



Mynydd Fforch Dwm, Wind Farm, Neath Port Talbot

Heritage Impact Assessment

REG Power Management Limited

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Basis of Report

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Executive Summary

SLR Consulting Limited was commissioned by REG Power Management Limited to prepare a Heritage Impact Assessment on the potential direct and indirect impacts of a proposed development to widen and upgrade Fforch-Dwm Road, c. 1km to the north-east of Tonmawr, Neath Port Talbot, on Cwm Pelenna Colliery Ventilation Furnace Scheduled Monument (GM458) and the Grade II Listed Building of Cwm Pelenna Ventilation Stack (22888).

The proposed works to Fforch-Dwm Road are part of the wider development of the proposed Mynydd Fforch Dwm Wind Farm. The work to Fforch-Dwm Road is to enable construction traffic to access the proposed wind farm site. A 2022 Historic Environment Desk-Based Assessment, prepared by SLR Consulting Limited, and pre-application advice from Cadw recommended that a Heritage Impact Assessment and a Scheduled Monument Consent application would need to be produced and submitted alongside any planning application for the for the proposed Mynydd Fforch Dwm Wind Farm.

The assessment has considered the potential direct impact on Cwm Pelenna Colliery Ventilation Furnace Scheduled Monument. The proposed widening and upgrading of Fforch-Dwm Road, within the scheduled area, would implement a non-invasive design which would avoid cutting into the uphill slope to the east of the Fforch-Dwm Road which is scheduled. To achieve the desired road width the new road will partially overhang the scheduled area on the downward slope to the west of the Road to avoid any direct disturbance to the Scheduled Monument. Additionally, to mitigate the risk of settlement and / or weight loading that construction traffic could have on the underlying in-situ scheduled remains extending beneath the widened road, the designs propose the installation of a geogrid across the full width of the road and extending a minimum of 5m beyond the extent of the scheduled area in the direction of Fforch-Dwm Road. Therefore, there will be no potential for direct impact to Cwm Pelenna Colliery Ventilation Furnace Scheduled Monument and there will be no harm.

The assessment has also considered the potential indirect impacts on Cwm Pelenna Colliery Ventilation Furnace Scheduled Monument and Cwm Pelenna Ventilation Stack Grade II Listed building, as a result of any changes to their setting and impacting upon their significance. It has been established that the historic significance of both historic assets derives primarily from their evidential and historical values, especially from their archaeological potential. By comparison to these interests the setting of both assets makes a minor contribution to their significance, and this contribution mostly derives from their topographical position, located close to the Nant Blaenpelenna watercourse, and their convenient proximity to the former colliery. The proposed alterations to Fforch-Dwm Road comprise of the widening and upgrading of the existing metalled surface road, there will be no new road, and the proposals would not detract from an appreciation of the historic assets from Fforch-Dwm Road. However, the proposals would likely result in some minor harm to the significance of the building, which would derive from the likelihood of increased traffic and activity due to the proposed wind farm development. This harm, however, would likely be very minimal, and it would not detract from the assets' overall appreciation.

As such, the proposals relating to the upgrading and widening of Fforch-Dwm Road comply with the statutory requirement set out in Ancient Monuments and Archaeological Areas Act (1979), The Historic Environment (Wales) Act (2016), and with Planning Policy Wales and its associated technical advice notes, and with local plan policy.



Crynodeb Gweithredol

Welsh translation to be inserted following client review/comments.



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Appendix A Floating Road Detail



Acronyms and Abbreviations

ACIfA	Associate member of Chartered Institute for Archaeologists
CIfA	Chartered Institute for Archaeologists
FAME	Federation of Archaeological Managers and Employers
GGAT	Glamorgan-Gwent Archaeological Trust
HEDBA	Historic Environment Desk-Based Assessment
HIA	Heritage Impact Assessment
ISO	International Organization for Standardization
LiDAR	Light Detection and Ranging
MCIfA	Full member of Chartered Institute for Archaeologists
NMRW	National Monuments Record Wales
NRW	Natural Resources Wales
PPW	Planning Policy Wales
RCAHMW	Royal Commission on the Ancient and Historical Monuments of Wales
SMC	Scheduled Monument Consent
TAN	Technical Advice Note



1.0 Introduction

In April 2023, SLR Consulting Limited (SLR) was commissioned by REG Power Management Limited ('the Client') to prepare a Heritage Impact Assessment (HIA) in relation to a proposed windfarm development c. 6km to the east of Neath, c. 4km to the south of Resolven, and c. 1km to the north-east of the village of Tonmawr (NGR: 281843, 197645) (henceforth 'the Site'; **Figure 1**).

The aim of the assessment is to identify if the proposed access track, associated with the windfarm development, would directly impact on the Scheduled Monument of Cwm Pelenna Colliery Ventilation Furnace (**GM458**). Additionally, this assessment will consider the impact that the proposed access track will have on the setting of the Scheduled Monument, along with the setting of the Grade II Listed Building of Cwm Pelenna Ventilation Stack (**22888**).

1.1 Planning Background

SLR produced a Historic Environment Desk-Based Assessment (HEDBA)¹ in November 2022 to accompany a pre-planning application (Ref: P2022/1037) for the proposed Mynydd Fforch Dwm Wind Farm. As part of the proposed development, Fforch-Dwm Road would be the subject of upgrading and widening works to enable construction traffic, i.e., heavy good vehicles (HGVs), to access the Site. The assessment identified that the proposed upgrading and widening works to Fforch-Dwm Road had the potential to physically impact the Scheduled Monument and encroach upon the scheduled area.

The assessment recommended that the section of Fforch-Dwm Road which bisects the monument would not be the subject of conventional upgrading and widening works. Instead, it was recommended that an alternative design for the upgrading and widening works within the scheduled area was formulated. It was stipulated that such designs would need to ensure that there would be no physical / direct impacts within the scheduled area. The initial assessment also confirmed that the road could be widened by conventional means within the areas beyond the scheduled area, but the c. 10m of the road which abuts the Scheduled Monument would need to remain undisturbed. The assessment concluded that a HIA and Scheduled Monument Consent (SMC) application would need to be produced and submitted alongside any planning application for the proposed Mynydd Fforch Dwm Wind Farm.

Pre-application advice from Cadw was received on 18th January 2023 (Cadw ref: DNS 3255801). The advice stated the following:

"Whether the proposed "floating road" will protect the scheduled monument, or not, will therefore be material consideration in the determination of the application for the windfarm, but currently there is insufficient information on this matter. This is a specific historic environment issue and would be best determined by the applicant submitting a scheduled monument consent application for the "floating road", in advance of, or concurrent with, the planning application, so that the results of that application can be presented to the Inspector determining the planning application.

The submission of the scheduled monument consent application will require a Heritage Impact Assessment to be produced and this should also consider the impact of the proposed development on the setting of the scheduled monument and also the impact on the setting of listed building 22888 Cwn Pelenna ventilation stack."

This report comprises of the HIA that will be submitted alongside a SMC application.

1.2 Standards

This assessment has been undertaken in accordance with all relevant statute, policy, and guidance, including PPW (2021), TAN 24 (2017), the Chartered Institute for Archaeologists' (CIfA) *Standard and guidance for historic environment desk-based assessment* (2020), Cadw's best practice guidance;

¹ SLR Consulting Limited. 2022. *Mynydd Fforch Dwm Wind Farm, Neath Port Talbot: Historic Environment Desk-Based Assessment*.



Conservation Principles for the Sustainable Management of the Historic Environment in Wales (2011), Heritage Impact Assessment in Wales (2017a), Setting of Historic Assets in Wales (2017b), and Managing Scheduled Monuments in Wales (2018).

