



Galileo 03 Ltd.

Mynydd Ty-talwyn Energy Park - Environmental Statement Volume II

Main Written Statement – Chapter 7: Cultural Heritage

Project Reference: 663870

This chapter is summarised within the Non-Technical Summary in Volume I of this Environmental Statement. A Welsh translation of the Non-Technical Summary is also available as part of the application.

Crynoir y bennod hon yng Nghrynodeb Annhechnegol y Datganiad Amgylcheddol hwn. Mae cyfieithiad Cymraeg o'r Crynodeb Annhechnegol hefyd ar gael fel rhan o'r cais.

NOVEMBER 2025

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Environment Ltd.

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7 CULTURAL HERITAGE

7.1 Introduction

- 7.1.1 This chapter presents an assessment of likely significant effects arising from the construction, operation and decommissioning of the proposed Mynydd Ty-talwyn Energy Park (the 'Proposed Development') upon cultural heritage (comprising archaeology, historic buildings, and 'setting').
- 7.1.2 This chapter is supported by the following appendices presented in **ES Volume III**:
- **Appendix 7.1: Written Scheme of Investigation for Heritage Desk-Based Assessment;**
 - **Appendix 7.2: Heritage Desk-Based Assessment;**
 - **Appendix 7.3: Written Scheme of Investigation for Geophysical Survey (Solar & Substation);**
 - **Appendix 7.4: Geophysical Survey Report (Solar Panels & Substation);**
 - **Appendix 7.5: Written Scheme of Investigation for Geophysical Survey (Wind Turbines);**
 - **Appendix 7.6: Geophysical Survey Report (Wind Turbines) and;**
 - **Appendix 7.7 Archaeological Field Evaluation Report.**
- 7.1.3 This chapter is supported by the following figures presented in **ES Volume IV**:
- **Figure 7.1 Designated Historic Assets Within 10 km Study Area;**
 - **Figure 7.2 Non-Designated Historic Assets Within the Site by RCAHMS (NMR) & Heneb (HER);**
 - **Figure 7.3 Geophysical Survey Interpretation (Solar, Substation, and Additional Areas No Longer in the Development);**
 - **Figure 7.4 Geophysical Survey Interpretation (Wind Turbines, Substation, and Additional Areas No Longer in the Development);**
 - **Figure 7.5 Archaeological Trial Trench Evaluation Survey Plan (Sheets 1 to 5); and**
 - **Figure 7.6 Cultural Heritage Receptors.**
- 7.1.4 This chapter should be read in conjunction with the following chapter in **ES Volume II**:
- **Chapter 8: Landscape and Visual.**

7.2 Consultation and Scope

Scoping Direction

- 7.2.1 The scope of this assessment has been established through an ongoing scoping process. This has involved the production of an EIA Scoping Report (provided in **ES Volume III, Appendix 1.1: EIA Scoping Report**), which was submitted to Planning and Environment Division Wales (PEDW) on 27 November 2023. Further information on the scoping process can be found in **ES Volume II, Chapter 4: Approach to the EIA**.
- 7.2.2 The Scoping Direction, a copy of which is included in **ES Volume III, Appendix 1.2: Scoping Direction**, was received on 11 April 2024. **Table 7.1** summarises the key Scoping Direction comments related to this assessment and sets out how these have been addressed.

Table 7.1 Summary of Scoping Direction Comments Relevant to this Cultural Heritage Assessment

ID no.	Issue	Comment raised	Applicant response
ID.36	'Study Area' - Study area for heritage setting assessments	Bridgend County Borough Council's (BCBC) Conservation Team advised they do not agree with the proposed study area due to the potential impact on historical assets from physical vibration. PEDW recommended that the study area is widened to include an assessment for physical vibrations and the construction access route. The Applicant should liaise with BCBC's Conservation Team to agree the study area.	The 10 km study area for the purposes of heritage setting assessment (i.e. non-physical effects to historic assets) has been approved by Cadw. Indirect impacts on historic assets from construction noise has been considered in the chapter, as informed by the Applicant's Noise and Vibration Consultant. Physical impacts on historic assets from vibration can only arise from construction traffic movements in close proximity to assets. As set out in ES Volume II, Chapter 9: Noise and Vibration when road surfaces are kept in good condition and free from significant irregularities, vibration from vehicle movements on the public highway is typically negligible. Therefore, vibration impacts from construction vehicles using existing public highways have not been assessed further, as these routes are maintained to Highway Standards and any potential vibration effects would be minimal and would not affect heritage assets along the construction route. Notwithstanding this, as discussed in ES Volume II, Chapter 12: Traffic and Movement, the Applicant would carry out regular monitoring of the carriageway condition during the construction of the Proposed Development. Necessary repair works would be carried out in a timely manner to prevent further deterioration of the carriageway during the works.

ID no.	Issue	Comment raised	Applicant response
N/A	Consideration of the construction route as part of heritage setting assessments	BCBC's Conservation Team advises that a physical assessment of the construction route to and from the Site and the impact of any works/removal of features with regard to the setting of historic assets is required to understand the effects from the Proposed Development.	Designated historic assets within 100 m of the construction traffic routes have been identified. This radius was determined by the nature of the assets, their setting, the ways in which they are experienced, and the current character of the construction traffic routes. Construction traffic count and traffic noise data collected from Automatic Traffic Count locations closest to designated historic assets have been reviewed as part of the Stage 1 heritage setting assessment as well as the Stage 2 heritage setting assessment undertaken for Derllwyn Road Tondur Conservation Area - see ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment .
ID.37	'Archaeological surveys' - Requirement for a desk-based assessment in accordance with a written scheme of investigation	Glamorgan Gwent Archaeological Trust (GGAT) concurred with the intention to undertake a full archaeological desk-based assessment. GGAT advised the assessment should be conducted in accordance with the Chartered Institute for Archaeologists Standard and guidance for historic environment desk-based assessment (2014) and to an agreed written scheme of investigation (WSI).	A WSI for a full archaeological desk-based assessment was agreed with GGAT on 2 April 2024 – see ES Volume III, Appendix 7.1: WSI for Heritage Desk-Based Assessment . The WSI outlined an assessment scope and methodology guided by the Chartered Institute for Archaeologists' Standard and guidance for historic desk-based assessment (2014). The desk-based assessment has been undertaken in accordance with the agreed WSI – see ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment .
ID.37	'Archaeological surveys' - Requirement for archaeological	GGAT advised that the results of the desk-based assessment should inform whether further archaeological work is required. Cadw also noted that should there be a need for	WSIs for geophysical survey of the proposed solar and wind development areas were agreed with GGAT on 9 August 2024 and 28 January 2025 – see ES Volume III, Appendix 7.3: WSI for Geophysical Survey (Solar & Substation)

ID no.	Issue	Comment raised	Applicant response
	surveys and fieldwork after the desk-based assessment but before completion of the ES	follow-on archaeological surveys and fieldwork to be undertaken, these works should be undertaken before EIA is completed.	and ES Volume III, Appendix 7.5: WSI for Geophysical Survey (Wind Turbines). The reports of both surveys are available for the ES – see ES Volume III, Appendix 7.4: Geophysical Survey Report (Solar Parcels & Substation) and ES Volume III, Appendix 7.6: Geophysical Survey Report (Wind Turbines). A WSI for an archaeological trial trench evaluation was agreed with GGAT on 2 September 2025. The findings of this investigation and the WSI are available in ES Volume III, Appendix 7.7: Archaeological Field Evaluation Report.
ID.38	'Baseline condition' - Consideration of third-party claims that the Site contains the battlefield of the Battle of Badon	Cadw advised the Applicant that the Proposed Development site has been claimed to be the site of the Battle of Badon, although they acknowledge it is not included in The Inventory of Historic Battles in Wales maintained by the Royal Commission on the Ancient and Historic Monuments in Wales. Britain's Hidden History (BHH) also refer to the site falling within the Mynydd Baedan battlefield, which is claimed by BHH to be the location of the Battle of Badon. PEDW therefore advised that the assessment will need to consider this possible site and any impact that will be caused on it by the Proposed Development. This matter should be addressed when agreeing the approach to	The claim for the Site having been the site of the Battle of Badon has been considered in ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment following consultation with Cadw and GGAT – see Table 7.2.

ID no.	Issue	Comment raised	Applicant response
		assessing archaeological receptors with GGAT.	
ID.39	'Proposed assessment methodology' - Methodology and scope of setting assessments	Cadw stated that a stage 1 assessment following the methodology in " <i>The Setting of Historic Assets in Wales</i> " should be carried out for all designated heritage assets listed in Annex A of their comments, including registered historic landscapes. This will determine the need, if necessary, for stages 2 to 4 to be carried out for specific heritage assets. The results of the stage 1 assessment should be included as an appendix to the ES.	Stage 1 setting assessments have been undertaken for designated heritage assets within a 10 km study area of the Site, and Stages 2 to 4 have been carried out for specific assets identified by Stage 1 as being potentially sensitive to the Proposed Development through changes to their setting, in line with the methodology in " <i>The Setting of Historic Assets in Wales</i> " – see ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment .
ID.39	'Proposed assessment methodology' - Requirement for a heritage impact assessment	BCBC noted that a detailed Heritage Impact Assessment (HIA) should be undertaken. The assessment should list all heritage assets and their significance, details of the proposal and its impact on those heritage assets and their settings. This should include the delivery route of equipment to the site. The assessment should allow a full understanding of the potential impacts from the development and should inform any proposed mitigation. PEDW recommended that the Applicant liaises with the relevant consultees on the scope and methodology for the HIA.	ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment provides impact assessments for all heritage assets deemed potentially sensitive to the Proposed Development through change to setting. The setting assessments have included consideration of the construction traffic routes, reviewing and referencing the construction traffic count and noise data. The scope and methodology of the setting assessments was agreed with Cadw; no response was received from BCBC during consultation efforts in 2023 - see Table 7.2 .

ID no.	Issue	Comment raised	Applicant response
ID.40	'References' - Forthcoming legislation	Cadw highlighted that the Historic Environment (Wales) Act (HEWA) 2023 will be enacted during the latter part of 2024. The Applicant therefore may need to review and update the ES should this be enacted prior/during submission.	HEWA 2023 was formally enacted in November 2024 and is cited in ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment and this chapter.

Additional Consultation

7.2.3 **Table 7.2** provides a summary of the additional consultation activities undertaken in support of the preparation of this assessment outside of the EIA Scoping process.

Table 7.2 Summary of Additional Consultation Undertaken

Consultee	Date of engagement	Summary of matters discussed	Applicant response
Archaeological Planning Officer at GGAT (Heneb) –	20/24 July 2023	Proposed scope and methodology of Heritage Desk-Based Assessment.	WSI prepared in 2024. See ES Volume III, Appendix 7.1: WSI for Heritage Desk-Based Assessment.
Senior Historic Environment Planning Officer at Cadw	20 July/1 August 2023	Proposed scope and methodology of Heritage Desk-Based Assessment.	WSI prepared in 2024. See ES Volume III, Appendix 7.1: WSI for Heritage Desk-Based Assessment.
BCBC Conservation Team	04 August 2023/no response	Comment sought on proposed scope and methodology of setting assessments.	N/A
Archaeological Planning Officer at GGAT (Heneb)	22 March 2024/ 02 April 2024	Submission and approval of WSI to formalise scope and methodology of Heritage Desk-Based Assessment.	ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment has been produced in accordance with the approved ES Volume III, Appendix 7.1: WSI for Heritage Desk-Based Assessment.
Senior Historic Environment Planning Officer at Cadw	30 July 2024	Meeting held to discuss the sensitivity of the Scheduled Monuments within the Site, in relation to the draft wind turbine layout.	Draft setting assessments prepared for the Scheduled Monuments, and shared with Cadw – see later row in this table (date of engagement 17

Consultee	Date of engagement	Summary of matters discussed	Applicant response
			December 2024/20 December 2024; 13 January 2025)
Archaeological Planning Officer at GGAT (Heneb)	7–9 August 2024	Submission/approval of WSI for geophysical survey of the wind development areas.	Geophysical survey undertaken in accordance with the approved ES Volume III, Appendix 7.5: WSI for Geophysical Survey (Wind Turbines) .
BCBC Conservation Team	25 November 2024	Meeting held to discuss scope and methodology of heritage setting assessments, in relation to the draft wind turbine and solar layout.	Arrangements made for an accompanied site visit – see following row in this table.
Senior Historic Environment Planning Officer at Cadw	17 December 2024/20 December 2024; 13 January 2025	Submission of draft setting assessments for Scheduled Monuments within the Site; and receipt of comments via email and in a meeting.	Feedback from Cadw was very positive, confirming that no significant effects to these assets were anticipated to arise from implementation of the working development layout.
BCBC Conservation Team	15 January 2025	Accompanied site visit held.	N/A
Archaeological Planning Officer at GGAT (Heneb)	20 January 2025	Meeting held to present the archaeology baseline work undertaken to date, including the results of the geophysical survey for the solar parcels, and to discuss	Geophysical survey for wind development areas progressed – see last row in this table. Heneb requested trial trenching of the solar parcels pre-determination. This

Consultee	Date of engagement	Summary of matters discussed	Applicant response
		expectations for next steps.	has been undertaken and informs the assessment reported in this Chapter. Further details are provided in correspondence dated the 02 September 2025.
GGAT (Heneb)	24 January 2025/28 January 2025	Submission/approval of WSI for geophysical survey of wind development areas.	Geophysical survey undertaken in accordance with the approved ES Volume III, Appendix 7.5: WSI for Geophysical Survey (Wind Turbines) . The results of the geophysical survey are reported in ES Volume III, Appendix 7.6: Geophysical Survey Report (Wind Turbines) .
CADW	26 June 2025	Virtual meeting. This meeting discussed the Pre-Application Consultation (PAC) comments received, the findings from the geophysical surveys and discussed the locations proposed for targeted trial trenching required to better understand the potential effects of the Proposed Development on the	Following the meeting, the trial trenching survey scope was further developed and formalised through the WSI submitted and agreed with Heneb, as provided within Appendix 7.7: Archaeological Field Evaluation Report – see correspondence from 02 September 2025.

