HEOLDDU SOLAR FARM

Environmental Statement

Volume 3, Appendix 5.4: Residential Visual Amenity Assessment

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Abbreviations

Abbreviation	Meaning
LVIA	Landscape and Visual Impact Assessment
PRoW	Public Right of Way
RVAA	Residential Visual Amenity Assessment
TGN	Technical Guidance Note
ZTV	Zone of Theoretical Visibility

1 RESIDENTIAL VISUAL AMENITY ASSESSMENT

1.1 Introduction

1.1.1 This document forms Volume 3, Appendix 5.4: Residential Visual Amenity Assessment (RVAA) of the Environmental Statement prepared for the development of Heolddu Solar Farm (referred to hereafter as 'the Proposed Development').

1.1.2 This assessment identifies potential effects from the Proposed Development on residential visual amenity through the completion of **Steps 1 to 3** of the RVAA. The assessment identifies properties with the greatest magnitude of change, which are taken forward to **Step 4** of the RVAA and assessed in more detail.

1.1.3 The methodology section below provides further details of the RVAA process.

1.2 Background

1.2.1 The purpose of the RVAA is to identify potential effects of the Proposed Development on residential visual amenity of such nature and / or magnitude that it potentially affects "living conditions" or residential visual amenity. This is referred to as the *residential visual amenity threshold*. RVAA requires assessors to reach a conclusion on whether the effect of a development proposal on visual amenity and / or views from the property reaches the threshold.

1.2.2 Residential amenity is a planning matter that involves a wide number of effects (such as noise) and benefits, of which residential visual amenity is just one component. RVAAs are limited to the consideration of visual effects on residential amenity and the methodology in this assessment accords with the advice in GLVIA3 and the Landscape Institute's Technical Guidance Note 02/19: Residential Visual Amenity Assessment.

1.2.3 Planning law contains a widely understood principle that the outlook or view from a private property is a private interest and not therefore protected by the UK planning system. However, the planning system also recognises situations where the effects on residential visual amenity are considered as a matter of public interest. This matter has been examined at a number of public inquiries in Wales (as well as in Scotland and England) where the key determining issue was not the identification of significant effects on views, but whether a proposed development would have an overbearing effect and/or result in unsatisfactory living conditions, leading to a property being regarded, objectively, as an unattractive (as opposed to a less attractive) place in which to live (LI Technical Guidance Note 2/19 Appendix 1 - Planning Precedent).

1.2.4 This RVAA consequently provides a detailed assessment of the most affected residential properties by the Proposed Development. This allows the Welsh Ministers to make a judgement as to whether the residents at these properties and communities would be likely to sustain unsatisfactory living conditions which it would not be in the public interest to create. Reviews of decisions

demonstrate that significant visual effects or changes to the views available from residential properties and their curtilage are not the decisive consideration, rather it is the residential amenity and, with regard to the Landscape and Visual Impact Assessment (LVIA), visual amenity that is determinate.

1.2.5 In any event RVAA can be considered supplementary to LVIA following on from, and informed by, the latter's findings and conclusions. It is, however, important to note that the assessment of residential visual amenity is separate and distinct from the LVIA. RVAA focuses on private visual amenity at individual properties whilst LVIA focusses on public amenity and views. Technical Guidance Note (TGN) 2/19 makes it clear that 'combined effects on a number of residents', by means of 'aggregating properties within a settlement' is a matter of LVIA and not of RVAA.

1.3 Assessment Methodology

1.3.1 The RVAA is based on the process of four 'steps' as set up in the landscape Institute Technical Guidance Note 2/19 as follows:

- Step One: Definition of study area and scope of the assessment - informed by the description of the Proposed Development, defining the study area extent and scope of the assessment with respect to the properties to be included.

- Step Two: Evaluation of baseline visual amenity at properties to be included having regard to the landscape and visual context and the development proposed.

- Step Three: Assessment of likely change to visual amenity of included properties in accordance with GLVIA3 set of principles.

- Step Four: Further assessment of predicted change to visual amenity of properties to be included forming a judgement with respect to the Residential Visual Amenity Threshold.

1.3.2 This is the process by which informed professional judgement is engaged to reach a conclusion regarding the *residential visual amenity threshold*.