The assessment has been undertaken, and the report prepared, by James Evans ACIfA, Senior Archaeology and Heritage Consultant, SLR Consulting Ltd.

The assessment has been reviewed and signed off by Charlotte Dawson MCIfA, Principal Archaeology and Heritage Consultant, SLR Consulting Ltd.

SLR Consulting is a member of the Federation of Archaeological Managers and Employers (FAME).

SLR Consulting is ISO 9001 certified and operates a quality management system to help ensure all projects are managed in a professional and transparent manner.



2.0 Methodology

The primary objective of this assessment is to assess the potential impact of the proposed upgrading and widening works to Fforch-Dwm Road on Cwm Pelenna Colliery Ventilation Furnace (**GM458**), and how these proposals may impact on the setting of the Scheduled Monument and the Grade II Listed Building of Cwm Pelenna Ventilation Stack (**22888**).

This assessment will gather enough information to understand the significance of the above historic assets potentially affected and assess any impact of the proposals on those assets. This will help inform future decision making, design solutions, and potential mitigation strategies.

This assessment provides information of sufficient detail to allow informed planning decisions to be made which can safeguard the archaeological resource and the impact on the setting of the Scheduled Monument and Listed Building.

2.1 Data Procurement

The following sources were consulted during the preparation of this assessment:

- Cof Cymru – National Historic Assets of Wales website, for depictions and associated record descriptions of designated historic assets in Wales;
- the Glamorgan-Gwent Archaeological Trust (GGAT) Historic Environment Record (HER), for sites and events data;
- the National Monuments Record Wales (NMRW), held by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW), for any additional archival data about sites, buildings and monuments, accessed via the Historic Wales website;
- Natural Resources Wales (NRW) library of open access LiDAR data (DSM and DTM), accessed via the Data Map Wales website;
- the Ordnance Survey open-source library, for topographic and cartographic data, including elevation point cloud, contour and hydrological data;
- National Library of Wales for tithe mapping;
- the Welsh Government Aerial Photographs Officer for available aerial photographs;
- other online resources, including: the British Geological Survey; the Cranfield University Soilscape viewer; and the National Library of Scotland's online mapping database; and
- grey literature relating to excavations within, and within proximity to, the Site.

Site Visit

A Site inspection was undertaken on 12th October 2022 as part of the initial HEDBA to assess the Site within its wider landscape context, identify any evidence for previous disturbance, and examine any known or suspected archaeological features. The photographs and notes from this visit have been reused for this assessment.

2.2 Assessment of Heritage Significance

Historic assets have been assessed in terms of their significance, following the requirement in TAN 24 (2017),² and taking account of Cadw's guidance on *Conservation Principles* (2011).³ Significance, within the historic environment, is defined by Cadw simply as '[the] sum of the cultural historic values of a place'.

² Welsh Government. 2017. *Technical advice note (TAN) 24: the historic environment*.

³ Cadw. 2011. *Conservation Principles for the sustainable management of the historic environment in Wales*.



Conservation Principles (2011) and the TAN 24 (2017) glossary provide that an asset's significance derives from its historic 'values', which are defined by the latter as follows:

- **Evidential Value:** value deriving from the potential of a place to yield evidence about past human activity;
- **Historical Value:** value deriving from the ways in which past people, events, and aspects of life can be connected through a place to the present;
- **Aesthetic Value:** value deriving from ways in which people draw sensory and intellectual stimulation from a place; and
- **Communal Value:** value deriving from the meaning of a place for the people who relate to it, or from whom it figures in their collective experience or memory.

This approach allows for a detailed and justifiable determination of heritage significance and the values from which that significance derives.

Neither policy, however, provides a classification system for historic assets to determine their 'level' of significance. Nevertheless, it is generally considered that designated historic assets, such as Scheduled Monuments and Listed Buildings, are of greater heritage significance than non-designated or unrecorded historic assets. Within this assessment, any hierarchy of significance within these categories has been determined by evaluating the available evidence and exercising professional judgement.

In respect of identifying the importance of setting to the identified significance of a historic asset, Cadw's *Setting of Historic Assets in Wales* (2017) will be utilised; specifically, the staged approach, as follows:

- **Stage 1:** identify the historic assets that might be affected by a proposed change or development;
- **Stage 2:** define and analyse the settings to understand how they contribute to the significance of the historic assets and, in particular, the ways in which the assets are understood, appreciated, and experienced;
- **Stage 3:** evaluate the potential impact of a proposed change or development on that significance; and
- **Stage 4** (if necessary): consider options to mitigate or improve the potential impact of a proposed change or development on that significance.

2.3 Assessment of Effects

Welsh national policy does not specify how the degree of harm to historic assets (impact) should be articulated. *Conservation Principles* (2011) however provides the following guidance:

*"Every reasonable effort should be made to eliminate or minimize adverse impacts on historic assets. Ultimately, however, it may be necessary to balance the benefit of the proposed change against the harm to the asset. If so, the weight given to heritage values should be proportionate to the importance of the assets and the impact of the change upon them."*⁴

The above is interpreted as weighing the significance of the historic assets in the balance with the impact of the change or 'harm'. The level of harm is determined within this assessment by applying professional judgement.

As clarified in the High Court, preservation does not mean no change; it specifically means no harm.⁵ This is echoed in *Conservation Principles*, which states "Change to historic assets is inevitable... to

⁴ Cadw. 2011. *Conservation Principles*, p. 15.

⁵ *R (Forge Field Society) v Sevenoaks District Council* [2014] EWHC 1895 (Admin).



ensure the long-term future of historic assets changes need to be managed to ensure that their significance is not diminished as a consequence.”⁶

The assessment of anticipated development effects can thus be seen to have been undertaken in accordance with a robust methodology, formulated within the context of current best practice, the relevant policy provisions, and key professional guidance.

2.4 Approach to Undertaking the Heritage Impact Assessment

In undertaking a Heritage Impact Assessment, Cadw guidance⁷ requires the assessment to ascertain the following:

- understand the significance of the asset(s);
- identify impact that development proposals will have upon that significance; and
- identify the best way to meet the proposed development’s needs and those of the historic asset(s).

To assess the impact of the proposed development on the significance of each identified historic asset, the significance of each asset is assessed against the historic values laid out in *Conservation Principles* (2011) and the TAN 24 (2017), as discussed in Section 2.2.

⁶ Cadw. 2011. *Conservation Principles*., p. 18.

⁷ Cadw. 2017. *Heritage Impact Assessment in Wales*.



3.0 Statute, Policy & Guidance

Designated heritage assets protected by statutory legislation comprise Scheduled Monuments, Protected Wrecks, Listed Buildings and Conservation Areas.

Nationally significant archaeological sites, monuments and structures are protected under the **Ancient Monuments and Archaeological Areas Act (1979)**.

Listed Buildings and Conservation Areas are protected under the **Planning (Listed Building and Conservation Areas) Act (1990)**. In relation to development proposals, the legislation states that:

"[...] in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the secretary of state shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses" (Section 66).

The Historic Environment (Wales) Act (2016) was introduced to give more effective protection to Listed Buildings and Scheduled Monuments, enhance existing mechanisms for the sustainable management of the historic environment, and introduce greater transparency and accountability into decisions taken on the historic environment. It also introduced several stand-alone provisions for Wales, e.g., the compilation and maintenance of a list of historic place names in Wales, HER for each local authority area in Wales, and the establishment of a panel of persons, to be known as the Advisory Panel for the Welsh Historic Environment.

3.1 Planning Policy

3.1.1 Planning Policy Wales (2021)

Applicable national policy comprises Planning Policy Wales (2021), and specifically the following paragraphs:

Paragraph 6.1.9, which states that:

"Any decisions made through the planning system must fully consider the impact on the historic environment and on the significance and historic values of individual historic assets and their contribution to the character of place."