Consultee	Date of engagement	Summary of matters discussed	Applicant response
		on-site Scheduled Monuments.	
GGAT (Heneb)	02 July 2025	Virtual meeting. This meeting discussed the PAC comments received from Heneb and discussed the locations proposed for targeted trial trenching within the Site.	Following the meeting, the trial trenching survey scope was further developed and formalised through the WSI provided within Appendix 7.7: Archaeological Field Evaluation Report – see correspondence from 02 September 2025.
BCBC – Planning Officer, Heritage Officer and Landscape and Visual Representative	05 August 2025	Virtual meeting. This meeting directly followed email feedback received on 04 August 2025 from the Landscape and Visual Representative and the PAC comments received from the Heritage Officer. The meeting discussed the Applicant's proposed changes to the layout and sought feedback on the proposed amendments.	Further design revision has been undertaken to remove additional solar parcel fields, remove the BESS, relocate the substation and revise the woodland planting.
GGAT (Heneb)	02 September 2025	Submission/approval of WSI for archaeological trial trench evaluation of Solar Parcels A, D, E, F, G, H, J, K, L and T03.	The WSI was agreed with Heneb and the archaeological evaluation undertaken in accordance with the approved WSI. The results of the archaeological evaluation and WSI are reported in ES

Consultee	Date of engagement	Summary of matters discussed	Applicant response
			Volume III, Appendix 7.7: Archaeological Field Evaluation Report.

Pre-Application Consultation

- 7.2.4 **Table 7.3** provides a summary of the responses received, in relation to cultural heritage, following the statutory PAC process, and the necessary action taken to update the assessment, where relevant. Where appropriate the PAC responses have been summarised. The full consultee comments are set out in the standalone **Pre-application Consultation Report**, which is submitted to accompany the DNS Application.

Table 7.3 PAC Comments and Responses

Consultee	Summary of consultee comment	Applicant response
Bridgend County Borough Council	My overarching concerns are the physical and visual impact on the historic sites of Llangwynwyd, Coytrehen and Tondy in respect of transport movement, vibration, visual glare from large areas of solar panels, physical and visual impact on green landscape to be used for storage containers in considerable numbers. Extract below from Cadw's map and key. The list refers to the historic structures just in Llangwynyd. The blue dots indicate all listings [map and key not copied here] The following map shows the extent of the Registered Historic Landscape: [map not copied here] Also, the setting of Pentre Farm will be impacted on (sic). [map not copied here] I have concerns over the scale of vehicles travelling on roads that were shown to us, that in part, are single track roads. Whilst I appreciate the need for each country to generate its own energy, the use of green field sites that form part of historic landscapes, should not be the first choice of implementing schemes, that currently will be switched off due to lack of generated energy, being stored. Similarly, 40 odd shipping containers to act as battery storage on green field sites is both visually and physically harmful. There must be less sensitive sites that can be used? From a heritage and historic landscape perspective, this is very difficult to support for any approval.	The assessment reported in this chapter, and supporting appendices considers the impacts from increased vehicle trip generation, noise, vibration and changes in views from relevant heritage receptors, including those within Llangwynyd. The effects of the Proposed Development on the local road network are assessed and reported in ES Volume II, Chapter 12: Traffic and Movement. The potential setting effects on heritage receptors as a result of the increased trips are assessed as part of this chapter. The area of the Site which falls within BCBC's jurisdiction is located within LSA1: Llangynwyd Rolling Uplands and Forestry which is identified as being suitable for wind and solar energy development. Further detail on the site selection process can be found in ES Volume II, Chapter 3: Environmental Context and Reasonable Alternatives Considered. The BESS has been removed from the design and is no longer included as part of the Proposed Development. This change, and other changes in the design of the Proposed Development were discussed with

Consultee	Summary of consultee comment	Applicant response
		BCBC's Heritage Officer via virtual meetings (as set out in Table 7.2). These changes to the design were welcomed by BCBC.
CADW	We consider that the pre-application is inadequately documented, and we recommend that additional information is required to enable a balanced decision to be taken against Planning Policy Wales. Full details of the additional information that is required are explained in the below assessment.	The Applicant notes this comment. See responses to more detailed comments below.
CADW	The application will be accompanied by an environmental statement prepared by RSK, with chapter 7 Heritage being produced by Pegasus. This work has considered the impact of the proposed development on the designated historic assets listed in Annex B and their settings. This work has concluded that, with the current level of information, there will not be significant effects on these designated historic assets and their settings: However, the geophysical surveys carried out in the application area has identified a number of archaeological sites, some of which could be contemporary and connected to the designated assets, but no investigations have been carried out to identify the date and function of these sites. The assessment of the impact of the proposed development on the settings of the designated historic assets is therefore incomplete until archaeological evaluation of the identified archaeological sites has been carried out and the results considered. As noted above the archaeological sites identified by the geophysical surveys have not been the subject of archaeological evaluation, thus their extent, nature and date have not been established and therefore their significance is unknown, contrary to the advice given in section 6.1.26 of Planning Policy Wales, which states: -	An archaeological trial trench evaluation has been undertaken for the Proposed Development. The results are presented in this chapter and Appendix 7.7: Archaeological Field Evaluation Report.

Consultee	Summary of consultee comment	Applicant response
	Where archaeological remains are known to exist or there is a potential for them to survive, an application should be accompanied by sufficient information, through desk-based assessment and/or field evaluation, to allow a full understanding of the impact of the proposal on the significance of the remains. This information is particularly required as it is possible that some of these archaeological sites may be determined to be of National Importance and therefore development on them, or in their settings, could have adverse impact or an unacceptably damaging effect that would be contrary to section 6.1.24 of Planning Policy Wales, which states: - 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. Whilst it is noted that section 7.7 of the environmental statement suggests that the archaeological evaluation could be carried out post-determination of the application, this is clearly contrary to section 6.1.26 of Planning Policy Wales. It is therefore necessary for the archaeological evaluation work to be carried out prior to the completion of the environmental statement and the submission of the planning application. The evaluation should be targeted to provide the required information on the sites identified by the heritage desk-based assessment and the geophysical surveys.	

Consultee	Summary of consultee comment	Applicant response
Heneb/Neath Port Talbot Council	We have consulted the regional Historic Environment Record (HER) and note the submission of an Environmental Statement which includes a Cultural Heritage section (Chapter 7), a Heritage Desk Based Assessment (Appendix 7.2), a Geophysical Survey for the Solar Panels and Substation (Appendix 7.4) and a Geophysical Survey for the Wind Turbines (Appendix 7.6). The archaeological work to date has identified potential Bronze Age burial mounds, a medieval road, several enclosures, as well as linear, discrete and magnetic enhancement anomalies. As a result, there is the potential of encountering archaeological features and structures during the course of the proposed development. However, the exact nature and significance of the identified features is not currently known.	The Applicant notes this comment. An archaeological trial trench evaluation has since been undertaken for the Proposed Development. The results are presented in this chapter and Appendix 7.7: Archaeological Field Evaluation Report.
Heneb/Neath Port Talbot Council	It is proposed to undertake ‘intrusive archaeological investigations’ composed of trial trenches, potentially followed by further investigations and mitigation, as appropriate. As noted in the submitted documentation, we concur with such an approach. However, also as noted, our recommendation would be for such work to be carried out pre-determination as set out in Planning Policy Wales and TAN 24. Specifically, Planning Policy Wales 2024 (Edition 12) Section 6.1.26 states that “<i>Where archaeological remains are known to exist or there is a potential for them to survive, an application should be accompanied by sufficient information, through desk-based assessment and/or field evaluation, to allow a full understanding of the impact of the proposal on the significance of the remains</i>” More detail on this guidance can be found in TAN24 sections 4.7 and 4.8. It remains our assertion that a field evaluation is appropriate in this particular case and should be conducted pre-determination. It is	An archaeological trial trench evaluation has been undertaken for the Proposed Development. The results are presented in this chapter and Appendix 7.7: Archaeological Field Evaluation Report.

Consultee	Summary of consultee comment	Applicant response
	therefore still our opinion that the applicant should be requested to commission the required archaeological work. Consequently, as the impact of the development on the archaeological resource will be a material consideration in the determination of any planning application this should be deferred until a report on the evaluation has been submitted. It should also be noted that additional archaeological mitigation could be required, following the completion of the evaluation works.	
Heneb/Neath Port Talbot Council	The scope and methodology for the evaluation will need to be detailed in a written scheme of investigation (WSI), compiled by the archaeological contractor and submitted to us for approval. It is our policy to recommend that all archaeological work is carried out either by a Registered Organisation (RO) with the Chartered Institute for Archaeologists (CIfA), or by a full Member (MCIfA) of CIfA.	A WSI for the archaeological evaluation was prepared by Archaeology Wales and approved by GGAT on 2 September 2025. All works were subsequently undertaken in accordance with that WSI and to the standards and guidance set by the CIfA; Standard for archaeological field evaluation (2023), and Universal guidance for archaeological field evaluation (2023). Archaeology Wales is a RO with the CIfA.

Scope of the Assessment

- 7.2.5 The technical scope of this assessment has been established through an ongoing scoping process. As a result of this process, the technical scope of the assessment reported in this chapter comprises:
- Physical effects on heritage receptors within the Site;
 - Non-physical development effects on heritage receptors within the Site; and
 - Non-physical development effects on heritage receptors within 10 km of the Site.
- 7.2.6 The following matters are considered unlikely to result in likely significant effects, and therefore have been scoped out of the assessment, as agreed through the EIA scoping process:
- Physical development effects on heritage receptors beyond the Site;
 - Non-physical development effects on heritage receptors beyond 10 km of the Site.
- 7.2.7 Physical effects are direct effects, namely demolition, destruction, or partial loss of or damage to above- and below-ground historic assets, which may include buildings/structures, earthworks, and buried archaeological remains. Non-physical effects are indirect effects, as arising through change to the setting of historic assets, which includes both visibility and noise.
- 7.2.8 Despite the changes to the Proposed Development layout since **ES Volume III, Appendix 1.1: EIA Scoping Report** was submitted to PEDW (namely the reduction in the number of wind turbines from 10 to 6, the reduction in the extent of the solar development, the removal of BESS, and the relocation of the substation), there has been no change to the scope of this assessment since the receipt of the Scoping Direction, which is presented in **ES Volume III, Appendix 1.2: Scoping Direction**.

7.3 Methodology

- 7.3.1 This assessment has been undertaken in accordance with the following legislation, and with regard to the following planning policy and guidance. It should be noted that this chapter does not assess the compliance of the Proposed Development against relevant planning policy. Such an assessment is presented in the standalone **Planning, Design and Access Statement** submitted as part of the DNS Application.

Legislation

- Historic Environment (Wales) Act 2023;
- Town and County Planning Act 1990 (as amended); and
- Well-being of Future Generations (Wales) Act 2015.

National Planning Policy

- *Future Wales 2040* (Welsh Government Llywodraeth Cymru, 2021);
- Planning Policy Wales 12 (Welsh Government Llywodraeth Cymru, 2024); and
- *Technical Advice Note 24 – The Historic Environment* (Welsh Government Llywodraeth Cymru, 2017).

Local Planning Policy

- Bridgend Borough County Council Replacement Local Development Plan 2018-2033 (adopted 2024); and
- Neath Port Talbot Local Development Plan 2011-2026 (adopted 2016).

Guidance

- Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Cadw, 2011);
- Setting of Historic Assets in Wales (Cadw, 2017);
- Heritage Impact Assessment in Wales (Cadw, 2017); and
- Standard and guidance for historic environment desk-based assessment (Chartered Institute for Archaeologists, 2014).

Baseline Characterisation

Extent of the Study Area

- 7.3.2 **ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment** has been informed by historic environment records of non-designated historic assets within a 5 km-radius study area of the Site; however, the assessment focusses on those assets within a 3 km-radius study area¹. Other sources of information for the archaeological desk-based assessment, such as historic maps and aerial photographs, have been gathered for a 1 km-radius study area of the Site. This approach was set out in **ES Volume III, Appendix 1.1: EIA Scoping Report**, as well as **ES Volume III, Appendix 7.1 WSI for Heritage Desk-Based Assessment**, and was approved by Heneb (GGAT) – see **Table 7.1** and **Table 7.2**.

¹ HER and NMR data was originally procured in July 2023 for a study area measured from the original iteration of the Site boundary (as submitted for the EIA Scoping). These datasets were re-ordered in December 2024 for the same study area, but subsequently presented against a revised study area as measured from the revised (final) iteration of the Site boundary (as submitted for the ES).

- 7.3.3 The heritage setting assessment has identified all designated historic assets within a 10 km-radius study area of the Site. The Zone of Theoretical Visibility (ZTV) models for the wind and solar and substation components of the Proposed Development have been used as assessment tools. The wind ZTV has assumed a 200 m height to blade tip and has been undertaken on bare earth terrain on that basis that localised vegetation offers limited screening based on the height of the wind turbines. The solar ZTV is screened and has assumed 3 m as the height of the solar panels and 12 m for the height of the substation. The ZTVs guided a sieving exercise for designated historic assets within and beyond 10 km. This approach was set out in **ES Volume III, Appendix 1.1: EIA Scoping Report** as well as in email correspondence with Cadw, and was approved by Cadw – see **Table 7.1** and **Table 7.2**.
- 7.3.4 Geophysical survey has been undertaken for all of the proposed solar development areas excepting c.9 ha where crop precluded access, though the data for c.17 ha was voided by contamination; as well as for the proposed footprint of the substation (refer to **ES Volume III, Appendix 7.4: Geophysical Survey Report (Solar Parcels & Substation)**).
- 7.3.5 Geophysical survey has also been undertaken for each of the proposed six wind turbines: in each case covering a 1 hectare area centred on the turbine as well as the associated area of cut-and-fill and hardstanding (refer to **ES Volume III, Appendix 7.6: Geophysical Survey Report (Wind Turbines)**).
- 7.3.6 The scope and methodological approach to the geophysical surveys is set out in **ES Volume III, Appendix 7.3: WSI for Geophysical Survey (Solar & Substation)**² and **ES Volume III, Appendix 7.5: WSI for Geophysical Survey (Wind Turbines)**, both of which were approved by Heneb (GGAT) – see **Table 7.1** and **Table 7.2**.
- 7.3.7 An archaeological trial trench evaluation has been undertaken for solar parcels A, D, E, F, G, H, J, K, L and T03 (refer to **ES Volume III, Appendix 7.7: Archaeological Field Evaluation Report** and **ES Volume IV, Figure 7.5 Archaeological Trial Trench Evaluation Survey Plan**).