1.3.3 The following section sets out the methodology and the factors considered in more detail.

Step One: Definition of study area and scope of assessment

1.3.4 Step One of the assessment comprised a desk study of address data, OS mapping, aerial imagery utilising Google Earth Pro and the production of a Zone of Theoretical Visibility (ZTVs) to identify residential properties which are inside the viewshed (ZTV) within the 1 km study area.

1.3.5 Figure 1: 'Residential Properties and Zone of Theoretical Visibility' shows a total of 16 residential properties on the ZTV overlay within a 1 km study area.

Step Two: Evaluation of baseline visual amenity at properties

1.3.6 Step 2 involved evaluation of the baseline visual conditions at the properties within the ZTV.

1.3.7 In considering baseline visual amenity, the following were examined:

- The nature and extent of the existing available views (including main/principal and secondary/ peripheral views) from the property and its garden/ domestic curtilage, including the proximity and relationship of the property to surrounding landform, landcover and visual foci; and
- Views experienced when approaching or departing from the property via its driveway and/or access roads, if applicable.

1.3.8 OS maps, aerial imagery and Google Streetview and field survey were used to record information such as:

- The location of the residential elements of each property.
- The type of property and its use (detached, semidetached, terraced property, single or two-storey etc., plus details of grounds and any outbuildings).
- Layout and orientation of the gardens and property curtilage.
- Access location, and likely views from private or shared driveways or access tracks.
- Potential screening provided by local variations in topography, the built environment and vegetation/tree cover within the surrounding landscape.

Step Three: Assessment of likely change to visual amenity of included properties in accordance with GLVIA3 set of principles

1.3.9 Step Three assess the magnitude and significance of likely visual effects at the included properties and identifies those properties requiring further assessment to identify the likelihood of these effects to approach the RVAA threshold.

1.3.10 A judgement on the magnitude of visual change which would be experienced has been made with reference to the following factors:

- Distance of property from the Proposed Development and the visibility of the Proposed Development in views from the property.

- The elevation of the property relative to the Proposed Development and angle of view, proportion of the view occupied by the Proposed Development.

- The extent of the Proposed Development that is visible, and its position within views from the property e.g. whether in key views from the property, secondary views, gardens and/ or private drives and whether subject to any screening or filtering.

- The viewing experiences in different directions: the availability of other views from the property, including those that would not be affected by the Proposed Development.

1.3.11 The magnitude of visual change is set out in **Table 1** below.

Table 1: Magnitude of change in views and visual amenity

Magnitude of change in views and visual amenity	
Magnitude of impact	**Visual resource description**
High	Complete or very substantial change in view, dominant involving complete or very substantial obstruction of existing view or complete change in character and composition of baseline, e.g., through removal of key elements.
Medium	Moderate change in view: which may involve partial obstruction of existing view or partial change in character and composition of baseline, i.e. pre-development view, through the introduction of new elements or removal of existing elements. Change may be prominent but would not substantially alter scale and character of the surroundings and the wider setting. Composition of the views would alter. View character may be partially changed through the introduction of features which, though uncharacteristic, may not necessarily be visually discordant.
Low	Minor change in baseline, i.e. pre-development view, – change would be distinguishable from the surroundings whilst composition and character would be similar to the pre-change circumstances.
Negligible	Very slight change in baseline, i.e. pre-development view, – change barely distinguishable from the surroundings. Composition and character of view substantially unaltered.
No change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Step Four: Assessment of predicted change to visual amenity of properties to be included forming a judgement with respect to the Residential Visual Amenity Threshold.

1.3.12 The Step Four Assessment considers the likelihood of whether significant effects identified in the assessment would be 'overbearing' or 'overwhelming' and whether, in terms of the wider public interest, the visual effects would result in unsatisfactory living conditions, leading to properties being regarded, objectively, as an unattractive (as opposed to a less attractive) place in which to live. Those properties that are identified to have a Medium or above magnitude of change are considered at Step 4 to ensure a conservative approach to assessment.

1.3.13 A property experiencing significant visual effects will not necessarily experience effects on residential visual amenity which are judged to breach *the residential visual amenity threshold*. For the purposes of this assessment such impacts are considered to occur when solar panels are present in such number, size and proximity that they represent an unpleasantly overwhelming and unavoidable presence in main views from a house or garden.