Paragraph 6.1.24, which relates to highly significant archaeological remains, states that:

"Where nationally important archaeological remains and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical protection in situ. It will only be in exceptional circumstances that planning permission will be granted if development would result in an adverse impact on a scheduled monument (or an archaeological site shown to be of national importance) or has a demonstrably and unacceptably damaging effect upon its setting."

3.1.2 Local Planning Policy

Local planning policy is provided in:

- Neath Port Talbot County Borough Council, Local Development Plan (2011-2026), adopted January 2016:
 - o Strategic Policy SP2: Built Environment and Historic Heritage;
 - o Policy BE1: Design; and
 - o Policy BE2: Buildings of Local Importance.

This Policy is quoted below:

Strategic Policy SP2: Built Environment and Historic Heritage

The built environment and historic heritage will, where appropriate, be conserved and enhanced through the following measures:



- 1 Encouraging high quality design standards in all development proposals;
- 2 Protecting arterial gateways from intrusive and inappropriate development;
- 3 Safeguarding features of historic and cultural importance;
- 4 The identification of the following designated sites to enable their protection and where appropriate enhancement:
 - a) Landscapes of Historic Interest;
 - b) Historic Parks and Gardens;
 - c) Conservation Areas;
 - d) Scheduled Ancient Monuments; and
 - e) Listed Buildings and their curtilage.

Policy BE1: Design

All development proposals will be expected to demonstrate high quality design which fully takes into account the natural, historic and built environmental context and contributes to the creation of attractive, sustainable places. Proposals will only be permitted where all of the following criteria, where relevant, are satisfied:

- 1 complements and enhances the character and appearance of the site, building or area in terms of siting, appearance, scale, height, massing and elevation treatment;
- 2 It respects the context of the site and its place within the local landscape, including its impact on the important arterial gateways into the County Borough, its effects on townscape and the local historic and cultural heritage and it takes account of the site topography and prominent skylines or ridges;
- 3 It utilises materials appropriate to its surroundings and incorporates hard and soft landscaping and screening where appropriate;
- 4 It would not have a significant adverse impact on highway safety, the amenity of occupiers of adjacent land or the community;
- 5 Important local features (including buildings, amenity areas, green spaces and green infrastructure, biodiversity and ecological connectivity) are retained and enhanced as far as possible;
- 6 It achieves and creates attractive, safe places and public spaces, taking account of 'Secured by Design' principles (including where appropriate natural surveillance, visibility, well lit environments and areas of public movement);
- 7 It plays a full role in achieving and enhancing an integrated transport and communications network promoting the interests of pedestrians, cyclists and public transport and ensures linkages with the existing surrounding community;
- 8 It uses resources, including land and energy, as efficiently as possible through:
 - a) Making the best and most efficient use of the land available through being of appropriate density taking into account the character and appearance of the area, normally a minimum of 35 dwellings per hectare in the Coastal Corridor Strategy Area or a minimum of 30 dwellings per hectare in the Valleys Strategy Area;
 - b) The layout and form of the development does not preclude the reasonable use of other adjacent land;
 - c) Developing brownfield land in preference to greenfield land where possible;
 - d) Minimising building exposure while maximising solar gain.
- 9 Its drainage systems are designed to limit surface water run-of and flood risk and prevent pollution; and



- 10 The layout and design of the development achieves inclusive design by ensuring barrier free.

Policy BE2: Buildings of Local Importance

Development proposals that would affect buildings that are of local historic, architectural, or cultural importance will only be permitted where:

- They conserve and where appropriate enhance the building and its setting; or
- It is demonstrated that the development could not reasonably be accommodated without affecting or replacing the building and the reasons for the development outweigh the heritage importance of the site.



4.0 Understanding Significance

4.1 Introduction

An assessment of the significance of the following historic assets (as identified in the 2022 HEDBA and Cadw's pre-application advice) is provided within this section of the statement:

- Cwm Pelenna Colliery Ventilation Furnace, Scheduled Monument (**GM458**); and
- Cwm Pelenna Ventilation Stack (**22888**).

The 2022 HEDBA provided a detailed historic background of the wider Site and surrounding area; however, this Section will provide a focused history on the Cwm Pelenna Colliery Ventilation Furnace and Stack.

4.2 Historic Background

Throughout most of the post-medieval (c. 1539 – 1900) the Site and the surrounding area, like much of the South Wales region, remained a predominantly agricultural area, characterised by scattered isolated farmsteads, and the upland areas were dominated by livestock rearing. Through various Acts of Parliament, between 1750 and 1850, much of the agricultural land in England and Wales was enclosed through Inclosure Acts.⁸ The Site was agricultural in nature and the regular field enclosures into which it was divided had the appearance of post-medieval enclosures, as shown in the 1841 Tithe map (**Plate 1**).

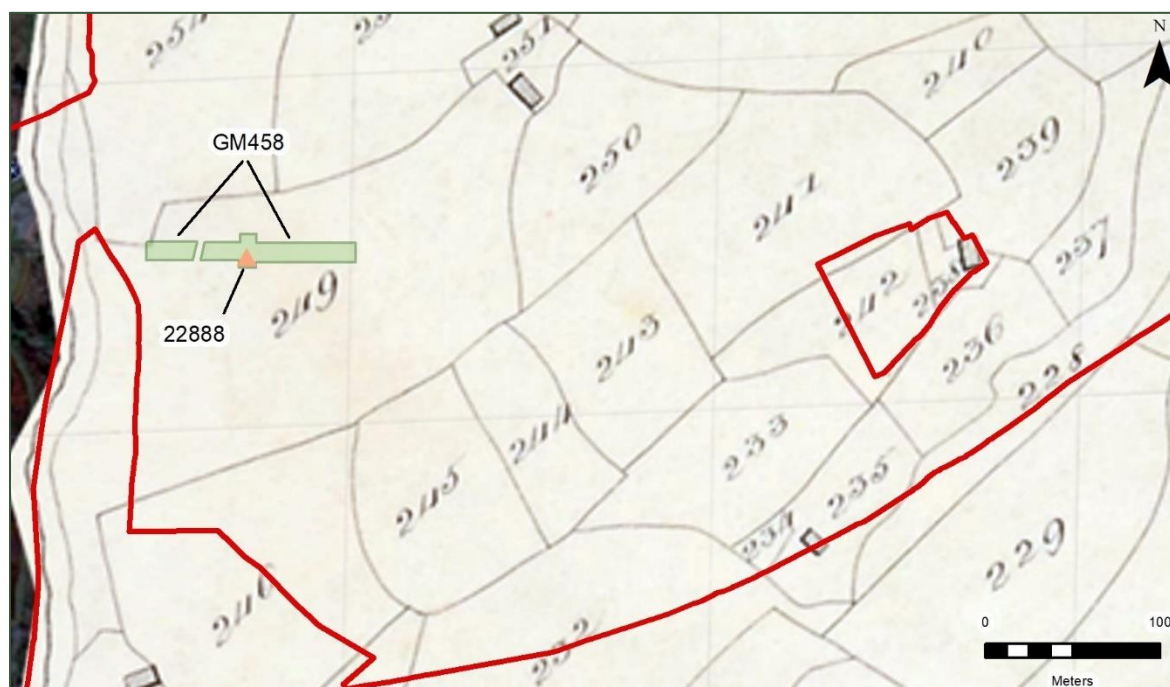


Plate 1: 1841 Tithe map © National Library of Wales

However, during the 18th and 19th centuries, the low-lying area surrounding the Site experienced a radical change as heavy industry altered the character of the wider landscape. Heavy production industries, such as copper, iron, steel, and tinsplate, were introduced to the area during this period, and associated development is visible in the Site and surrounding area. The most notable post-medieval industrial remains within the Site are the scheduled remains of Cwm Pelenna Colliery Ventilation

⁸ Hoskins, W.G. 1981. *The Making of the English Landscape*, p. 185.