Desk Study

- 7.3.8 In order to establish the baseline conditions within the study area, data was obtained from the following sources for the purposes of **ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment**:
- Cadw datasets regarding designated historic assets;
 - Glamorgan Gwent Archaeological Trust's Historic Environment Record (HER) data regarding non-designated historic assets;

² The BESS has since been removed from the scheme and the substation relocated from its original location to that formerly occupied by the BESS. As the WSIs have been previously issued to and approved by Heneb, the documents have not been updated.

- The Royal Commission on the Ancient and Historical Monuments of Wales's National Monuments Record (NMR) for further information on non-designated historic assets;
- The Royal Commission on the Ancient and Historical Monuments of Wales's (RCAHMS) Inventory of Historic Battlefields in Wales;
- Historic maps and other relevant documentary material held by West Glamorgan Archives (visited in person) and the National Library of Wales (remote search only);
- Historic aerial photographs within the collections of the Welsh Government Aerial Photography Unit (available online);
- 2003 and 2007 2 m resolution digital terrain model LiDAR imagery (incomplete coverage of the Site), downloaded from Data Map Wales;
- Google Earth satellite imagery;
- Bare Earth Zone of Theoretical Visibility Model for Wind Turbines;
- Screened Zone of Theoretical Visibility Model for Solar;
- Screened Zone of Theoretical Visibility Model for Substation; and
- Wirelines and photomontages to visualise the Proposed Development.

Field Study(s)

- 7.3.9 Site visits to support this assessment and **ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment**, comprising a walkover survey of the Site and inspections of designated historic assets from the Site and public rights of way, were undertaken on 28–29 June 2023, 18–19 April 2024, and 6 February 2025.
- 7.3.10 The geophysical survey of the proposed solar parcels and land formerly reserved for BESS (now proposed for the substation) was undertaken between 13 August and 4 September 2024 (refer to **ES Volume III, Appendix 7.4: Geophysical Survey Report (Solar Parcels & Substation)**).
- 7.3.11 The geophysical survey of the proposed wind turbines and land formerly reserved for a substation (now relocated) was undertaken between 10 and 14 February 2025 (refer to **ES Volume III, Appendix 7.6: Geophysical Survey Report (Wind Turbines)**).
- 7.3.12 The archaeological trial trench evaluation of Solar Parcels A, D, E, F, G, H, J, K, L and T03 was undertaken between 08 September and 17 October 2025 (refer to **ES Volume III, Appendix 7.7: Archaeological Field Evaluation Report**).

Assessment Criteria

- 7.3.13 The assessment considers the following in respect of each identified historic environment receptor (asset):
- The asset's level of significance;
 - The magnitude of any beneficial or adverse impacts to the asset's significance; and,

- Whether that magnitude of impact would comprise a significant beneficial or adverse effect.

Assessment of Heritage Significance

- 7.3.14 The Welsh Government's Technical Advice Note 24 (TAN24) defines heritage significance as: *"the sum of the cultural and natural heritage values of a place, often set out in a statement of significance."*
- 7.3.15 Cadw's Conservation Principles for the sustainable management of the historic environment in Wales defines significance as deriving from a combination of any, some or all of the following four component values:
- Evidential value: deriving from the potential of a place to yield evidence about past human activity;
 - Historic 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: deriving from the ways in which people draw sensory and intellectual stimulation from a place; and
 - Communal value: deriving from the meaning of a place for the people who relate to it, or for whom it figures in their collective experience or memory.
- 7.3.16 This approach allows for a detailed and justifiable determination of significance and the values from which that significance derives.
- 7.3.17 In accordance with the levels of significance articulated in TAN24 and Planning Policy Wales 12 (PPW), the following terminology is used in this chapter where applicable:
- Designated historic assets: Scheduled Monuments, Listed Buildings (Grade I, II* and II), Registered Parks and Gardens (Grade I, II* and II), Registered Historic Landscapes ('Outstanding' or 'Special'), World Heritage Sites, and Conservation Areas;
 - Non-designated nationally important archaeological remains: Archaeological remains that are not designated but are still considered to be of a level of significance commensurate with that of a Scheduled Monument; and
 - Non-designated historic assets: Assets of less than national importance, including any of special local interest.
- 7.3.18 Designated historic assets are ascribed a significance of **very high** or **high**. Scheduled Monuments, Grade I and II* Listed Buildings, Grade I and II* Registered Parks and Gardens, Outstanding Registered Historic Landscapes, World Heritage Sites, and Conservation Areas containing numerous of the above are considered of **very high** significance. Grade II Listed Buildings, Grade II Registered Parks and Gardens, Special Registered Historic Landscapes, and most Conservation Areas are considered of **high** significance.

- 7.3.19 Non-designated historic assets are ascribed a significance of **medium**, **low** or **negligible** significance. This is based on available information and professional experience and judgement regarding the asset's known and/or potential level of survival, its geographical rarity, and its ability to contribute to knowledge.
- 7.3.20 Locally Listed Buildings, other asset types with locally-ascribed designations, and archaeological remains with potential to contribute to regional research framework aims and objectives would typically be considered of **medium** significance. Structures and archaeological remains of local interest would be considered of **low** significance. Historic agricultural features are an example of remains that would be considered of **negligible** significance.

Assessment of the Contribution Made by Setting to Significance

- 7.3.21 Setting is defined in TAN24 as: *“the surroundings in which [a historic asset] is understood, experienced, and appreciated embracing past and present relationships to the surrounding landscape. Its extent is not fixed and may change as the asset and its surrounding evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect [the] ability to appreciate that significance or may be neutral.”*
- 7.3.22 Setting can contribute to, detract from, or have a neutral effect upon the heritage significance of an asset. In addition, whilst a physical or visual connection between a historic asset and its setting will often exist, it is not essential or determinative.
- 7.3.23 TAN24 states that *“setting is not a historic asset in its own right but has value derived from how different elements may contribute to the significance of a historic asset.”* As such, any impacts are described within this chapter in terms of how they affect the significance of a historic asset, and any heritage values that contribute to that significance, through changes to setting.
- 7.3.24 Settings assessments have been undertaken in accordance with the industry-standard methodology provided by Cadw's Setting of Historic Assets in Wales (Cadw, 2017). This guidance promotes a 'stepped' (iterative) approach, as follows:
- Stage 1 - assess which assets would be affected and identify their setting;
 - 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 - assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it; and
 - Stage 4 - consider options to mitigate or improve the potential impact of a proposed change or development on that significance.
- 7.3.25 The following resources were used to inform Stage 1:
- The relevant Cadw Scheduling and Listing descriptions;

- The Bare Earth ZTV and the Screened ZTVs (SZTVs)³;
- Digital terrain modelling;
- Modern and historic mapping; and
- Satellite imagery and aerial photography.

Assessment of Magnitude of Impact

- 7.3.26 **Paragraph 6.1.5** of PPW states that: *“The planning system must take into account the Welsh Government’s objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being... Conservation Principles highlights the need to base decisions on an understanding of the impact a proposal may have on the significance of an historic asset.”*
- 7.3.27 The over-riding provision within PPW in relation to change to designated assets (and non-designated assets of equivalent significance) is that there should be a presumption in favour of:
- The physical preservation in situ of Scheduled archaeological remains;
 - The preservation and enhancement of Listed Buildings and their settings; and
 - The preservation or enhancement of the character or appearance of Conservation Areas or their settings.
- 7.3.28 PPW also states that any development effects upon the following are material considerations in the determination of planning applications:
- Registered Parks or Gardens, or their setting; and
 - Non-designated archaeological remains, with the relative importance of the archaeological remains and their settings to be weighed against other factors, including the need for the Proposed Development.
- 7.3.29 For the purposes of this assessment:
- Where the significance of an historic asset will be compromised, this will be articulated as an adverse impact;
 - Where the significance of an historic asset will be preserved, this will be articulated as no adverse impact;
 - Where the asset’s significance would be enhanced, this will be articulated as a benefit;
- 7.3.30 The magnitude of adverse and beneficial impacts has been gauged to be **no change, negligible, minor, moderate, or major**.
- **No change** has been used where there will be no change to the asset.

³ SZTVs illustrate theoretical visibility to the Proposed Development, taking account of the screening from intervening woodland and buildings in the local context which reduce visibility.

- **Negligible** has been used in cases where there will be only very slight loss or detrimental change, or very modest benefit or positive addition, to one or more characteristics or components of the asset including elements of its setting as applicable.
- **Minor** has been used in cases where there will be slight loss or alteration, or small-scale improvement or positive addition, to one or more characteristics or components of the asset including elements of its setting, resulting in some loss or enhancement of its significance.
- **Moderate** has been used in cases where there will be partial loss of or damage to, or partial improvement or addition to, key characteristics or components of the asset including elements of its setting, resulting in a less than substantial reduction or enhancement of its significance.
- **Major** has been used in cases where there will be complete loss, total alteration, or considerable positive change or improvements to, the asset or its setting, resulting in a substantial reduction or enhancement of its significance.

7.3.31 Benefit would weigh in favour of the Proposed Development in the planning balance. It would be a desirable outcome, consistent with all key policy objectives and industry guidance provisions.

Assessment of Significance of Effect

7.3.32 In determining whether any identified adverse or beneficial impacts to heritage receptors would translate into a significant effect, a matrix-led system has been used (**Table 7.4**) combined with professional judgement.

Table 7.4: Matrix for Assessment of Significance of Effect

		Magnitude of Impact				
		No change	Negligible	Minor	Moderate	Major
Significance of Receptor	Very high	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

7.3.33 A significance of effect of **large** and/or **very large** would be **significant**.

- 7.3.34 Where **Table 7.4** indicates a range for the significance of effect and the effect could be either significant or not significant (e.g. moderate or large), professional judgement has been applied to define the significance. Where both categories within the range fall within either 'significant' or 'not significant', the range has not been adjusted to a single descriptor (for example if the range is 'neutral or slight', as both effects are considered to be not significant; or if the range is 'large or very large', as both effects are considered to be significant).
- 7.3.35 Any adverse impact to Scheduled Monuments as arising through change to the setting will be considered against the **Paragraph 6.1.24** test in *PPW*, i.e. whether it constitutes a demonstrably and unacceptably damaging effect.
- 7.3.36 Likewise, it will be determined whether any adverse impact on other statutorily protected built heritage assets as arising through change to the setting constitutes unacceptably adverse impact, as per Policies 17 and 18 of *Future Wales 2040*.
- 7.3.37 Whilst an individual effect may be considered significant, it does not necessarily follow that the Proposed Development would be unacceptable in the planning balance.

7.4 Baseline Conditions

Existing Baseline

Prehistoric and Roman

- 7.4.1 A moderate amount of evidence of prehistoric activity is recorded within and beyond a 3 km radius of the Site by existing databases.
- 7.4.2 In the northern part of the Site, the HER records one possible Neolithic/Bronze Age standing stone to the north of the track to Maescadlawr and one to the south. No stone was observed in either location during the walkover survey, and the former is considered to be incorrectly mapped by the HER.
- 7.4.3 In the southern central part of the Site, on the west side of Ffordd-y-Gyfraith at Cefn-y-gelli (within Solar Parcel K) and on the east side of Ffordd-y-Gyfraith to the north of Baiden Farm (outside the Site), the HER records nine cropmark ring ditches and two earthwork mounds believed to indicate Bronze Age funerary monuments referred to as round barrows and/or ring cairns.
- 7.4.4 A small area of low, incoherent earthworks was observed at Baiden Farm during the walkover survey; nothing was observed within Solar Parcel K at Cefn-y-gelli. The geophysical survey of Solar Parcel K also identified no suggestive anomalies; and no archaeological features were exposed within Trenches 58-61 during the later trial trench evaluation (**ES Volume IV, Figure 7.5 Archaeological Trial Trench Evaluation Survey Plan, Sheet 5**).
- 7.4.5 However the geophysical survey of Solar Parcel H identified a series of partial ring ditch anomalies, many of which contain a single internal feature. These were ascribed an interpretation of 'uncertain' but their morphology was not inconsistent with that of ploughed-out round barrows. A selection of these anomalies was

targeted during the trial trench evaluation by Trenches 33, 34, 35 and 36 (**ES Volume IV, Figure 7.5 Archaeological Trial Trench Evaluation Survey Plan, Sheet 4**).