1.3.14 For example, where a development forms a dominant element in close proximity to the majority of key locations, representing a pervasive impact on the quality and character of views out from a property/ group of properties, and on the visual amenity of a property /properties as a whole, these impacts could be considered **oppressive, overbearing or overwhelming**.

1.3.15 The Residential Visual Amenity Threshold is judged by considering whether the Proposed Development, for example:

- blocks the only available view from a property; or
- is overwhelming views in all directions; or
- is unpleasantly encroaching/ overly intrusive; or
- is inescapably dominant from the property.

1.3.16 Very Large impacts may also occur where the Proposed Development would cause encirclement or the completion of the encirclement of a property or group of properties by similarly visually dominant developments, thereby making cumulative effects truly pervasive oppressive, overly intrusive or overbearing.

1.3.17 For this assessment the most significantly affected properties were visited in order to identify and describe in detail the extent of external and internal areas of the property affected by views of the Proposed Development.

1.3.18 Specific terms used to describe the impact of the Proposed Development on the visual amenity of a property are listed below and a definition provided:

- **Overbearing:** Tending to overwhelm. Of such scale and dominance relative to the residential environment and views that the development can be said to represent a significant detractor from views and the character of the environment of the property.

- **Overwhelming:** Impacts are of such scale and dominance relative to the residential environment and that the development can be said to be 'overpowering and/ or oppressive'. Such effects are pervasive and largely unavoidable in main views and main/ principal locations in the property.

- **Oppressive:** Effects may be considered intolerable or of such an extent that they result in a sense of ill-ease and discomfort.

1.4 Study findings

RVAA Steps 1 to 3

1.4.1 To inform Steps 1 to 3 of the RVAA Figure 1: 'Residential Properties and Zone of Theoretical Visibility' illustrates the RVAA study area and all residential properties that have the potential to experience visual effects. A small number of residential properties fall within the ZTV and outside of the study to the southeast of the development and have been scoped out of this RVAA. This is because the LVIA has considered visual effects from the nearby PRoW – Clifford 62/54/1 and 62/54/2 and found a very small portion of the site in the background of the views would be obtained. This is because most of the site would be located behind the intervening topography.

1.4.2 Site surveys were undertaken on 30 April 2025 and 19 July 2025 when weather conditions were dry and visibility was good. Site surveys were undertaken from publicly accessible locations, except for property P16 Nantygoetre and P13 Maesmawr where access to the curtilage of these properties was made.

1.4.3 A summary of the baseline site surveys undertaken to inform this chapter are provided in **Table 2: Property Analysis Table**.

Table 2: Property Analysis

Table 1.1: Property Analysis						
Property reference	**Property name**	**Distance to Proposed Development / redline boundary**	**Description of existing outlook and predicted view**	**Magnitude of Change**	**Level of Effect**	**Scope of additional surveys**
P1	Golygfa	277m to east of Solar Area West 324m to west of Solar Area East	Detached bungalow located adjacent to the west of Cilfeithy Farm. This property has planning permission for a 2-storey side extension (CCC Ref PL/05587), and this has been considered within this evaluation. The front elevation is north facing with views out from the property boundary to the north being obtained over a low boundary wall. Views north are short ranging as the adjacent lane is bound by mature hedgerows that screens views of the agricultural fields located beyond. Views to the northeast towards Solar Area East and northwest towards Solar Area West are channelled along the un-named lane that has overhead powerlines located to the north of the un-named lane. Due to the mature hedgerow and availability of only first floor views being obtained from this bungalow there would be limited to no potential for views of the Proposed Development to the northwest and northeast from this property.	No change	No change	No further surveys required

Table 1.1: Property Analysis						
P2	Nonam House	30m to east of Solar Area West	Detached dormer-bungalow located at the crossroad junction of two un-named lanes. The front of this property is west facing. Ground level views west towards Solar Area West from the property and front garden are filtered by a mature hedgerow located along the front garden (western boundary of property). Views to the west from first floor windows would look over the top of the of the boundary hedgerow and be more open. Views west would be in the context of the adjacent lane which is bound to the west by an immature hedgerow and post and rail fence. Beyond the hedgerow views are obtained of undulating agricultural land that is dissected by field boundary hedgerows, lanes and contains isolated farmsteads (P13 - Maesmawr and P4 - Bryncoch) and overhead powerlines. Residential development at Ferryside occupies a small area in long distance views and beyond this elevated landform to the west of the River Towy is scene in the far distance. Direct, close views of Solar Area West are predicted and views would be most prominent from the first floor of this property. Views to the east towards Solar Area East from the rear of this property would be screened by the single storey barn 'stable	Medium	Moderate	**P2 is identified as a Step 4 property for further assessment.** Private access required to ground truth the desk-based findings from within this property.