Furnace (**GM458**) and its associated listed Ventilation Stack (**22888**). The remains are located on a hillside of a steep valley overlooking Fforch-Dwm Road within the eastern area of the Site (**Figure 2**).

The furnace and stack related to the Fforch-Dwm Coal Level which, although not illustrated in the Tithe map, opened in the 1830s. The 1884 First Edition Ordnance Survey map illustrates the colliery, but it is not until the 1900 Second Edition Ordnance Survey map that the Ventilation Stack is first depicted (**Plate 2**). The colliery subsequently changed name to Mercantile No 1, Blaenmawr Navigation Colliery, Garth Level, and finally Garth Tonmawr Colliery before it closed in 1964.

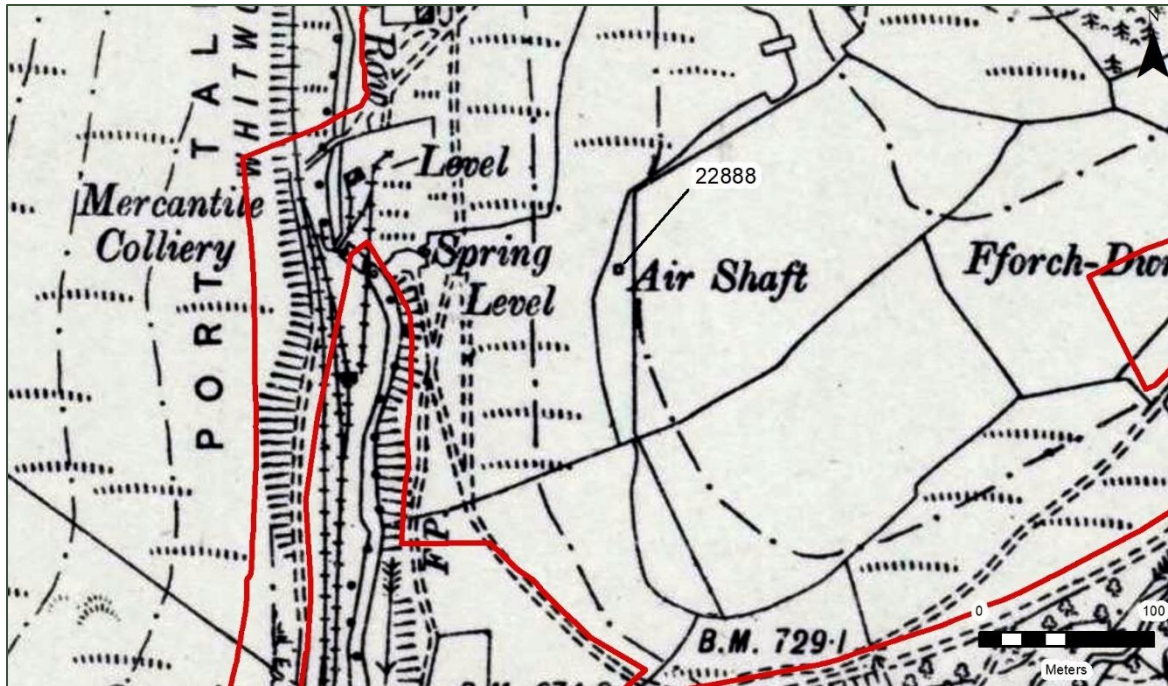


Plate 2: 1900 Second Edition Ordnance Survey map © National Library of Scotland



Plate 3: 1946 aerial photograph © Welsh Government



The Ventilation Furnace is not visible in the historic mapping sources; however, post-war aerial photography illustrates, and processed LiDAR data illustrates both the ventilation furnace and stack (**Plates 3 and 4**). These images also show the Fforch-Dwm Road bisecting the furnace's hillside flue which reappears on the western side of the road. The scheduled area reflects the lack of earthwork remains within the footprint of Fforch-Dwm Road, the construction of which likely truncated the flue at this location.

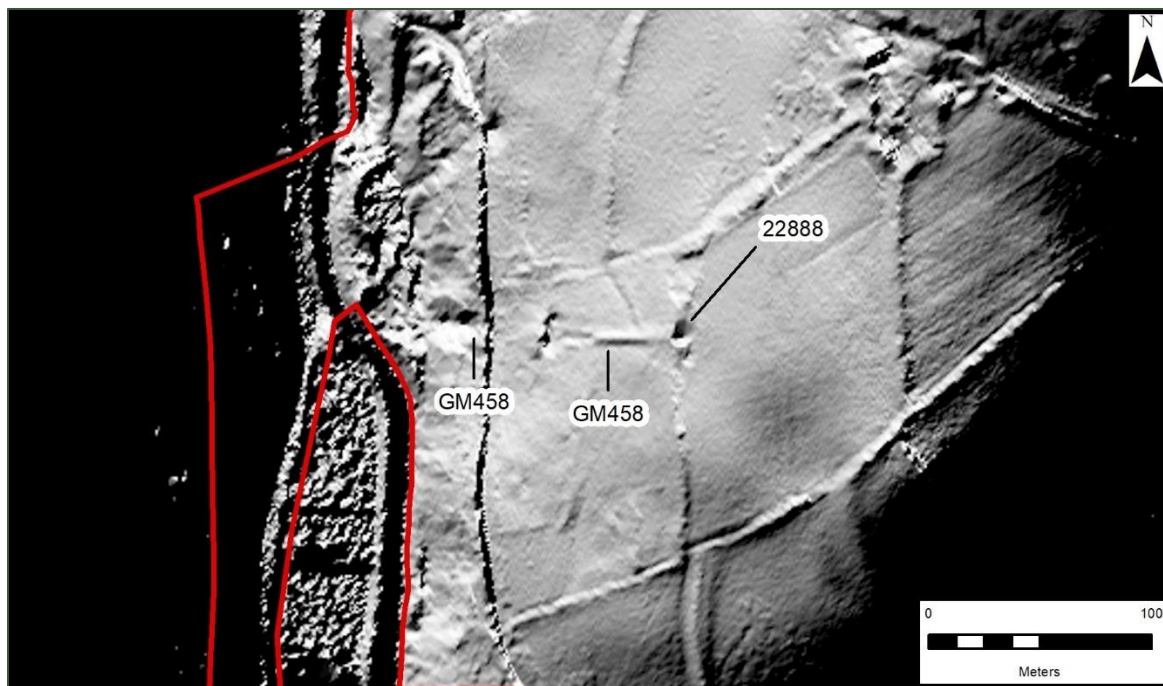


Plate 4: 1m DTM LiDAR data with hillshade

4.3 Cwm Pelenna Colliery Ventilation Furnace

The monument comprises the remains of the 19th century colliery ventilation furnace with a hillside flue. The head of the flue is a short stone stack, built on a rectangular plan with rounded corners. The flue is also stone built, with an arched roof and flat floor. It runs downhill to the ruins of a probable post-war fan house which seems to have re-used it in part. The lower part of the flue is underground but is discernible as a slight ridge at the surface except where it has been truncated by Fforch-Dwm Road (**Photo 1 and 2**).

The monument's national significance derives from its evidential and historic values. Further investigation of the furnace under archaeological conditions has the potential to provide further information on the early 19th century coal mining industry. There are potentially buried deposits and artefacts which could help understand the chronology, building techniques, and functional detail of the furnace.