- 7.4.6 None of these trenches identified any ring ditches. However, Trench 36 identified a central feature: a circular pit measuring c.0.4 m in diameter and containing a probable Bronze Age cremation urn. This pit may originally have lain at the centre of a round barrow as defined by an outer ring ditch. The urn was left in situ, although a total of 15 disturbed sherds from the neck of the vessel were recovered for dating purposes.
- 7.4.7 Findspots of Roman coins within a 1–4 km radius of the Site comprise the only recorded physical evidence of Roman activity within the study area; although the conjectured alignments of several Roman roads have been plotted, one coinciding with Ffordd-y-Gyfraith, which extends through the Site.
- 7.4.8 The geophysical survey of the solar parcels of the Proposed Development detected possibly prehistoric to Romano-British enclosures and associated linear and discrete features in the following locations:
- In the west of Solar Parcel E, south of Maescadlawr (**ES Volume IV, Figure 7.3: Geophysical Survey Interpretation (Solar, Substation, and Additional Areas No Longer in the Development): E1**);
 - In the north of Solar Parcel J, at Cefn-y-gelli (**ES Volume IV, Figure 7.3: Geophysical Survey Interpretation (Solar & BESS): E2, E3**);
 - In the south-east of Solar Parcel J and in the south-west of Parcel K, at Cefn-y-gelli (**ES Volume IV, Figure 7.3: Geophysical Survey Interpretation (Solar, Substation, and Additional Areas No Longer in the Development): E?4, E?5**); and
 - In the east of Solar Parcel G, at Baiden Farm (**Geophysical Survey Interpretation (Solar, Substation, and Additional Areas No Longer in the Development): E6**).
- 7.4.9 The subsequent trial trench evaluation identified ditches corresponding to the enclosures of E1, E2 and E6 only. The ditch fills of E1 contained Bronze Age and Roman pottery, confirming a later prehistoric to Romano-British origin. The ditch fills of E2 and E6 contained no finds, but a post-medieval date was indicated by the ditch cuts through the subsoil.

Early Medieval and Medieval

- 7.4.10 Carved stones recorded 2–3 km from the Site constitute the only definite physical evidence of early medieval activity within the study area.
- 7.4.11 Modern, popularist literature has suggested that the Site was the location for the ‘Battle of Baeden’, fought in the late 5 or early 6 century AD. Within the Site are groups of linear earthworks:
- On the east side of Mynydd Baeden;

- To the north and south of Ffordd-y-Gyfraith on the north and east sides of Mynydd Ty-talwyn; and
 - Near Gilfach Uchaf.
- 7.4.12 Proponents of the Battle of Baeden theory believe these earthworks represent entrenchments from the battle. However, this interpretation is not found in official databases. The Site is not included on Royal Commission on the Ancient and Historical Monuments of Wales's Inventory of Historic Battlefields in Wales. The HER and NMR consider the earthworks to represent medieval hollow-ways (in some cases with house platforms) and/or evidence of historic industrial activity. Research for this assessment found no documentary sources or archaeological evidence to support the claim for the Battle of Baeden.
- 7.4.13 The geophysical survey included one of the areas at Mynydd Ty-talwyn and detected a large Y-shaped anomaly that was later confirmed by the trial trench evaluation to comprise a series of ditches. Plastic and 20th-century bricks were recovered from the fill of one of the recut ditches, indicating that the feature was recut i.e. modified during the modern period.
- 7.4.14 A considerable amount of evidence of medieval activity is recorded within and beyond a 3 km radius of the Site by existing databases.
- 7.4.15 Within the Site are recorded several locales of medieval rural settlement. To the west of Maescadlwr is the Scheduled Monument of a medieval settlement known as 'British Fortified Residence' (GM086). Three wells are recorded in its vicinity. On the Mynydd Ty-talwyn plateau are two Scheduled Monuments of house platforms known as 'Mynydd Ty Talwyn Ancient Farms' (GM092, GM093), one Scheduled Monument comprising 11 house platforms collectively known as 'Earthwork and Platform Houses N of Nant Fadog' (GM340); as well as several other non-designated house platforms, enclosures, trackways, and a well. At Cwm Nant Gwyn there are four non-designated house platforms. At Mynydd Baeden there are two non-designated house platforms.
- 7.4.16 The only recorded medieval remains that were seen as extant earthworks during the Site walkover surveys were:
- British Fortified Residence at Maescadlwr (Heneb ref. 00126m (Scheduled Monument GM086);
 - Trackway on the west side of Mynydd Ty-talwyn (Heneb refs. 08074m and 08075m);
 - House platforms on the north side of Mynydd Ty-talwyn (Heneb refs. 006013m and 06320m);
 - House platform on the east side of Mynydd Ty-talwyn (Heneb ref. 06129m);
 - House platform/pastoral enclosure on the southern slopes of Mynydd Ty-talwyn (Heneb ref. 00134m (part of Scheduled Monument GM340));
 - House platform on the southern slopes of Mynydd Ty-talwyn (Heneb ref. 00131m (part of Scheduled Monument GM340));

- House platform on the southern slopes of Mynydd Ty-talwyn (Heneb ref. 00132m (part of Scheduled Monument GM340));
- House platforms to the south of Cwm Nant-gwyn (Heneb refs. 042228m and 01713m);
- House platform on the north-west side of Mynydd Baeden (Heneb ref. 04225m); and
- Deserted rural settlement at Craig Fadog (Heneb ref. 01731m).

7.4.17 The geophysical survey of the Site provided coverage of part of the Mynydd Ty-talwyn plateau, for Solar Parcel D and the substation, and Turbines T03 and T04. No anomalies suggestive of house platforms were detected, only responses consistent with historic plough trends and former field boundaries.

7.4.18 The subsequent trial trench evaluation tested these same areas, by way of Trenches 6-18 (**ES Volume IV, Figure 7.5 Archaeological Trial Trench Evaluation Survey Plan, Sheet 2**). All of these trenches were blank – i.e. devoid of archaeological features – except for Trench 15. This trench revealed a steep-sided and flat-bottomed pit, its fill containing frequent charcoal and occasional charred grain. As the pit cut through the subsoil, it was assumed to be post-medieval in date. Its function is currently unknown, but an association with agricultural activity seems likely.

7.4.19 The road through the Site, known as Ffordd-y-Gyfraith ('Road of the Law'), is believed to have been used in the medieval period by officials travelling from the lowlands into the wild hill country. According to the HER, branches from Ffordd-y-Gyfraith led to the 'British Fortified Residence' (surviving as earthworks of a hollow-way) and to Mynydd Baeden (an extant farm track) (Heneb ref. 03111.0 m).

Post-medieval and Modern

7.4.20 A considerable amount of evidence of post-medieval and modern activity is recorded within and beyond a 3 km radius of the Site by existing databases.

7.4.21 A total of 23 post-medieval, modern, and undated features are recorded within the Site. These all relate to agricultural and industrial activity, and include several farmsteads, historic field bank boundaries, stone quarries, dispersed coal levels, and the buildings and tramway of Ton Phillip Colliery.

7.4.22 The locations of these features were visited as far as possible during the Site walkover surveys, and only the following were observed as above-ground remains:

- Clawdd type field boundary at Bryncynan Farm (Heneb ref. 04743 m);
- Quarry earthworks near Maescadlawr (Heneb ref. 04744 m);
- Historic field bank boundary at Mynydd Ty-talwyn (Heneb ref. 08790 m);
- Old driveway at Mynydd Ty-talwyn (Heneb ref. 06128 m);
- Historic field bank boundary at Cefn-y-gelli (Heneb ref. 08791 m);
- Former quarry at Cefn-y-gelli (Heneb ref. 08072 m); and

- Modern barn possibly incorporating earlier fabric at Cefn-y-gelli (Heneb ref. 06126 m).

7.4.23 The geophysical survey detected ditches on the same alignment as field boundaries recorded on 19th-century maps. These ditches were targeted in the subsequent trial trench evaluation by Trenches 28 (Solar Parcel E), 36 (Solar Parcel H), and 66, 70, 74, 77 and 79 (Solar Parcel J). No dating was recovered from the ditch fills.

Uncertain Date

7.4.24 The geophysical surveys of the solar parcels and former location of the BESS (now the location of the substation) detected anomalies of uncertain origin as follows:

- Linear anomalies L1–L11 inclusive, representing possible evidence of human activity, period unknown;
- Smaller discrete anomalies U1–U6 inclusive, representing possible evidence of human activity, period unknown; and
- Magnetic enhancement anomalies ME1–ME9 inclusive, representing possible evidence of human activity, period unknown.

7.4.25 The geophysical surveys of the wind turbine locations and original location of the substation (since relocated) detected anomalies of uncertain origin as follows:

- Linear anomalies L12–18 inclusive, representing possible evidence of human activity, period unknown;
- Smaller discrete anomaly U7, representing possible evidence of human activity, period unknown; and
- Magnetic enhancement anomalies ME10–ME11 inclusive, representing possible evidence of human activity, period unknown.

7.4.26 The trial trench evaluation recorded ditches corresponding to linear anomalies in Trenches 3 (Solar Parcel A), 32 and 33 (Solar Parcel H), and 71, 73, 75, and 76 (Solar Parcel J). No dating was recovered from any of the ditch fills. Several of the ditches cut through the subsoil and were presumed to relate to post-medieval agricultural activity, some perhaps representing former field boundaries pre-dating 1839.

7.4.27 The trial trench evaluation identified four large, sub-oval pits corresponding to magnetic enhancement anomalies ME6 in Trenches 46 and 49 in Solar Parcel G. None of the pits relate to features shown on available historic maps, and none contained any dating evidence. They may be former quarry pits.

7.4.28 The trial trench evaluation also identified three small, sub-oval pits in Trenches 15 (Turbine T03), 64 (in an area since removed from Solar Parcel J), and 75 (Solar Parcel J). The pits in Trenches 64 and 75 were not predicted by the geophysical survey. The pit in Trench 15 was predicted by the geophysical survey; it cuts through the subsoil and so is likely post-medieval in date. None of the pits

contained any dating evidence, although the two fills of the pit in Trench 75 contained abundant charcoal.

Designated Historic Assets

- 7.4.29 The following designated historic assets are located within the Site:
- British Fortified Residence at Maescadlawr (ref. GM086);
 - Mynydd Ty Talwyn Ancient Farms (refs. GM092 and GM093); and
 - Earthwork and Platform Houses N of Nant Fadog (ref. GM340).
- 7.4.30 The following designated historic assets are located within a 10 km radius of the Site:
- 560 Listed Buildings, comprising:
 - 23 Grade I Listed Buildings;
 - 59 Grade II* Listed Buildings;
 - 478 Grade II Listed Buildings;
 - 105 Scheduled Monuments (including those within the Site);
 - 19 Conservation Areas;
 - 9 Registered Historic Parks and Gardens (and 14 Gardens/Kitchen Gardens); and
 - 3 Registered Historic Landscapes: Margam Mountain; Merthyr Mawr, Kenfig and Margam Burrows; and The Rhondda.
- 7.4.31 Stage 1 of Cadw's setting assessment methodology for designated historic assets comprised a sieving process utilising the wind, solar, and substation ZTVs, consideration of designation descriptions, and review of assets' locations through desk-based analysis and site visits. This exercise considerably reduced the number of assets deemed potentially sensitive to the Proposed Development through change to setting. Full details of the process are provided in **ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment**.
- 7.4.32 The assets progressed to Stages 2 and 3 setting assessment were as follows:
- Scheduled Monument of British Fortified Residence at Maescadlawr (Cadw ref. GM086);
 - Scheduled Monument of Mynydd Ty Talwyn Ancient Farms (Cadw refs. GM092 and GM093);
 - Scheduled Monument of Earthwork and Platform Houses N of Nant Fadog (Cadw ref. GM340);
 - Scheduled Monument of Y Bwlwarcaw (Cadw ref. GM059);
 - Scheduled Monument of Roman Camp (Cadw ref. GM058);
 - Scheduled Monument of Llangynwyd Castle (Cadw ref. GM085);
 - Grade II* Listed Building of Church of St Cynwyd at Llangynwyd (Cadw ref. 11243);

- Grade II Listed Building of Gilfach-ganol Farmhouse (Cadw ref. 11375);
- Llangynwyd Conservation Area;
- Derllwyn Road Tondu Conservation Area; and
- Margam Mountain Registered Historic Landscape.

7.4.33 It was determined that the Site makes no contribution through setting to the significance of Y Bwlwarcaw, Roman Camp, Gilfach-ganol Farmhouse or Margam Mountain Registered Historic Landscape.

7.4.34 It was determined that parts of the Site do contribute through setting to the significance of British Fortified Residence, both Mynydd Ty Talwyn Ancient Farms, Earthwork and Platform Houses N of Nant Fadog, Church of St Cynwyd, Llangynwyd Conservation Area, and Derllwyn Road Tondu Conservation Area.

British Fortified Residence

7.4.35 It is considered that the following elements of setting contribute to the significance of the British Fortified Residence:

- The east-facing slopes of a point of high ground, on the west side of a narrow valley, which would presumably have afforded shelter from prevailing westerly winds and good drainage downslope as well as perhaps having a defensive consideration;
- Its proximity to the springs and streams of Nant y Gadlys and Nant Bryncynan, which would have provided a water supply for the settlement;
- Its associated agricultural hinterland, which presumably included the summit and slopes of the high ground on which the settlement was located, and perhaps the land dropping down north to Nant Bryncynan and north-east to Maescadlawr;
- Its possible association with the medieval road known as Ffordd-y-Gyfraith, which the HER plots as having formerly diverted north from the modern road to directly serve the British Fortified Residence from the south;
- Its possible associations with the medieval house platforms on Mynydd Ty-talwyn, although there is no intervisibility with these sites/the plateau due to the intervening topography;
- The surrounding field, from where the surviving earthworks are typically and best experienced – particularly the rising ground to the south-west of the monument, which allows the viewer to appreciate the monument within its wider landscape setting; and
- The panoramic views from the monument looking north-west through north to east, which allows the geographical and topographical situation of the settlement to be appreciated, and may also have had a defensive function; and
- The open, pastoral, and rugged character of the surrounding uplands, largely free of visible modern built form, which arguably assists in imagining the medieval landscape.

