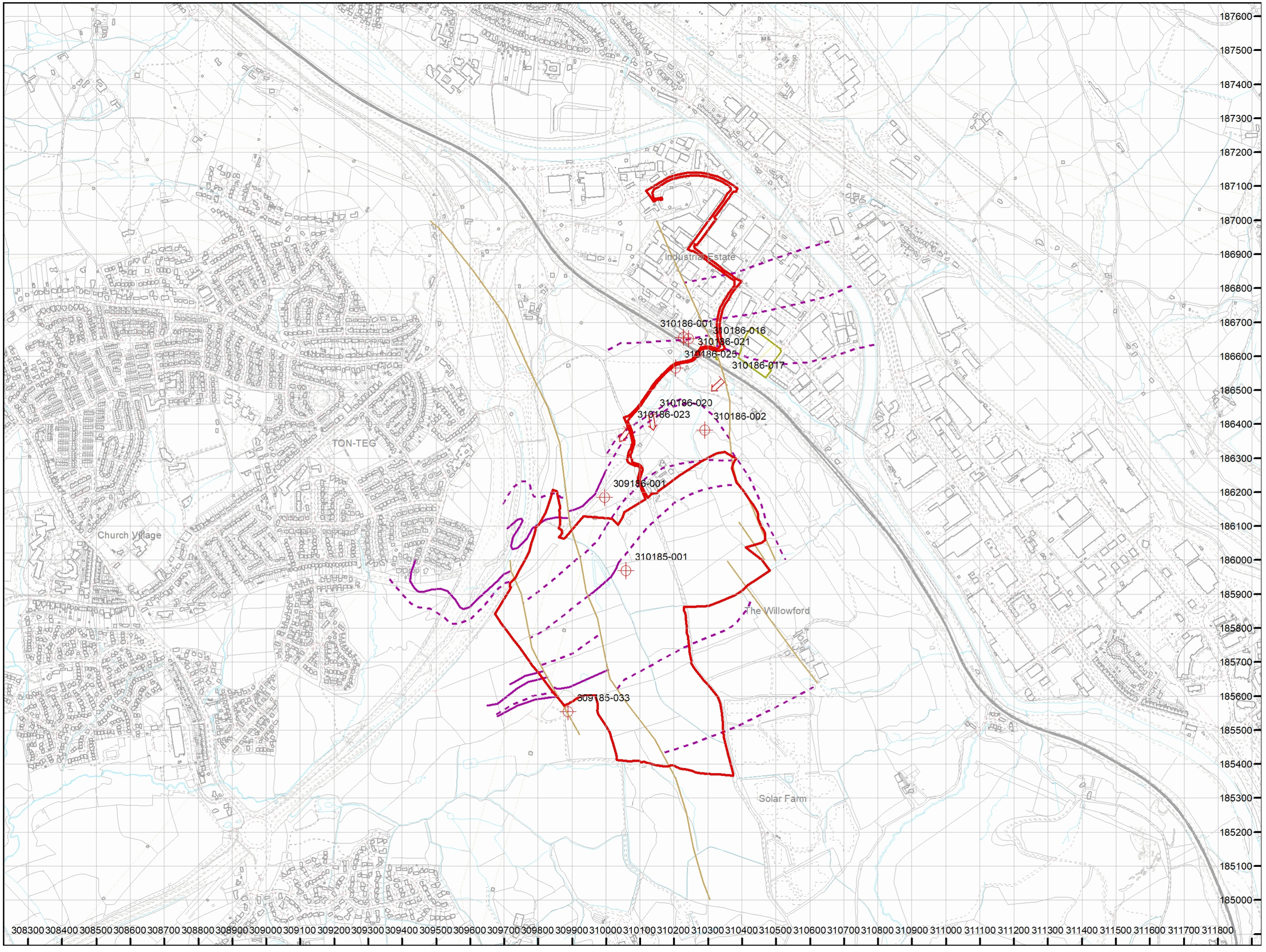
The Coal Authority

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
- Disused mine shaft
- Disused adit
- Outcrop (Proven)
- Outcrop (Conjectured)
- Geological faults
- Site investigations



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