4.4 Cwm Pelenna Ventilation Stack

The building comprises a ventilation stack built in the 1830s, with a hillside flue for Fforch-Dwm coal level. The building consists of a square rubble stone ventilation stack with rounded angles, standing on a square base. The stack stands c. 5m high. On the western side of the base is a round arch at the upper end of a stone flue, which is visible in the hillside below (**Photo 1 and 2**). The building is associated with Cwm Pelenna Colliery Ventilation Furnace (**GM458**) Scheduled Monument, which is discussed above.

As a Grade II Listed Building, Cwm Pelenna Ventilation Stack is a designated historic asset of less than the highest significance. This significance derives from its historic, architectural, and archaeological values. Historically and architecturally, the building is tied to the history of the development of Fforch-Dwm coal level and 19th century coal mining techniques and developments. The archaeological value



of the building is embodied by its association with the industrial remains of Cwm Pelenna Colliery Ventilation Furnace (**GM458**) Scheduled Monument.



Photo 1: Cwm Pelenna Colliery Ventilation Furnace and Stack from Fforch-Dwm Road

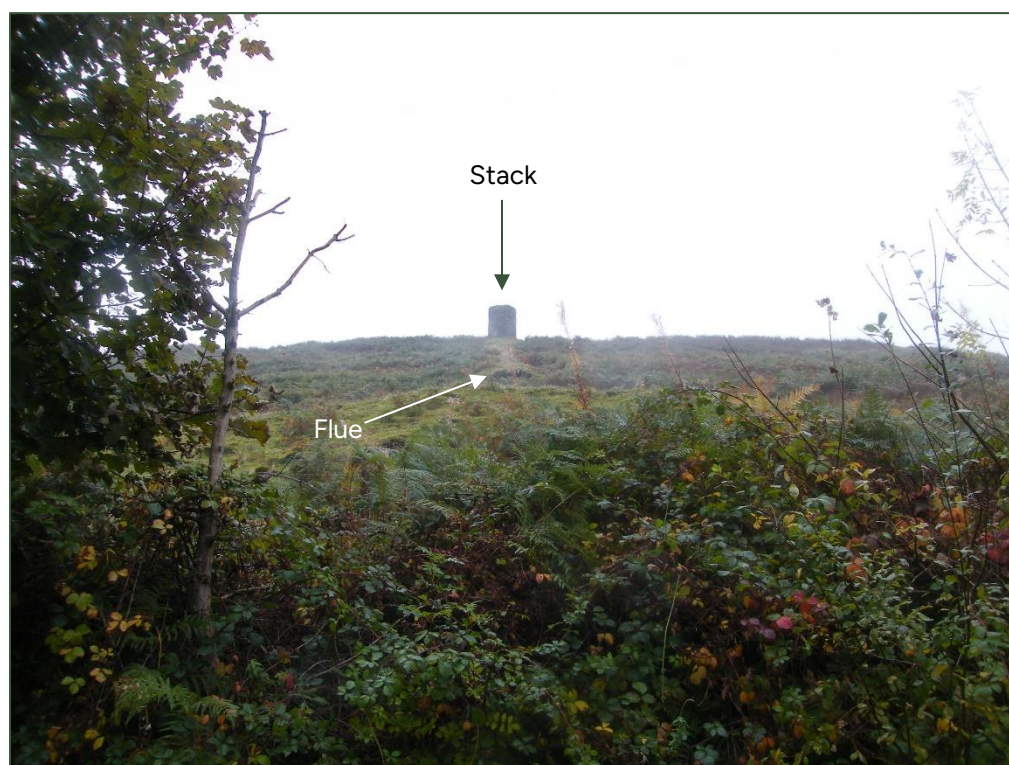


Photo 2: Cwm Pelenna Colliery Ventilation Furnace and Stack from Fforch-Dwm Road





Photo 3: View along Fforch-Dwm Road, within scheduled area, looking south



Photo 4: View along Fforch-Dwm Road, within scheduled area, looking north



5.0 The Proposals

5.1 Introduction

This assessment focusses on the proposed access track, associated with the windfarm development, which will comprise the widening and upgrading of the current Fforch-Dwm Road to facilitate HGVs accessing the Site. The 2022 HEDBA identified that the road upgrade had the potential to encroach on the scheduled area of Cwm Pelenna Colliery Ventilation Furnace and have the potential to truncate/remove archaeological remains of the highest significance.

It was proposed that the parts of the road within or in close vicinity to the scheduled area would not be the subject of the standard design and construction methodology employed elsewhere on the Site, and the designs would need to ensure that there would be no direct / physical impacts within the scheduled area or its immediate vicinity. The design / plan for the road can be found in **Appendix A** and is discussed in more detail below.

5.2 The Road

The existing Fforch-Dwm Road comprises a rough compacted stone track (as seen in **Photo 3** and **4**) used primarily as access to Fforch-Dwm Farm. The existing road measures c. 3m in width and this will need to be widened to 5m. As the road is located along a hillside, any widening will need to take cognisance of the slope stability, regarding both the up gradient (i.e., digging into the hillside) or widening on the down gradient side (i.e., a suitable road embankment will need to be provided).

The current road surface within the scheduled area would not be disturbed prior to any road widening and upgrading work. There will no excavations within this area.

The current road surface and any road widening will be upgraded using compacted granular material, typically Type 1 material or similar. Type 1 material comprises a granular, well-graded material sized c. 31.5mm to dust (**Plate 5**). The Type 1 material will be laid to a minimum thickness of 300mm, but this may increase to level out any low spots in the current profile.



Plate 5: Example of Type 1 material © Aggregates Direct

With regards to the road within the scheduled area (see **Plate 6**), the road widening will require that no digging into the uphill slope will take place. This will avoid any direct impact to the monument. The widening will require that the new road overhangs the scheduled area on the downward slope to avoid any physical / direct impacts, i.e., machine excavation. This overhang will be supported by an embankment. To mitigate the risk of settlement that construction traffic could have on the underlying



in-situ scheduled remains beneath this embankment, and therefore any loading to the remains, it is proposed to install a geogrid (**Plate 7**) across the full width of the road and extending a minimum of 5m beyond the extent of the scheduled area in the direction of Fforch-Dwm Road.

The geogrid should be placed within the granular fill and will interlock with the granular material, which allows the geogrid to lock in place and spread the vertical loads across a wider area, thereby reducing the risk of settlement and associated load transfer to the Scheduled Monument.

Additionally, regular maintenance of the road should be undertaken to ensure that a minimum depth of 300mm is always achieved between the top of the rack and the geogrid within the scheduled area.