- 7.4.36 To summarise with regard to the Site, it is considered that Ffordd-y-Gyfraith and its former branch to the British Fortified Residence, the Mynydd Ty-talwyn plateau hosting other medieval settlement remains, and the current landscape character of those parts of the Site featuring in views from and towards the British Fortified Residence – specifically, the surrounding field and the land on the north side of the track to Maescadlawr – contributes to the significance of the Scheduled Monument.

Mynydd Ty Talwyn Ancient Farms

- 7.4.37 It is considered that the following elements of setting contribute to the significance of each of the two monuments known as Mynydd Ty Talwyn Ancient Farms:
- The upper north-facing slopes of the point of high ground known as Mynydd Ty-talwyn, which would have ensured good drainage downslope as well as mid-ranging views to the north – the need for a defensive advantage perhaps outweighing the need for a more sheltered position;
 - Their proximity to the watercourse of Nant Craig-yr-aber, which would have provided a water supply for the settlement(s);
 - Their associated agricultural hinterland, which presumably included the plateau of Mynydd Ty-talwyn and at least its northern and western slopes;
 - Their possible association with the medieval road known as Ffordd-y-Gyfraith, which may have separated their agricultural hinterland from that of the British Fortified Residence (if indeed the two were contemporaneous);
 - Their possible associations with the medieval house platforms on the south and east side of Mynydd Ty-talwyn, on the east side of Ffordd-y-Gyfraith, and the British Fortified Residence, although there is seemingly limited to no intervisibility with the other sites due to the intervening topography;
 - The views looking roughly north and south-east from the assets, which allows their geographical and topographical situation to be appreciated, and may also have had a defensive function; and
 - The open, pastoral, and rugged character of the Mynydd Ty-talwyn plateau, free of modern built form, which arguably assists in imagining the medieval rural landscape.
- 7.4.38 To summarise with regard to the Site, it is the group value of the Mynydd Ty-talwyn and Nant Fadog house platforms and any currently-unknown buried archaeological remains of associated activity on Mynydd Ty-talwyn in particular, and the current landscape character of the Mynydd Ty-talwyn, Cefn-y-gelli and Mynydd Baeden uplands featuring both in outward views from the assets and inward views towards and between the assets from those locations, that contributes to the significance of both Scheduled Monuments.

Earthwork and Platform Houses N of Nant Fadog

- 7.4.39 It is considered that the following elements of setting contribute to the significance of Earthwork and Platform Houses N of Nant Fadog:
- The mid to lower south- and east facing slopes of the point of high ground known as Mynydd Ty-talwyn, which would presumably have afforded shelter from prevailing westerly winds and ensured good drainage downslope;
 - Their proximity to the watercourse of Nant Fadog, which would have provided a water supply for the settlement(s);
 - Their associated agricultural hinterland, which presumably included the land on the southern slopes of Mynydd Ty-talwyn and perhaps the north-facing slopes of Cefn-y-gelli on the opposite side of Nant Fadog;
 - The possible associations with the medieval house platforms on the north side of Mynydd Ty-talwyn, on the east side of Ffordd-y-Gyfraith, and the British Fortified Residence, although there is seemingly limited to no intervisibility with the other sites due to the intervening topography;
 - The cross-valley views looking south and south-east from the assets towards Cefn-y-gelli, which allows their geographical and topographical situation to be appreciated; and
 - The open, pastoral, and rugged character of the Mynydd Ty-talwyn plateau and wider surroundings of Mynydd Baeden, free of modern built form, which arguably assists in imagining the medieval rural landscape.
- 7.4.40 To summarise with regard to the Site, it is the group value of the Mynydd Ty-talwyn and Nant Fadog house platforms and any currently-unknown buried archaeological remains of associated activity on Mynydd Ty-talwyn in particular, and the current landscape character of the Mynydd Ty-talwyn, Cefn-y-gelli and Mynydd Baeden uplands featuring both in outward views from the assets and inward views towards and between the assets from those locations, that contributes to the significance of this Scheduled Monument.

Church of St Cynwyd

- 7.4.41 It is considered that the following elements of setting contribute to the significance of the Church of St Cynwyd:
- Its historical functional association with the historic rural parish and village of Llangynwyd;
 - Its central and elevated position within the medieval settlement core, ensuring its visual prominence and dominance particularly at close range but also at long range;
 - Its walled churchyard and outlying cemetery, with which it has an historical and extant functional association and from where the asset is typically and best experienced;
 - The sections of Llan Road along the northern, western and southern sides of the churchyard, which also offer key views of the asset;

- Selected long-ranging views of the asset from the south, across the intervening uplands and valley, which allows the church to be seen in the context both of Llangynwyd village and its landscape setting; and
- Views from the curtilage of the asset towards grazing land of the outlying valley and uplands to the south, which illustrate the historic rural isolation and agricultural economy of the village.

- 7.4.42 The Site lies within the parish of Llangynwyd. There are long-ranging northerly views towards the church from certain points on roads, tracks, and footpaths that cross the Site. In such views, the church is seen in its immediate and wider rural landscape context. Ffordd-y-Gyfraith and the track to Maescadlawr offer the clearest views from the Site.
- 7.4.43 Parts of the Site feature in the long-ranging outward south-westerly to south-easterly views from the churchyard of the church. Currently, few modern built components are present in this view (the river valley towns and other wind farms being located to the east and north).
- 7.4.44 It is considered that the semi-remote and undeveloped character of the landscape featuring in both long-ranging northerly views towards the church and long-ranging southerly views from the church – which includes the Site – makes a small contribution to the significance of the Church of St Cynwyd.

Llangynwyd Conservation Area

- 7.4.45 It is considered that the following elements of setting contribute to the significance of Llangynwyd Conservation Area:
- The topographical and geographical context of Llangynwyd, on a low hill above the Nant y Gadlys valley with upland ranges to the north, east, and south – which can be experienced in panoramic views from the churchyard and cemetery at the centre of the Conservation Area as well as in panoramic views towards the Conservation Area from the Llangynwyd Mountain Road, Ffordd-y-Gyfraith, and the track to Maescadlawr;
 - The narrow, enclosed, and leafy character of the lanes leading towards and from Llangynwyd, which are the principal approaches to the Conservation Area and foster a sense of the upland rural isolation and historic agricultural economy of the village;
 - Immediately outlying grazing land within the historic agricultural hinterland of Llangynwyd, where this can be experienced in views towards and from the Conservation Area, for instance, to the south of The Old House; and
 - The rural, semi-remote, and largely-undeveloped character of the wider landscape to the west and south, which is most clearly visible in long-ranging views from Llan Road and the Church of St Cynwyd at the centre of the Conservation Area.

- 7.4.46 The Site lies within the parish of Llangynwyd. There are long-ranging northerly and north-westerly views towards the Conservation Area from certain points on roads, tracks, and public rights of way that cross the Site. In such views, the Conservation Area is seen in its immediate and wider rural landscape context. Ffordd-y-Gyfraith and the track to Maescadlawr offer the clearest views from the Site.
- 7.4.47 Parts of the Site feature in the long-ranging outward south-westerly to south-easterly views from the churchyard of the Church of St Cynwyd at the centre of the Conservation Area. Currently, few modern built components are present in this view (the river valley towns and other wind farms being located to the east and north).
- 7.4.48 It is considered that the semi-remote and undeveloped character of the surrounding/wider landscape that features in both long-ranging northerly views towards the Conservation Area and long-ranging southerly views from the Conservation Area – which includes the Site – makes a small contribution to the significance of Llangynwyd Conservation Area.

Sensitive Receptors

- 7.4.49 As far as possible, the Proposed Development layout has been designed to avoid known historic assets within the Site (see **Section 7.5**). As such, for the purposes of this ES, only the known and potential historic assets coinciding with the infrastructure of the Proposed Development are identified as being susceptible to physical impact.
- 7.4.50 Meanwhile, regarding the susceptibility of designated historic assets to non-physical impacts, as arising through changes to setting, only those assets for which Stages 2 and 3 of Cadw's setting assessment methodology found adverse impacts from the Proposed Development are identified as sensitive receptors.
- 7.4.51 **Table 7.5** sets out the receptors scoped in as relevant to this assessment and their level of significance. The location of these receptors is illustrated on **ES Volume IV, Figure 7.6: Cultural Heritage Receptors**.

Table 7.5 Sensitive receptors

ID	Receptor	Discussion	Significance
Physical effects			
1	Potential Bronze Age burials in Solar Parcel K	Recorded by the HER on the basis of cropmark evidence, but not detected by the geophysical survey or trial trench evaluation	Non-designated assets of up to regional importance Up to medium significance

ID	Receptor	Discussion	Significance
2	Known and potential Bronze Age cremation burials in Solar Parcel H	Buried archaeological remains indicated by geophysical survey and confirmed by trial trench evaluation	Non-designated assets of up to regional importance Up to medium significance
3	Bronze Age to Romano-British enclosure E1 in Solar Parcel E	Buried archaeological remains indicated by geophysical survey and confirmed by trial trench evaluation	Non-designated asset of up to county importance Up to medium significance
4	Roman pit in Solar Parcel J	Buried archaeological remains revealed by trial trench evaluation	Non-designated asset of local importance Low significance
5	The medieval road of Ffordd-y-Gyfraith and its former branches to the British Fortified Residence and Mynydd Baeden	Recorded by the HER; the road and track to Mynydd Baeden are extant while the branch to the British Fortified Residence partially survives as a hollow-way	Non-designated asset of local importance Up to medium significance
6	Post-medieval enclosure E2 in Solar Parcel J	Buried archaeological remains indicated by geophysical survey and confirmed by trial trench evaluation	Non-designated asset of local importance Low significance
7	Post-medieval enclosure E6 in Solar Parcel G	Buried archaeological remains indicated by geophysical survey and confirmed by trial trench evaluation	Non-designated asset of local importance Low significance
8	Post-medieval pit within the footprint of Turbine T03	Buried archaeological remains revealed by trial trench evaluation	Non-designated asset of local importance Low significance

ID	Receptor	Discussion	Significance
9	Post-medieval pit within Solar Parcel J	Buried archaeological remains revealed by trial trench evaluation	Non-designated asset of local importance Low significance
10	Four large undated pits, which may be associated with post-medieval quarrying, in Solar Parcel G (and others elsewhere across the Site)	Buried archaeological remains indicated by geophysical survey and confirmed by trial trench evaluation	Non-designated asset of local importance Low significance
11	Probable post-medieval ditches (mapped as 'intrenchments') in the vicinity of the access track to Turbine T01 (and others elsewhere across the Site)	Buried archaeological remains indicated by geophysical survey and confirmed by trial trench evaluation	Non-designated asset of local importance Low significance
Non-physical effects			
12	British Fortified Residence GM086	Scheduled Monument, located within the Site	Designated asset of national importance Very high significance
13	Mynydd Ty Talwyn Ancient Farms GM092	Scheduled Monument, located within the Site	Designated asset of national importance Very high significance
14	Mynydd Ty Talwyn Ancient Farms GM093	Scheduled Monument, located within the Site	Designated asset of national importance Very high significance
15	Earthwork and Platform Houses N of Nant Fadog GM340	Scheduled Monument, located within the Site	Designated asset of national importance Very high significance
16	Church of St Cynwyd	Grade II* Listed Building located c.1.5 km north of the Site	Designated asset of national importance

ID	Receptor	Discussion	Significance
			Very high significance
17	Llangynwyd Conservation Area	Conservation Area located c.1.4 km north of the Site	Designated asset of regional to national importance High significance

Future Baseline in the Absence of the Proposed Development

- 7.4.52 No significant changes to the existing baseline are anticipated without the implementation of the Proposed Development.
- 7.4.53 The continuation of sheep grazing across the majority of the Site is not expected to have any major above- or below-ground impacts on known and potential archaeological and historic features within the Site.
- 7.4.54 The continuation of arable cultivation within parts of the Site may, through ploughing and other plant movements, truncate and/or destroy known and potential buried archaeological remains within the Site.
- 7.4.55 The continuation of use of the motocross track at Cefn y Gelli is not anticipated to have any major above- or below-ground impacts on known and potential archaeological and historic features within the Site.
- 7.4.56 It is also possible that currently unknown historic assets are discovered within the Site in the future; these could be non-designated or designated. Additionally, it is possible that currently known non-designated assets could become designated (as Scheduled Monuments or Listed Buildings); and for designated assets to become non-designated. However, such events could occur even with the implementation of the Proposed Development.

7.5 Mitigation Embedded into the Design

- 7.5.1 This assessment has been based on the principle that measures have been 'embedded' into the design of the Proposed Development to remove potential significant effects as far as practicable, for example by the considered placement of infrastructure. The embedded mitigation relevant to this assessment is detailed in **Table 7.6**.

Table 7.6 Embedded mitigation relevant to the cultural heritage assessment

Embedded mitigation measure relevant to Cultural Heritage	Function
Wherever possible, built infrastructure has been sited to avoid Scheduled Monuments, non-designated historic assets recorded by the HER and NMR, earthworks of potential historic interest	By avoiding known historic assets, physical impacts to the above- and below-ground remains of these assets are avoided.

Embedded mitigation measure relevant to Cultural Heritage	Function
identified by the Site walkover surveys, and selected buried archaeological remains identified by the trial trench evaluation. The Scheduled Monuments on Mynydd Ty-talwyn have been afforded a minimum 100 m buffer from built infrastructure. The internal access tracks to Turbines T03 and T04 have been intentionally designed to avoid linear earthworks believed to represent historic hollow-ways. Solar arrays have been removed from the location of the Bronze Age cremation burial in Solar Parcel H.	
Woodland planting around the solar parcels, selected wind turbines, and the substation. The planting around Solar Parcel D (with Turbine T04) and the substation is intended to help screen the Proposed Development in views from Llangynwyd Conservation Area. NB The SZTVs for the solar and the substation take the screening effect of this planting into account.	By providing vegetative screening around built infrastructure, the non-physical impacts to designated historic assets (i.e. visibility of the Proposed Development, comprising a change to the assets' setting) are reduced.