Table 1.1: Property Analysis						
			block and P15 – Noman House (residential property), located adjacent to the east.			
P3	Un-named bungalow	21m to east of Solar Area West	Detached bungalow located adjacent to the west of an un-named lane. The front elevation of this property is west facing with views to the west obtained from the front garden and front elevation, looking out beyond a low brick wall to the adjacent un-named lane. A mature roadside hedgerow lies to the west of the lane and heavily filters views of the open agricultural fields beyond. Views west would be similar to that described for P2- Penrheol (above) but would only be available from the ground floor living areas of this bungalow with direct views of Solar Area West predicted. Views to the east towards Solar Area East from the rear of this property would be screened by barns at Cilfeithy Farm, located adjacent to the east.	Medium	Moderate	**P3 is identified as a Step 4 property for further assessment.** Private access required to confirm level of screen provided by hedgerow to the west of the un-named lane.
P4	Bryncoch	90m to north of Solar Area West	Detached farmhouse located to the west of associated agricultural buildings. The front elevation of this property is west facing and looks out to the main garden which is contained by a mature boundary hedge. Oblique views south from ground and first floor elevations at the front of this property and direct views from the main garden and driveway towards Solar Area West would be obtained from this elevated location. Views	Low	Minor	No further surveys required

Table 1.1: Property Analysis						
			south include agricultural fields dissected by field boundary hedgerows, an un-named lane located adjacent to the south and P13 - Maesmawr Farm in the foreground. Oblique, distant views from property and direct views of development in the southern extents of Solar Area West are predicted. Views to the east towards Solar Area East and development in the northeast of Solar Area West are screened by the associated agricultural buildings located adjacent to the east of this property.			
P5	Caeglas	819m to west of Solar Area West	Large detached new build with associated (un-used) stable block located to the east of an un-named lane. The front elevation of this property is north facing and would provide little opportunity for oblique views to the east towards either Solar Area East or Solar Area West. The first-floor eastern elevation obtains views east towards Solar Area East and Solar Area West and views of development would be obtained in the distance beyond the adjacent valley, associated narrow woodland belt and agricultural land. Oblique, distant views of development in Solar Area West are predicted.	Low / Medium	Minor / Moderate	No further surveys required
P6	Rhosyscoch	970m to southwest of Solar Area West	Detached property and associated barns located adjacent to the south of Port Way (lane). The front elevation of this property is west facing with the driveway located to the	Negligible	Minor	No further surveys required

Table 1.1: Property Analysis						
			north of the property obtaining channelled views to the north. It has not been possible to ascertain if this property has windows on the northern elevation, that will obtain oblique views to the northeast, towards both Solar Area East and Solar Area West. However, it was noted the property boundary and driveway are contained by mature vegetation and potential views to the northeast would be heavily filtered by the mature hedgerow located along the north of Port Way (lane) and views of either Solar Area East and Solar Area West are very unlikely.			
P7	Bryn Eryl Farm	928m to southwest of Solar Area West	Detached bungalow and associated barns located to the north of Port Way (lane). The front elevation of this property is southwest facing. Agricultural barns located to the north of this bungalow screen views to the north from the rear of this property towards the Proposed Development. Oblique views to the northeast would be obtained from ground floor windows (that are thought to be non-primary living areas within the property) on the eastern elevation of this property. More open views to the northeast would be obtained from the garden located to the southeast of this property which is contained by a low timber post and rail fence. Oblique views to the northeast from the eastern elevation and the front garden are of	Low	Minor	No further surveys required