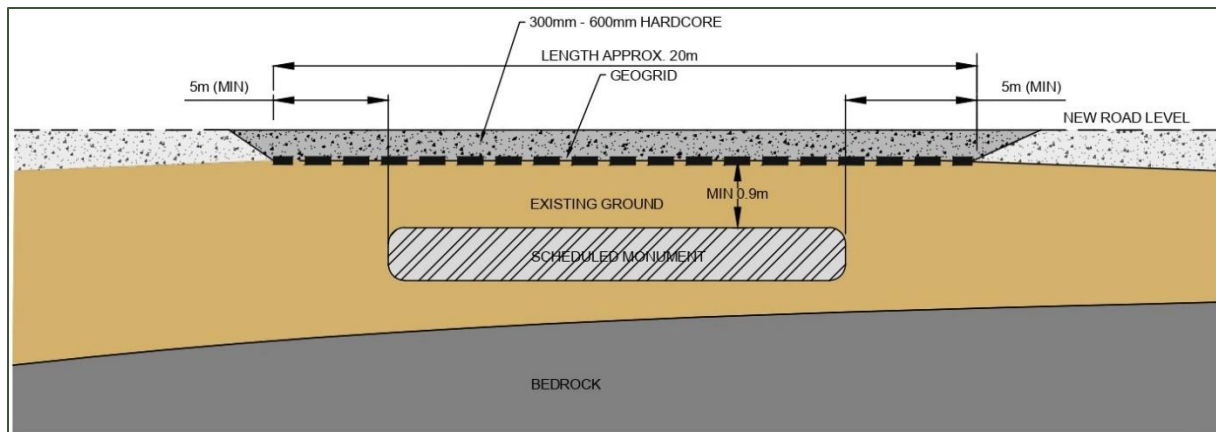


Plate 6: Extract drawing of road

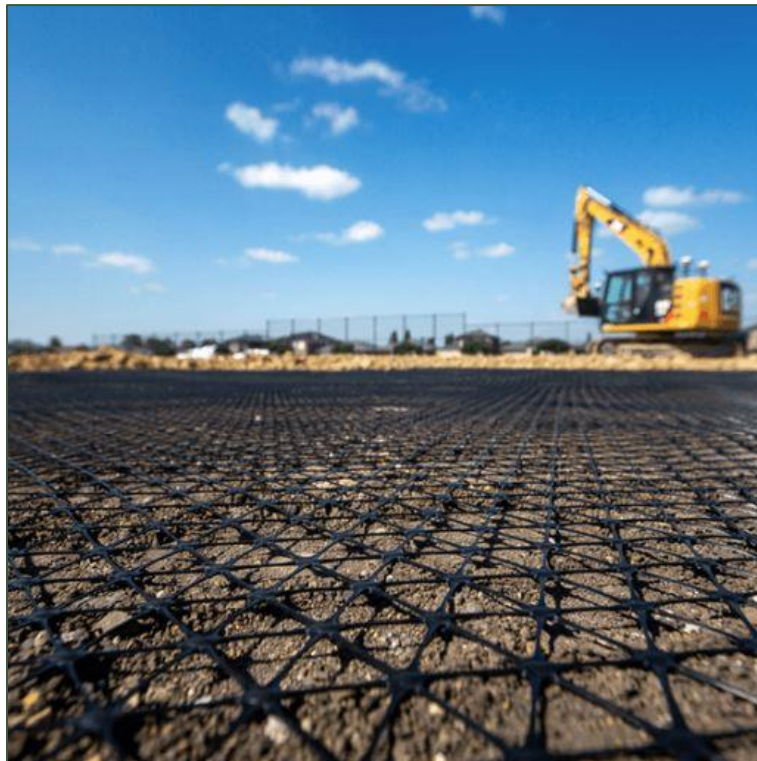


Plate 7: Example of geogrid system © Tensar



6.0 Assessment of Impact

6.1 Introduction

This stage of the assessment will consider the impact the proposed access track to Mynydd Fforch Dwm Wind Farm, i.e., the upgrading and widening of Fforch-Dwm Road within the scheduled area of Cwm Pelenna Colliery Ventilation Furnace (**GM458**), may have upon that Scheduled Monument. Additionally, this stage of the assessment will also consider the potential impact of the proposed access track on the setting of the Scheduled Monument, along with the setting of the Grade II Listed Building of Cwm Pelenna Ventilation Stack (**22888**).

6.2 Direct Impact – Cwm Pelenna Colliery Ventilation Furnace

The proposed widening and upgrading of the current Fforch-Dwm Road will have no direct / physical impact upon the Scheduled Monument. The scheduled area partially encroaches upon the current eastern and western extents of Fforch-Dwm Road (**Figure 2**). The widening of the road, as laid out in Section 5, will result in the upgraded road overhanging the scheduled area to the west of the extant Road, and as such, it will not result in any physical truncation of the Scheduled Monument, i.e., there will be no excavation works within the scheduled area.

As laid out above in Section 5.2, the proposed upgraded and widened section of Fforch-Dwm Road within the scheduled area would incorporate a geogrid, and this would extend to a minimum of 5m beyond the extent of the scheduled area along the road. Such an installation would spread any loads / weight caused by construction traffic across a wider area and reduce the risk of settlement and associated load transfer to the Scheduled Monument. Therefore, there will be **no harm** to Cwm Pelenna Colliery Ventilation Furnace.

6.3 Indirect impact – Cwm Pelenna Colliery Ventilation Furnace

The monument sits on a hillside of a steep valley overlooking Fforch-Dwm Road within the eastern area of the Site. The monument is aligned east to west and is clearly visible from Fforch-Dwm Road (**Photo 1 and 2**), but distant views are blocked due to the topography of the narrow valley.

The monument's setting is predominantly based on functionality and topography. The furnace was constructed in this location due to the proximity of the nearby colliery, and the steep sided hill provided an ideal location to allow smoke to be emitted above the base of the valley.

Today, the monument predominantly exists as below-ground remains, with occasional structures protruding the surface, i.e., the arched roof. The monument is located on a steep sided hill that is covered with bracken and vegetation, and indicators of its former use are largely obscured.

As outlined in Section 4.3, the monument's significance derives primarily from its evidential and historic values and especially from its archaeological potential. By comparison to those interests, the monument's setting makes a minor contribution to its significance, and this contribution can be seen to derive from the following aspects specifically:

- the topographical position of the monument ascending the steep-sided valley, which was a key consideration in the siting of the monument;
- the Nant Blaenpelenna, a stream which flows southwards into the Pelenna River, this water source was likely used by the nearby colliery, and could have been another consideration for the siting of the monument; and
- the location of Fforch-Dwm coal level and associated infrastructure, the monument would have been in convenient proximity to the level / colliery.

In terms of non-physical affects, only the proposed access tracks to Mynydd Fforch Dwm Wind Farm would be visible from the Scheduled Monument. As detailed above, the access tracks would run along the current Fforch-Dwm Road, and visually, the tracks would appear very similar to how the road currently appears, i.e., a stone trackway at surface level. Nonetheless, the likelihood of increased



traffic and activity, due to the proposed wind farm development, is likely to result in some **negligible / minor harm** to the significance of the monument through setting change.

6.4 Indirect Impact – Cwm Pelenna Ventilation Stack

The building is located close to the summit of the steep valley overlooking Fforch-Dwm Road within the eastern area of the Site (**Photo 1** and **2**). Similarly, to the Scheduled Monument, the building's location is predominantly based on functionality and topography. The ventilation stack was constructed in this location due to the proximity of the nearby colliery, and the steep sided hill provided an ideal location to allow smoke to be emitted above the base of the valley.

The building's significance, as outlined in Section 4.4, is derived primarily from its evidential and historic values and especially from its archaeological potential. By comparison to those interests, the building's setting makes a minor contribution to its significance, and this contribution can be seen to derive from the following aspects specifically:

- the topographical position of the building atop the steep-sided valley, which was a key consideration in its siting;
- the Nant Blaenpelenna, a stream which flows southwards into the Pelenna River, this water source was likely used by the nearby colliery, and could have been another consideration for the siting of the building; and
- the location of Fforch-Dwm coal level and associated infrastructure, the monument would have been in convenient proximity to the level / colliery.

Additionally, its location within the scheduled area of Cwm Pelenna Colliery Ventilation Furnace (**GM458**) also contributes to its significance and places the building within its post-medieval and industrial context.

There is intervisibility between the building and the proposed access tracks which pass the building to the south. However, the proposed access tracks comprise of the widening of the existing metalled surface road, there will be no new road, and the proposals would not detract from an appreciation of the building from Fforch-Dwm Road.

In terms of setting and non-physical affects, the proposals would likely result in some **negligible / minor harm** to the significance of the building. This harm would come from the likelihood of increased traffic and activity due to the proposed development; however, the harm would likely be minimal, and it would not detract from its overall appreciation.