7.6 Assessment of Likely Effects (Without Additional Mitigation)

Construction

7.6.1 Construction of the Proposed Development will entail the following:

- Creating temporary compounds;
- Ground clearance and preparation (which may include topsoil stripping);
- Laying temporary and permanent internal access tracks with bellmouths and passing places;
- Piling for the solar arrays;
- Excavation of cable trenches and bases for inverters/transformers;
- Cut and fill excavations for the wind turbines and their crane pads;
- Cut and fill excavations for the substation;

- Erecting perimeter security fencing; and
- Woodland planting around the development parcels.

7.6.2 These activities could result in the truncation and/or partial or complete destruction of known and potential above- and below-ground archaeological remains within the Site. These would be physical, permanent, development effects.

7.6.3 Increased traffic movements and noise from heavy goods vehicles transporting materials to Site could also adversely affect the setting of historic assets. These would be non-physical, temporary, development effects.

Operation

7.6.4 Non-physical development effects caused by change to the setting of historic assets have the potential to arise from the operation of the Proposed Development.

7.6.5 Likely effects during the operation of the Proposed Development are described for specific historic assets, below.

British Fortified Residence

Wind Development

7.6.6 The British Fortified Residence is located c.300 m south-east of T05, c.450 m north-east of T04, and c.510 m north-north-west of T03.

7.6.7 The Wind ZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 14c & Annex 10**) indicates that all six of the proposed turbines will be visible from the entirety of the British Fortified Residence except for its south-eastern corner, from where five turbines will be visible; and that all six of the proposed turbines will also be visible from the remainder of the field within which it lies. However further modelling (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Annex 11**) has shown that only up to three turbines will be covisible in specific viewsheds.

7.6.8 Wirelines (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Annex 11**) demonstrate that T04 and T05 (and the blade tips of T06) will feature in views looking west from the monument – i.e. upslope towards where the track to Maescadlawr branches off from Ffordd-y-Gyfraith; while T01, T02 and T03 will feature in views looking south from the monument – i.e. upslope towards the Mynydd Ty-talwyn plateau, another area of medieval settlement (although the remains are not actually visible).

7.6.9 Although not modelled by a wireline, only T05 is expected to feature in the panorama looking north-west to north-east from the British Fortified Residence.

Solar Development

7.6.10 The British Fortified Residence is located c.340 m south-west of Solar Parcel D and c.700 m west of Solar Parcel E.

- 7.6.11 The Solar SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 15b & Annex 10**) indicates that solar development will be visible from the majority of the Scheduled Monument, and much of the remainder of the field within which it lies.
- 7.6.12 A bespoke SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Annex 10**) was prepared to clarify which of the solar parcels would be visible. It indicates only partial visibility of Solar Parcel E to the east. Solar Parcel D to the west would not be visible. In other words, only a peripheral glimpse of part of one solar parcel will feature in the panoramic views looking north-west to north-east from the British Fortified Residence.

Substation

- 7.6.13 The British Fortified Residence is located c.410 m east-north-east of the substation.
- 7.6.14 The substation SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 16b & Annex 10**) indicates that the substation will not be visible from the Scheduled Monument, or the remainder of the field within which it lies.

Summary

- 7.6.15 The Proposed Development will result in change within the setting of the British Fortified Residence. Co-visibility of wind turbines and solar arrays in views towards and from the asset will change the experience of the monument in its rural landscape setting.
- 7.6.16 The large-scale and moving blades of the turbines in particular may detract from the appreciation of the surviving earthwork form of the monument and its topographical and geographical context; and may compromise the ability to imagine the medieval landscape.

Mynydd Ty Talwyn Ancient Farms GM092 & GM093 and Earthwork and Platform Houses N of Nant Fadog GM340

Wind Development

- 7.6.17 T03 lies c.310 m north of the closest component of GM340, c.290 m south-west of GM093, and c.135 m south-east of GM092; and T04 lies c.280 m north of GM092 and c.340 m north-west of GM093.
- 7.6.18 The Wind ZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 14c & Annex 10**) indicates that:
- All 6 turbines would be visible in the cross-valley views of Mynydd Ty-talwyn from Cefn-y-gelli;
 - All 6 turbines would be visible from GM092, GM093, and the trio of GM340 platforms on the eastern slopes of Mynydd Ty-talwyn – as well as from the intervening plateau, i.e. featuring in lines of sight between the monuments; and

- Between 3 and 4 turbines would be visible from the remaining components of GM340 on the upper northern slopes of Mynydd Ty-talwyn and the lower southern slopes of Mynydd Ty-talwyn.

7.6.19 A wireline prepared to model the visibility of the wind turbines in the cross-valley views towards Mynydd Ty-talwyn from Cefn-y-gelli to the south shows that much of the towers as well as the hubs and blades of all 6 turbines will be visible (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Annex 11**).

Solar Development

7.6.20 The closest solar parcel to GM092 and GM093 is Solar Parcel D; the assets lie c.375 m south and c.395 m south-east of Solar Parcel D respectively. The closest solar parcels to GM340 are Solar Parcels J and K; the smallest separation distance from GM340 components and Solar Parcels J and K is c.365 m (Solar Parcel J, to the south) and c.560 m (Solar Parcel K, to the south-east).

7.6.21 The Solar SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 15b & Annex 10**) indicates that solar development will be visible from the entirety of GM092, GM093, and GM340. Considering the visibility of individual solar parcels, there is expected to be visibility of the entirety of Solar Parcel D in the mid-ranging views looking north from GM092 and GM093; and visibility of some of Solar Parcels J and K, and also Solar Parcels F and G, in the cross-valley views looking south and south-east from the slopes above the various components of GM340.

7.6.22 A bespoke SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Annex 10**) was prepared to clarify which of the solar parcels would feature in the cross-valley views looking south (across parts of GM340) from the upper south-facing slopes of the Mynydd Ty-talwyn plateau. It demonstrates that the northern part of Solar Parcel J, the north-western corner of Solar Parcel K, and the western halves of Solar Parcels F and G would be visible.

Substation

7.6.23 The substation is located c.460 m north of GM092, c.560 m north-west of GM093, and c.910 m north-west of the nearest component of GM340.

7.6.24 The substation SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 16b & Annex 10**) indicates that the substation will be visible from GM092 and GM093, the surrounding/ intervening area of the Mynydd Ty-talwyn plateau, and the high ground of Cefn-y-gelli; but not from any component of GM340.

Summary

7.6.25 The Proposed Development will result in change within the setting of Scheduled Monuments GM092, GM093 and GM340. Co-visibility of wind turbines and solar arrays (and substation as applicable) in views towards and from Mynydd Ty-talwyn will change the experience of the Scheduled Monuments in their rural landscape setting.

- 7.6.26 The large-scale and moving blades of the turbines in particular may detract from the appreciation of the physical form of the monuments and their topographical and geographical context, and also disrupt lines of sight between the components of individual monuments and between the different monuments (which have group value); while the change to the landscape character may compromise the ability to imagine the monuments within a rural medieval landscape.

Church of St Cynwyd

Wind Development

- 7.6.27 The Wind ZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 14b**) indicates that all 6 of the proposed turbines will be visible from the Church of St Cynwyd. There will also be covisibility of elements of the Proposed Development from 'third point' locations offering close-, mid- and long-ranging views of the asset (as detailed above).
- 7.6.28 Wirelines and photomontages confirm that all 6 turbines will be visible in the outward southerly views from the eastern boundary of the cemetery of the Church of St Cynwyd (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Annex 11**).

Solar Development

- 7.6.29 The Solar SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 15a & Annex 10**) indicates that solar development will be visible from the churchyard and cemetery of the Church of St Cynwyd, as well as from other locations in Llangynwyd village that offer views of the asset and/or are covisible in views of the asset.

Substation

- 7.6.30 The substation SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 16a & Annex 10**) indicates that the substation will not be visible either from the churchyard of the Church of St Cynwyd, or from other locations in Llangynwyd village that offer views of the asset and/or are covisible in views of the asset.

Summary

- 7.6.31 The Proposed Development will not physically affect the asset itself but it will visibly change its southern landscape setting through the introduction of various different forms of modern built development (wind turbines and solar arrays).
- 7.6.32 It is considered that this will not compromise the ability to appreciate the geographical and topographical context of the church, but will erode the sense of historic rural remoteness as experienced in views from the curtilage of the asset.

Llangynwyd Conservation Area

Wind Development

- 7.6.33 The Wind ZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 14a & Annex 10**) indicates that all 6 of the proposed turbines will be visible from throughout the Conservation Area; as well as from 'third point' locations offering close-, mid- and long-ranging views of the Conservation Area (as detailed above).
- 7.6.34 Wirelines and photomontages confirm that all 6 turbines will be visible in the outward southerly views from the eastern boundary of the cemetery of the Church of St Cynwyd (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Annex 11**).

Solar Development

- 7.6.35 The Solar SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 15a & Annex 10**) indicates that solar development will be visible from the majority of Llangynwyd Conservation Area.

Substation

- 7.6.36 The substation SZTV (**ES Volume III, Appendix 7.2: Heritage Desk-Based Assessment, Figure 16a & Annex 10**) indicates that the substation will not be visible from any part of Llangynwyd Conservation Area.

Summary

- 7.6.37 The Proposed Development will not physically affect the Conservation Area itself but it will visibly change its southern landscape setting through the introduction of various different forms of modern built development (wind turbines and solar arrays).
- 7.6.38 This will not compromise the ability to appreciate the geographical and topographical context of Llangynwyd village, but will erode the sense of historic rural remoteness and isolation as experienced in certain views from within the Conservation Area.

Decommissioning

- 7.6.39 Decommissioning of the Proposed Development will entail the removal of most of its infrastructure from the Site. Activities will include: creating temporary compounds, dismantling wind turbines and solar arrays, excavating cable trenches to remove cabling, removing hardstanding and fencing, and transporting all infrastructure including inverters and transformers off-site. Internal access tracks will likely be left in situ.

- 7.6.40 Excavations including removal of hardstanding have the potential to truncate buried archaeological remains within the Site. It cannot be assumed that all impacts will previously have occurred at the construction stage, as the removal of certain type of infrastructure can be more disruptive than their installation. These would be physical development effects.
- 7.6.41 Increased traffic movements and noise from heavy goods vehicles transporting materials away from the Site could temporarily adversely affect the setting of historic assets. Once complete, decommissioning will result in the restoration of the baseline conditions and thereby reverse the operational harm to assets. These would be non-physical development effects.

7.7 Additional Mitigation Measures

- 7.7.1 Additional mitigation measures for physical impacts to buried archaeological remains include:
- Undertaking further intrusive archaeological investigations (which for the solar parcels and substation could comprise localised strip map sample excavations for known archaeological deposits of regional importance and/or monitoring and recording for known and potential archaeological deposits of local importance; and which for the wind infrastructure would likely comprise monitoring and recording only) to provide further information regarding the survival, depth, character, date, function and significance of buried archaeological remains, and to *preserve by record* those remains considered to be of regional, county, or local importance;
 - Amending the Proposed Development layout through the discharge of a planning condition to accommodate localised exclusion zones within the solar parcels or through the micro-siting of turbines and associated infrastructure to *preserve in situ* any buried archaeological remains identified by post-determination monitoring and recording as being considered of regional or county importance; and
 - Committing to no-dig construction methods where possible for solar infrastructure (i.e. slabs instead of piles for the arrays and inverters/transformers, and surface trays for cabling) in discrete areas to *preserve in situ* those buried archaeological remains considered to be of regional or county importance.
- 7.7.2 Provision for additional mitigation would be secured by planning condition(s) and executed post-determination. Based on currently available information, the presence of buried archaeological remains of national importance, i.e. a significance equivalent to that of a Scheduled Monument, is considered unlikely.
- 7.7.3 The scope and methodology of archaeological fieldwork would need to be formalised in a WSI and agreed with Heneb (GGAT) prior to commencement. This would be secured via a pre-commencement planning condition. Different forms and/or stages of archaeological fieldwork may be needed for different parts of the Site.

- 7.7.4 For any exclusion zones and no-dig construction zones, it would also be necessary to implement additional safeguarding measures during the construction, operational, and decommissioning phases. For instance: fencing off areas to prevent unauthorised access by plant, laying protective matting for any necessary plant movements, no-dig strategies for establishing new ground cover, and use of lightweight machinery and hand-held tools for maintaining ground cover. Such measures would typically be outlined in an Archaeological Mitigation and Management Plan and also form part of the Construction Environmental Management Plan. These Plans would be secured via a pre-commencement planning condition. **ES Volume III, Appendix 2.1: Outline Construction Environmental Management Plan** would be developed and refined by the Principal Contractor into a detailed Construction Environmental Management Plan.
- 7.7.5 No additional mitigation measures for non-physical impacts to designated historic assets as arising through change to setting have been identified. There is no additional screening that can be provided beyond the woodland planting that forms part of the embedded mitigation (refer to **Section 7.5** above).
- 7.7.6 **Table 7.7** sets out the additional mitigation measures that may be required to mitigate effects on buried archaeological remains identified in **Section 7.6**. For the reasons set out in **Paragraph 7.7.5**, no additional mitigation measures are proposed for the operational phase of the Proposed Development.

Table 7.7 Additional Mitigation

Phase	Description of additional mitigation measure	Securing mechanism
Construction	Undertaking localised strip map sample excavation and/or archaeological monitoring and recording – preservation by record	Planning condition
Construction	Excluding development from areas of archaeological remains of county or regional importance – preservation in situ	Planning condition
Construction	Ground-mounting development in areas of archaeological remains of county or regional importance – preservation in situ	Planning condition
Decommissioning	Undertaking archaeological monitoring and recording in areas not previously impacted during construction – preservation by record	Planning condition

7.8 Assessment of Residual Effects (with Additional Mitigation)

Construction

- 7.8.1 Receptor 1 (*Possible Bronze Age burial mounds in Solar Parcel K*) is a non-designated historic asset of up to regional importance; it is a receptor of **up to medium** significance. Construction would likely result in a **minor** magnitude of impact following additional mitigation in the form of archaeological investigation i.e. preservation by record, and a **negligible or no change** magnitude of impact following additional mitigation in the form of localised exclusion zones and/or no-dig construction zones that achieve preservation in situ. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptor 1, which is considered to be **not significant**.
- 7.8.2 Receptor 2 (*Known and potential Bronze Age cremation burials in Solar Parcel H*) are non-designated historic assets of up to regional importance; they are a receptor of **up to medium** significance. Construction would likely result in a **minor** magnitude of impact following additional mitigation in the form of archaeological investigation, and a **negligible or no change** magnitude of impact following additional mitigation in the form of localised exclusion zones and/or no-dig construction zones that achieve preservation in situ. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptor 2, which is considered to be **not significant**.
- 7.8.3 Receptor 3 (*Enclosure E1 in Solar Parcel F*) is a non-designated historic asset of up to county importance; it is a receptor of **up to medium** significance. Construction would likely result in a **minor** magnitude of impact following additional mitigation in the form of archaeological investigation, and a **negligible or no change** magnitude of impact following additional mitigation in the form of localised exclusion zones and/or no-dig construction zones that achieve preservation in situ. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptor 3, which is considered to be **not significant**.
- 7.8.4 Receptor 4 (*Roman pit in Solar Parcel J*) is a non-designated historic asset of local importance; it is a receptor of **low** significance. Construction would likely result in a **negligible or no change** magnitude of impact following additional mitigation in the form of archaeological investigation. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptor 4, which is considered to be **not significant**.
- 7.8.5 Receptor 5 (*Ffordd-y-Gyfraith and branches*) is a non-designated historic asset of local importance; it is a receptor of **up to medium** significance. Construction would likely result in a **negligible or no change** magnitude of impact following additional mitigation in the form of archaeological investigation. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptor 5, which is considered to be **not significant**.

- 7.8.6 Receptor 6 (*Enclosure E2 in Solar Parcel J*) is a non-designated historic asset of local importance; they are receptors of **low** significance. Construction would likely result in a **minor** magnitude of impact following additional mitigation in the form of archaeological investigation, and a **negligible or no change** magnitude of impact following additional mitigation in the form of localised exclusion zones and/or no-dig construction zones that achieve preservation in situ. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptor 6, which is considered to be **not significant**.
- 7.8.7 Receptor 7 (*Enclosure E6 in Solar Parcel G*) is a non-designated historic asset of local importance; it is a receptor of **low** significance. Construction would likely result in a **minor** magnitude of impact following additional mitigation in the form of archaeological investigation, and a **negligible or no change** magnitude of impact following additional mitigation in the form of localised exclusion zones and/or no-dig construction zones that achieve preservation in situ. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptor 7, which is considered to be **not significant**.
- 7.8.8 Receptors 8 and 9 (*Post-medieval pits within the footprint of Turbine T03 and in Solar Parcel J*) are non-designated historic assets of local importance; they are receptors of **low** significance. Construction would likely result in a **minor** magnitude of impact following additional mitigation in the form of archaeological investigation, and a **negligible or no change** magnitude of impact following additional mitigation in the form of localised exclusion zones and/or no-dig construction zones that achieve preservation in situ. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptors 8 and 9, which is considered to be **not significant**.
- 7.8.9 Receptor 10 (*Four large undated pits, which may be associated with post-medieval quarrying, in Solar Parcel G (and others elsewhere across the Site)*) are at most non-designated historic assets of local importance; they are receptors of **low** significance. Given their discrete form, they could be wholly destroyed by proposed infrastructure. Construction would likely result in a **minor** magnitude of impact following additional mitigation in the form of archaeological investigation, and a **negligible or no change** magnitude of impact following additional mitigation in the form of localised exclusion zones and/or no-dig construction zones that achieve preservation in situ. Therefore, there is likely to be a **neutral or slight adverse** residual effect on Receptor 10, which is considered to be **not significant**.
- 7.8.10 Receptor 11 (*Probable post-medieval ditches (mapped as 'intrenchments') in the vicinity of the access track to Turbine T01 (and others elsewhere across the Site)*) are at most non-designated historic assets of local importance; they are receptors of **low** significance. Construction would likely result in a **minor** magnitude of impact following additional mitigation in the form of archaeological investigation, and a **negligible or no change** magnitude of impact following additional mitigation in the form of localised exclusion zones and/or no-dig construction zones that achieve preservation in situ. Therefore, there is likely to be a **neutral or**

slight adverse residual effect on Receptor 11, which is considered to be **not significant**.

- 7.8.11 The residual effects from construction are summarised in **Table 7.8**.

Operation

- 7.8.12 Receptor 12 (*British Fortified Residence*) is a designated historic asset in recognition of its national importance; it is a receptor of **very high** significance.
- 7.8.13 Operation of the wind development on its own would likely result in a **minor** magnitude of impact, through a visible change to the surrounding landscape character as experienced from the monument – i.e. the introduction of one turbine in the panoramic views looking north-west to north-east from the monument and the introduction of three turbines in views looking south and west from the monument.
- 7.8.14 Operation of the solar development on its own would likely result in a **negligible** magnitude of impact on the British Fortified Residence. For the lifespan of the Proposed Development there will be only an oblique or peripheral glimpse of solar arrays in the midground of panoramic views looking north-west to north-east from the monument.
- 7.8.15 Operation of the substation would likely result in a **negligible** magnitude of impact on the British Fortified Residence. For the lifespan of the Proposed Development there is anticipated to be partial visibility from the northern part of the monument.
- 7.8.16 It is considered that there will be a modest in-combination effect from the various forms of development, but the overall significance of effect is deemed **slight adverse**. Using professional judgement, this effect is considered to be **not significant**. With reference to **Paragraph 6.1.24** of *PPW*, the Proposed Development will not have a demonstrably and unacceptably damaging effect on the British Fortified Residence.
- 7.8.17 Receptors 13 (*Mynydd Ty Talwyn Ancient Farms GM092*), 14 (*Mynydd Ty Talwyn Ancient Farms GM093*) and 15 (*Earthwork and Platform Houses N of Nant Fadog GM340*) are designated historic assets in recognition of their national importance; they are receptors of **very high** significance.
- 7.8.18 Operation of the wind development on its own would likely result in a **moderate** magnitude of impact on GM092, GM093, and GM340, through both possible physical impacts to associated buried archaeological remains on the Mynydd Ty-talwyn plateau (in the case of Turbines T05 and T06) and a visible change to the surrounding landscape character as experienced from the monuments – i.e. the introduction of six turbines in the views across the Mynydd Ty-talwyn plateau and in the cross-valley views towards Mynydd Ty-talwyn from Cefn-y-gelli.

- 7.8.19 Operation of the solar development in Solar Parcels G, H and I would likely have a **moderate** magnitude of impact on GM340, through the introduction of solar arrays in the midground of the reciprocal cross-valley views from the upper south-facing slopes of Mynydd Ty-talwyn. The solar development is not anticipated to be fully screened by the maturation of the woodland planting that forms part of the embedded mitigation.
- 7.8.20 Operation of the substation would have a **negligible or no change** magnitude of impact on GM340, as no visibility or intervisibility is anticipated from Year 0 onwards.
- 7.8.21 Operation of the solar development in Solar Parcel E, and operation of the substation, would each likely have a **minor** magnitude of impact on GM092 and GM093, through the introduction of solar arrays and substation infrastructure in the midground of views looking north from these assets. The solar development and substation are not anticipated to be fully screened by the maturation of the woodland planting that forms part of the embedded mitigation.
- 7.8.22 It is considered that there will be an in-combination effect from the various forms of development, resulting in an overall **large adverse** significance of effect to each of the three Scheduled Monuments. Using professional judgement, this effect is considered to be **significant**. With reference to **Paragraph 6.1.24** of *PPW*, in all three cases, this is not considered to be a demonstrably and unacceptably damaging effect.
- 7.8.23 Receptor 16 (Church of St Cynwyd) is a designated historic asset in recognition of its national importance; it is a receptor of **very high** significance.
- 7.8.24 Operation of the wind development on its own would likely have a **minor** magnitude of impact on this receptor, by causing change to the character of the landscape featuring in southerly views from its churchyard.
- 7.8.25 Operation of the solar development on its own would likely have a **minor** magnitude of impact on this receptor for the lifespan of the Proposed Development, by causing change to the character of the landscape featuring in southerly views from its churchyard. The solar development is not anticipated to be fully screened by the maturation of the woodland planting that forms part of the embedded mitigation.
- 7.8.26 Operation of the substation would have a **negligible or no change** magnitude of impact on the Church of St Cynwyd, as no visibility or intervisibility is anticipated..
- 7.8.27 It is considered that there will be an in-combination effect from the various forms of development, resulting in a **slight to moderate adverse** significance of effect on Receptor 16. Using professional judgement, this effect is considered to be **not significant**.
- 7.8.28 Receptor 17 (Llangynwyd Conservation Area) is a designated historic asset in recognition of its regional to national importance; it is a receptor of **high** significance.

- 7.8.29 Operation of the wind development on its own would likely have a **minor** magnitude of impact on this receptor, by causing change to the character of the landscape featuring in southerly views from certain locations within the Conservation Area.
- 7.8.30 Operation of the solar development on its own would likely have a **minor** magnitude of impact on this receptor for the lifespan of the Proposed Development, by causing change to the character of the landscape featuring in southerly views from certain locations within the Conservation Area.
- 7.8.31 Operation of the substation would have a **negligible or no change** magnitude of impact on Llangynwyd Conservation Area, as no visibility or intervisibility is anticipated.
- 7.8.32 It is considered that there will be an in-combination effect from the various forms of development, resulting in a **slight to moderate adverse** significance of effect on Receptor 17. Using professional judgement, this effect is considered to be **not significant**.
- 7.8.33 The residual effects from operation are summarised in **Table 7.9**.

Decommissioning

- 7.8.34 For Receptors 1–11, the additional mitigation for construction would also be applicable to decommissioning, meaning in all cases a **neutral or slight adverse** residual effect.
- 7.8.35 For Receptors 12–17, decommissioning would result in adverse effects followed by a restoration of baseline conditions. The residual effect is considered **neutral**.
- 7.8.36 The residual effects from decommissioning are summarised in **Table 7.10**.

Table 7.8: Assessment of Residual Effects During the Construction Phase

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
1	Possible Bronze Age burial mounds in Solar Parcel K	Non-designated asset of up to regional importance Up to medium significance	Truncation and/or destruction of buried archaeological remains through topsoil stripping, piling for solar arrays, and excavations for cabling, inverters/transformers, a permanent access track, and fencing	Undertaking further archaeological work (such as strip map sample excavation), removal of built infrastructure, or commitment to no-dig construction methods as necessary	Minor at most	Slight adverse at most (permanent) Not significant
2	Known and potential Bronze Age cremation burials in Solar Parcel H	Non-designated asset of up to regional importance Up to medium significance	Truncation and/or destruction of buried archaeological remains through topsoil stripping, piling for solar arrays, and excavations for cabling, inverters/transformers, a	Undertaking further archaeological work (such as strip map sample excavation), removal of built infrastructure, or commitment to no-dig construction methods as necessary.	Minor at most	Slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
			permanent access track, and fencing			
3	Bronze Age to Romano-British enclosure E1 in Solar Parcel E	Non-designated asset of up to county importance Up to medium significance	Truncation and/or partial destruction of buried archaeological remains through topsoil stripping, piling for solar arrays, and excavations for cabling, the northern access route, and fencing	Undertaking further archaeological work (such as strip map sample excavation), removal of built infrastructure, or commitment to no-dig construction methods as necessary	Minor at most	Slight adverse at most (permanent) Not significant
4	Roman pit in Solar Parcel J	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
5	The medieval road of Ffordd-y-Gyfraith and its former branches to the British Fortified Residence and Mynydd Baeden	Non-designated asset of local importance Low to medium significance	Localised truncation and/or partial destruction of buried archaeological remains through the creation of bellmouths for internal access tracks to T01-T05 inclusive and the intersection of the internal access track to T01 with the Mynydd Baeden track	Undertaking further archaeological work (such as a watching brief)	Minor at most	Slight adverse at most (permanent) Not significant
6	Post-medieval enclosure E2 in Solar Parcel J	Non-designated asset of local importance Low significance	Truncation and/or partial destruction of buried archaeological remains through topsoil stripping, piling for solar arrays, and excavations for cabling, inverters/	Undertaking further archaeological work (such as a watching brief)	Minor at most	Slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
			transformers, a permanent access track, and fencing			
7	Post-medieval enclosure E6 in Solar Parcel G	Non-designated asset of local importance Low significance	Truncation and/or partial destruction of buried archaeological remains through topsoil stripping, piling for solar arrays, and excavations for cabling and a temporary access track	Undertaking further archaeological work (such as a watching brief)	Minor at most	Slight adverse at most (permanent) Not significant
8	Post-medieval pit within the footprint of Turbine T03	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of buried archaeological remains through and cut and fill excavations for turbine hardstandings	Undertaking further archaeological work (such as a watching brief)	Minor at most	Slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
9	Post-medieval pit in Solar Parcel J	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of buried archaeological remains through topsoil stripping, piling for solar arrays, excavations for cabling, inverters/ transformers, internal access tracks, and fencing	Undertaking further archaeological work (such as a watching brief)	Minor at most	Slight adverse at most (permanent) Not significant
10	Four large undated pits, which may be associated with post-medieval quarrying, in Solar Parcel G (and others elsewhere across the Site)	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of buried archaeological remains through topsoil stripping, piling for solar arrays, excavations for cabling, inverters/	Undertaking further archaeological work (such as a watching brief)	Minor at most	Slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
			transformers, internal access tracks, and fencing; and cut and fill excavations for turbine hardstandings			
11	Probable post-medieval ditches (mapped as 'intrenchments') in the vicinity of the access track to Turbine T01 (and others elsewhere across the Site)	Non-designated asset of local importance Low significance	Truncation and/or partial destruction of potential buried archaeological remains through topsoil stripping, piling for solar arrays, excavations for cabling, inverters/transformers, internal access tracks, and fencing; cut and fill excavations for turbine hardstandings; and cut and fill	Undertaking further archaeological work (such as a watching brief)	Minor at most	Slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
			excavations for the substation			