7.0 Conclusion

7.1 Summary of Findings

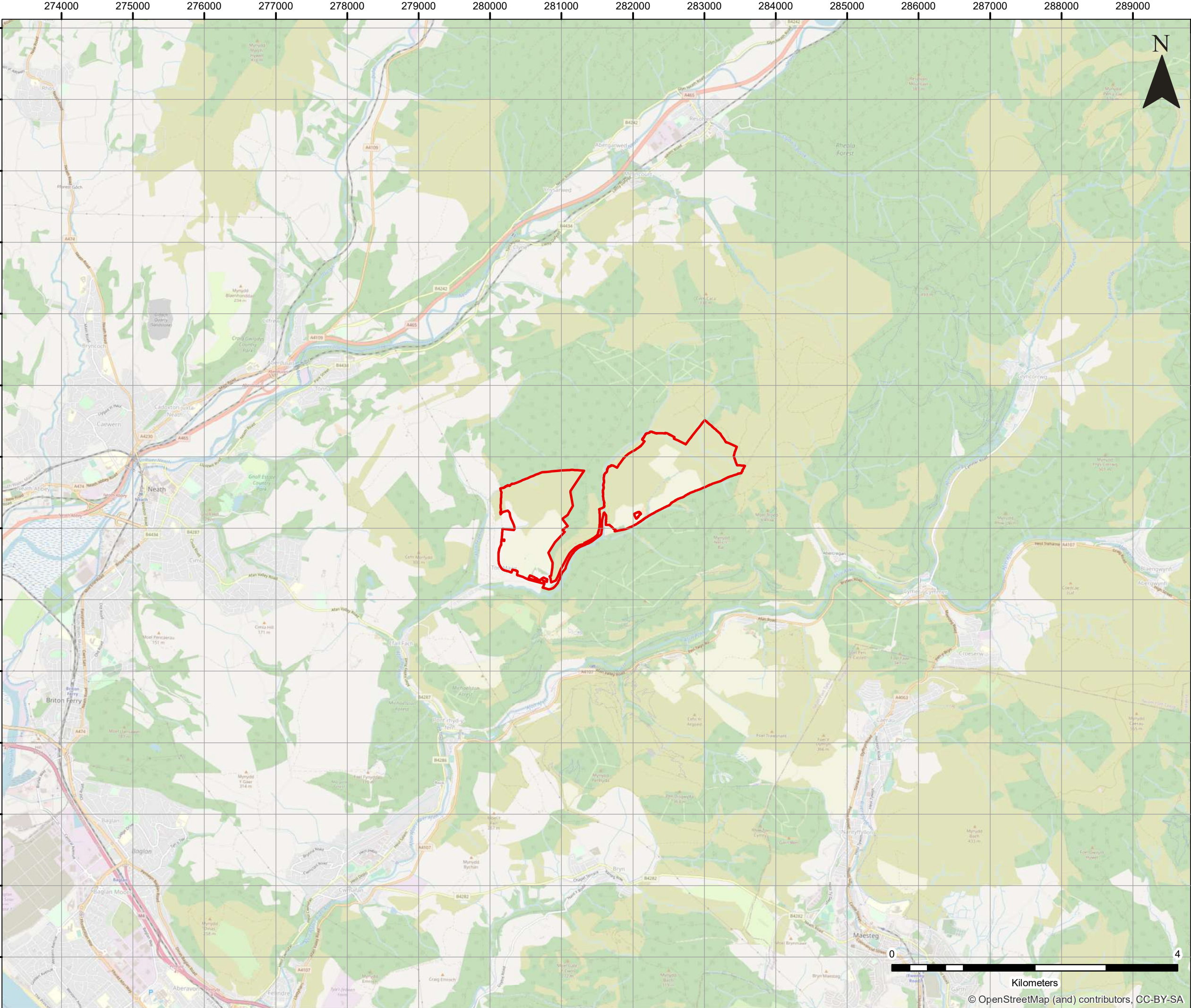
This assessment has established that the proposed widening and upgrading of Fforch-Dwm Road, to form a suitable access track to the proposed Mynydd Fforch Dwm Wind Farm, will result in:

- **no harm** in relation to direct / physical impacts on Cwm Pelenna Colliery Ventilation Furnace Scheduled Monument (**GM458**). The proposed works will not involve any ground-breaking activities within the scheduled area and the geogrid system will protect any below-ground remains from possible settlement or weight loading onto the Scheduled Monument;
- **negligible / minor harm** to the significance of Cwm Pelenna Colliery Ventilation Furnace Scheduled Monument (**GM458**) as a result to change in its setting due to increased traffic and activity from the proposed wind farm development. However, this harm will be negligible as the proposed works run along the current Fforch-Dwm Road, and visually, the tracks would appear very similar to how the road currently appears, i.e., a stone trackway; and
- **negligible / minor harm** to the significance of Cwm Pelenna Ventilation Stack Grade II Listed building (**22888**) as a result to change in its setting due to increased traffic and activity from the proposed wind farm development. However, as above, the proposals comprise the widening of the existing metalled surface road, there will be no new road, and the proposals would not detract from an appreciation of the building from Fforch-Dwm Road.

7.2 Conclusions

This assessment has considered the proposals relating to the upgrading and widening of Fforch-Dwm Road, and the proposals comply with the statutory requirement set out in **Ancient Monuments and Archaeological Areas Act (1979)**, **The Historic Environment (Wales) Act (2016)**, and with Planning Policy Wales and its associated technical advice notes, and with local plan policy.





LEGEND

SITE

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MYNYDD FFORCH DWM
HERITAGE IMPACT ASSESSMENT
SITE LOCATION

1

Scale 1:500,000 @ A3

Date MAY 2023



NOTE

1. DATA © CADW

LEGEND

SITE

VENTILATION STACK

VENTILATION FURNACE

PROPOSED ACCESS TRACKS

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

GROUND FLOOR
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MYNYDD FFORCH DWM