Table 7.9: Assessment of Residual Effects During the Operational Phase

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
12	British Fortified Residence GM086	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring in panoramic views from the asset	None	Minor for wind Negligible for solar Negligible for substation	Slight or moderate adverse (temporary - for lifespan of Proposed Development) Not significant
13	Mynydd Ty Talwyn Ancient Farms GM092	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring in views towards and from the asset	None	Moderate for wind Minor for solar Minor for substation	Large adverse (temporary - for lifespan of Proposed Development) Significant
14	Mynydd Ty Talwyn Ancient Farms GM093	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring	None	Moderate for wind Minor for solar Minor for substation	Large adverse (temporary - for lifespan of Proposed Development) Significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
			in views towards and from the asset			
15	Earthwork and Platform Houses N of Nant Fadog GM340	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring in views towards and from the asset	None	Moderate for wind Moderate for solar Negligible to no change for substation	Large adverse (temporary - for lifespan of Proposed Development) Significant
16	Church of St Cynwyd	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring in views towards the asset	None	Minor for wind Minor for solar Negligible to no change for substation	Slight or moderate adverse (temporary - for lifespan of Proposed Development) Not significant
17	Llangynwyd Conservation Area	Designated asset of regional to national importance High significance	Change to the visible character of part of the landscape featuring in views from and towards the asset	None	Minor for wind Minor for solar Negligible to no change for substation	Slight or moderate adverse (temporary - for lifespan of Proposed Development) Not significant

Table 7.10: Assessment of Residual Effects During the Decommissioning Phase

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
1	Possible Bronze Age burial mounds in Solar Parce K	Non-designated asset of up to regional importance Up to medium significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant
2	Known and potential Bronze Age cremation burials in Solar Parcel H	Non-designated asset of up to regional importance Up to medium significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant
3	Bronze Age to Romano-British enclosure E1 in Solar Parcel E	Non-designated asset of up to county importance Up to medium significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
			development infrastructure			
4	Roman pit in Solar Parcel J	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant
5	The medieval road of Ffordd-y-Gyfraith and its former branches to the British Fortified Residence and Mynydd Baeden	Non-designated asset of local importance Up to medium significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant
6	Post-medieval enclosure E2	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of	Undertaking archaeological	Minor	Neutral or slight adverse at most (permanent)

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
	in Solar Parcel J		potential buried archaeological remains through removal of development infrastructure	watching briefs as necessary		Not significant
7	Post-medieval enclosure E6 in Solar Parcel J	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant
8	Post-medieval pit within the footprint of Turbine 3	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
9	Post-medieval pit in Solar Parcel J	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant
10	Four large undated pits, which may be associated with post-medieval quarrying, in Solar Parcel G (and others elsewhere across the Site)	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
11	Probable post-medieval ditches (mapped as 'intrenchment s') in the vicinity of the access track to Turbine T01 (and others elsewhere across the Site)	Non-designated asset of local importance Low significance	Truncation and/or partial to full destruction of potential buried archaeological remains through removal of development infrastructure	Undertaking archaeological watching briefs as necessary	Minor	Neutral or slight adverse at most (permanent) Not significant
12	British Fortified Residence GM086	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring in panoramic views from the asset – restoration of baseline conditions	None	No change	Neutral (permanent) Not significant
13	Mynydd Ty Talwyn Ancient	Designated asset of national importance	Change to the visible character of part of the	None	No change	Neutral (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
	Farms GM092	Very high significance	landscape featuring in views towards and from the asset – restoration of baseline conditions			
14	Mynydd Ty Talwyn Ancient Farms GM093	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring in views towards and from the asset – restoration of baseline conditions	None	No change	Neutral (permanent) Not significant
15	Earthwork and Platform Houses N of Nant Fadog GM340	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring in views towards and from the asset – restoration of baseline conditions	None	No change	Neutral (permanent) Not significant
16	Church of St Cynwyd	Designated asset of national importance Very high significance	Change to the visible character of part of the landscape featuring	None	No change	Neutral (permanent) Not significant

ID from Table 7.5	Receptor / receptor groups	Significance of receptor	Likely effect	Additional Mitigation	Magnitude of impact (degree of change)	Residual effect
			in panoramic views from the asset – restoration of baseline conditions			
17	Llangynwyd Conservation Area	Designated asset of national importance High significance	Change to the visible character of part of the landscape featuring in panoramic views from the asset – restoration of baseline conditions	None	No change	Neutral (permanent) Not significant

7.9 Opportunities for Environmental Enhancement

- 7.9.1 There may be opportunities to improve public access and understanding of the Scheduled Monuments within the Site. This could be considered a heritage benefit.
- 7.9.2 For example, by creating a permissive path leading from the track to Maescadlawr (a public right of way) into the field containing the British Fortified Residence and installing an interpretation board at the entrance to or within the field⁴.

7.10 Difficulties and Uncertainties

- 7.10.1 No significant difficulties or uncertainties have been encountered during the undertaking of this cultural heritage assessment.

7.11 Inter-Project Cumulative Effects

- 7.11.1 Inter-project cumulative effects can be defined as the combined effects of the Proposed Development and other developments on a receptor.
- 7.11.2 The inter-project cumulative effects assessment has been undertaken in accordance with Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Planning Inspectorate, 2024), as detailed in **ES Volume II, Chapter 4: Approach to the EIA**. A 10 km-radius study area of the Site boundary has been agreed as the Zone of Influence (Zoi) for Cultural Heritage.
- 7.11.3 **Table 7.11** sets out the other developments located within 10 km of the Site and sets out the findings of a screening assessment undertaken to identify those developments which have the potential to result in significant effects with the Proposed Development.

Table 7.11: Inter-Project Cumulative Effect: Screening

Other development	Development description	Potential for cumulative effects?
CAS-02505-N3T6M4 Foel Trawsant Windfarm Connection	66 kV electricity network infrastructure comprising overhead lines and underground cables which will start at Foel Trawsant Wind Farm (grid ref: 283941 , 194161) in	No Any covisibility of the overhead lines with the Proposed Development, in views towards or from the receptors assessed in this ES, is not considered to

⁴ NB It is considered impractical on safety grounds to create a new path branching off from the public right of way that crosses the fields to the east and south of the British Fortified Residence. This PRoW lies in a combe with trees and a steep slope separating it from the field containing the British Fortified Residence.

Other development	Development description	Potential for cumulative effects?
	the north, heading south through the western edge of Maesteg (grid ref: 284482 , 191458) to a connection point with the existing overhead line approximately 2 km south west of the settlement of Llangynwyd (grid ref: 284175 , 187428)	result in significant inter-project cumulative effects.
P/24/753/SOR WEPA Vesta (Paper Machine)	New plant producing tissue paper machine at Bridgend and decommissioning and dismantling of old machine	No While this scheme lies within the Zol, it is not anticipated to be covisible with the Proposed Development, in key views towards or from any of the receptors assessed in this ES. Therefore, there is no potential for significant inter-project cumulative effects.
CAS-01977-L5K6R7 Eirlys Solar Farm	Solar	Uncertain at present Given its location, there is a strong likelihood of covisibility of this scheme and certain elements of the Proposed Development in south-easterly views from Roman Camp and possibly also Y Bwlwarcau – however visibility of developments is not necessarily harmful in and of itself. The DNS application has not yet been submitted, and as such, no assessment reports are publicly available and therefore it cannot be stated at this stage if a cumulative effect (above what has already been identified within

Other development	Development description	Potential for cumulative effects?
		this Chapter) would arise or whether these may be significant.
DNS CAS-03613-S7Y6S4 Prosiect Egni Glan Llynfi (Modular Nuclear)	The project will include 4 PWR-20 Modular Nuclear Reactor units, which will provide clean, carbon-free baseload electricity and heat to local industrial users. There will also be Grid, as well as private electricity & steam connections. There will be no air or water emissions from the plant.	No The 2025 EIA Scoping Report for this scheme states: <i>"No known archaeological interests are expected to be affected by the Project. As a coal power plant was built on the Project Site, there is also reduced potential for new archaeological interests. Historic Environment impacts are suggested to be scoped out of the EIA."</i>
DNS/3264571 Y Bryn Wind Farm	Wind Farm - 18 turbines, up to 250 m in height	No The 2023 ES for this scheme identified minor adverse effects on Llangynwyd Conservation Area, though considered these effects not significant. The ES was informed by wirelines and photomontages prepared by the LVIA for Viewpoint 28 within the centre of Llangynwyd village; this location is considerably more enclosed than the viewpoints chosen for the Proposed Development. Considering the available information for Y Bryn and the Proposed Development, partial covisibility of both schemes may be anticipated in southerly views from Llangynwyd Conservation Area.

Other development	Development description	Potential for cumulative effects?
		There is accordingly the potential for inter-project cumulative effects, but these are not considered significant.
P/23/218/FUL HyBont Green Hydrogen	Development of a green hydrogen production facility, and solar arrays	No While this scheme lies within the Zol, it is not anticipated to be covisible with the Proposed Development, in key views towards or from any of the receptors assessed in this ES. Therefore, there is no potential for significant inter-project cumulative effects.
DNS CAS-04421-B8S4Q5 Y Bryn Wind Farm Grid Connection	An up to 132 kV (kilovolt) electricity connection comprising underground cables and overhead lines between Y Bryn Wind Farm and the National Grid Substation at Margam.	No The archaeological resource of the Site is not anticipated to extend into the underground cables of this scheme. Any covisibility of the overhead lines with the Proposed Development, in views towards or from the receptors assessed in this ES, is not considered to result in significant inter-project cumulative effects.
P/22/225/FUL Great Western Avenue, Coity Road, Battery Energy Storage	Installation of a battery energy storage facility, substation, underground cabling and ancillary infrastructure & equipment to include security fence, CCTV & gates	No While this scheme lies within the Zol, it is not anticipated to be covisible with the Proposed Development, in key views towards or from any of the receptors assessed in this ES. Therefore, there is no potential for significant inter-project cumulative effects.

Other development	Development description	Potential for cumulative effects?
DNS/3279521 Ty'n Y Waun Solar	Solar	No The 2023 ES for this scheme identified no significant effects for cultural heritage receptors (and no adverse effects for any of the receptors assessed in this ES). Therefore, there is no potential for significant inter-project cumulative effects.
P2021/1255 Land West of Junction 38 M4	Development of a metal processing facility	No The 2022 ES for this scheme identified no significant effects on cultural heritage receptors (and no adverse effects for any of the receptors assessed by this ES). While this scheme lies within the Zol, it is not anticipated to be covisible with the Proposed Development, in key views towards or from any of the receptors assessed in this ES. Therefore, there is no potential for significant inter-project cumulative effects.
P2022/0372 Land At Kenfig Industrial Estate Margam	Wind Farm - 1 turbine, 100 m in height	No No significant inter-project cumulative effects are anticipated on account of the number and height of turbines for this scheme.
P2022/1048 Cefn Gwrgan Road	Wind Farm - 1 turbine, 21 m in height	No No significant inter-project cumulative effects are anticipated on account of the number and height of turbines for this scheme.

Other development	Development description	Potential for cumulative effects?
P2018/0153 & P2022/0517 Foel Trawsnant	Wind Farm - 11 turbines, 145 m in height	No The 2019 ES for this scheme assessed Y Bwlwarcu and Llangynwyd Conservation Area and identified no significant effects for either receptor. Given the location of this scheme relative to the Proposed Development, and in the context of the orientation of key views for these receptors, no significant inter-project cumulative effects are anticipated.
DNS CAS-03678-M4Y0G7 – Upper Ogmere Wind Connection	Grid Connection (overhead line and underground cabling)	No The archaeological resource of the Site is not anticipated to extend into the underground cables of this scheme. Any covisibility of the overhead lines with the Proposed Development, in views towards or from the receptors assessed in this ES, is not considered to result in significant inter-project cumulative effects.
CAS-01773-Z5L1D0 Mynydd y Gaer Wind Farm	Wind Farm - 9 turbines	No While this scheme lies within the ZOI, it is not anticipated to be covisible with the Proposed Development, in key views towards or from any of the receptors assessed in this ES. Therefore, there is no potential for significant inter-project cumulative effects.

Other development	Development description	Potential for cumulative effects?
DNS/3213662 Upper Ogmore	Wind Farm - 7 turbines, 130 height	No The 2023 ES for this scheme identified moderate adverse effects for two Scheduled Monuments but neither of these correspond to receptors assessed in this ES. Therefore, there is no potential for significant inter-project cumulative effects.
DNS/3213704 Felindre Road - STOR	Installation of a stand-by energy generating station that when constructed will have an installed generating capacity of approximately 40 MW	No The 2019 ES for this scheme identified no significant effects for cultural heritage receptors (and no adverse effects for any of the receptors assessed in this ES). While this scheme lies within the Zol, is not anticipated to be covisible with the Proposed Development, in key views towards or from any of the receptors assessed in this ES. Therefore, there is no potential for significant inter-project cumulative effects.
P/20/42/FUL Pant y Wal Extension (Phase 2)	Wind Farm - 2 turbines, 125 m in height	No No significant inter-project cumulative effects are anticipated on account of the number and height of turbines for this scheme.

7.12 References

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