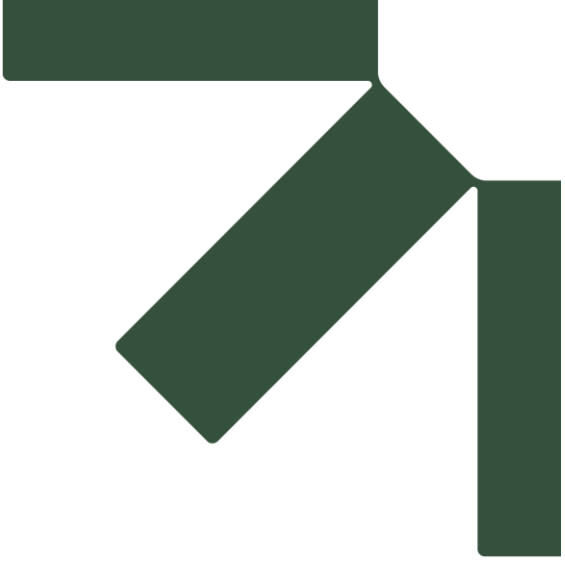
HERITAGE IMPACT ASSESSMENT

HISTORIC ASSETS

2

Scale 1:2,000 @ A3

Date MAY 2023



Appendix A Floating Road Detail

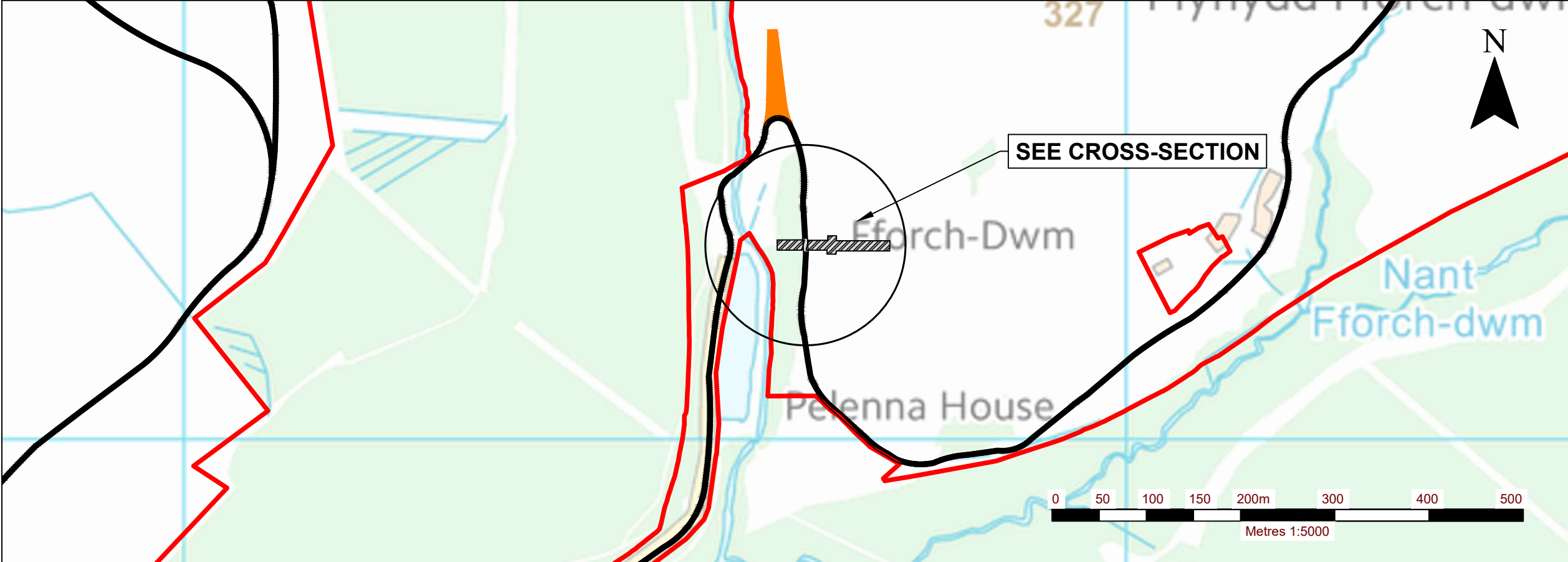
Mynydd Fforch Dwm, Wind Farm, Neath Port Talbot

Heritage Impact Assessment

REG Power Management Limited

SLR Project No.: 410.10909.00002

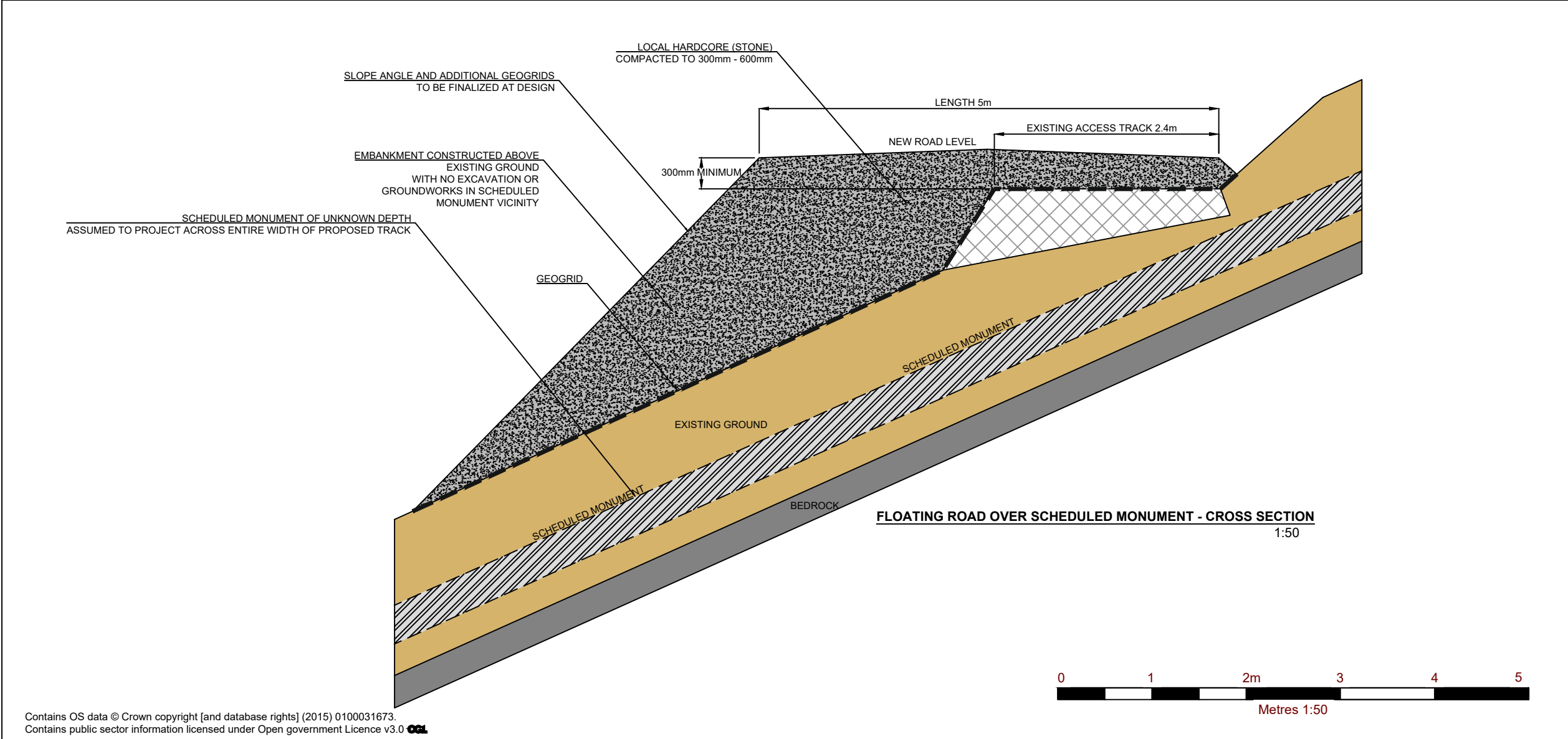
5 May 2023



- NOTES
1. WITHIN SCHEDULED MONUMENT AREA NO EXCAVATION OR GROUNDWORKS WILL BE UNDERTAKEN. NEW ACCESS TRACK TO BE CONSTRUCTED ABOVE EXISTING GROUND AND EXISTING ACCESS TRACK.
 2. A MINIMUM OF 300mm OF NEW LOCAL HARDCORE STONE WILL BE PLACED ABOVE A GEOGRID PLACED ON THE EXISTING TRACK AND SURROUNDING AREA.
 3. SCHEDULED MONUMENT IS KNOWN TO BE APPROXIMATELY 11.5m IN WIDTH. NEW ACCESS TRACK TO BE DEVELOPED TO OVERLAP THE MONUMENT BY A MINIMUM OF 5.0m ON EITHER SIDE.

LEGEND

	SITE BOUNDARY
	PROPOSED ACCESS TRACK
	SCHEDULED MONUMENT



4/5 LOCHSIDE VIEW
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Mynydd Fforch Dwm Wind Farm
PLANNING APPLICATION
FLOATING ROAD DETAIL

FIGURE 1

Scale VARIES @ A3

Date OCTOBER 2023

10909.00002.026.Fig-1.0_Floating_Road_RM.dwg

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