Table 1.1: Property Analysis						
			agricultural fields divided by hedgerows, containing isolated farmsteads (P13 - Maesmawr and Clifeithy Farm) and P3 - Nyth Y Wennol (residential property) that are seen beyond the adjacent valley and associated narrow woodland belt. Distant, oblique views from the property and direct views from the garden of a small amount of the Proposed Development located within part of Solar Area West are predicted.			
P8	3 properties Port Way (lane)	972 to southwest of Solar Area West	Detached property and two semi-detached properties located to the south of Port Way (lane). The front elevations of all three properties are northeast facing. The property furthest south has a mature evergreen boundary hedge which screens views to the northeast towards Solar Area East and Solar Area West. The two other properties have open front gardens and views to the northeast are in the context of Port Way (lane). A mature hedgerow located to the north of Port Way screens views to the northeast from ground floor front elevations of these properties. More open views to the northeast would be obtained from first floor windows and views would be similar to views obtained from P7- Bryn Eryl Farm as described above. Distant ground and first floor views of a small amount of development located within part of the Solar Area West are predicted.	Low	Minor	No further surveys required

Table 1.1: Property Analysis						
P9	Greenfield	764m to S of Solar Area West	Detached dorma-bungalow located to the north of Port Way (lane). The front elevation of this property is south facing and would not obtain views towards either Solar Area East or Solar Area West located to the north. Views to the north and northeast from the rear elevation, garden and driveway towards Solar Area East and Solar Area West are obtained beyond the largely open rear garden. Oblique views from the eastern elevation and direct views from the northern elevation and garden to the northeast look out across the adjacent valley and associated narrow woodland belt to agricultural fields divided by hedgerows and contain isolated farmsteads (Treforis Fach and Tir-bach). Nyth Y Wennol and P2 – Penrheol (residential properties) are also scene in the distance. Distant views from the property and garden of Solar Area West covering a wide area within view are predicted.	Low / Medium	Minor / Moderate	No further surveys required
P10	4 Port Way is representative of a small cluster of properties located at Broadway	1km to south of Solar Area West	Detached domra-bungalow located to the south of Port Way (lane). The front elevation of this property is northeast facing with views being obtained beyond a low boundary wall to Port Way. A mature hedgerow lies to the north of Port Way and filters views to the northeast towards Solar Area East and Solar Area West. This property is elevated from the road, and it is considered views of the	Low	Minor	No further surveys required

Table 1.1: Property Analysis						
			adjacent agricultural land would be obtained above the hedgerow from within the property. Views above the adjacent hedgerow of agricultural fields divided by hedgerows would include a nearby bungalow and Treforis Fach. Distant views from the driveway and property of a small amount of the Proposed Development located within part of Solar Area West are predicted.			
P11	Pen-hill	1km to south of Solar Area West	This is a detached farmhouse surrounded by barns and built structures associated with the farm. The main elevations of this property are west and northwest facing. Whilst this property has an elevated aspect ground floor views to the northwest and northeast towards both Solar Area East and Solar Area West are partially screened by structures associated with the farm located to the north of the property. Views from first floor windows are less contained with views being obtained above the structures. In addition, more open views to the northwest and northeast are obtained from the access track located to the west of the property and the Public Right of Way (PRoW) (representative viewpoint 11). No views of the Proposed Development would be visible from the ground floor of this property. Distant views from first floor windows and the access track of a small	Low	Minor	No further surveys required.

Table 1.1: Property Analysis						
			amount of the Proposed Development located in the Solar Area West are predicted.			
P12	Parcgwyn Farm	960m to southeast of Solar Area West 1km m to southwest of Solar Area East	This is a detached farmhouse surrounded by barns and built structures associated with the farm. The front elevation of this property is south facing, and it is considered the northern elevation forms the primary view from this property. Elevated views to the northeast and northwest towards both Solar Area East and Solar Area West are partially screened by barns, structures and vegetation located to the north and east of this property. Views from first floor windows of this property would be less contained with views obtained above the structures. In addition, more open views to the north are obtained from the PRoW that passes to the north of this property (representative viewpoint 14). No views of the Proposed Development would be obtained from the ground floor of this property. Distant views of the Proposed Development in Solar Area East would be obtained from first floor windows and the access track. Distant views of a small amount of the Proposed Development in Solar Area West would be obtained from the ground floor of this property.	Low	Minor	No further surveys required

Table 1.1: Property Analysis						
P13	Maesmawr	52m to north of Solar Area West	This is a detached farmhouse with several associated barns located to the north and northwest. The property is accessed via a farm track located to the north and the front elevation of this property is northwest facing with views to the northwest being channelled between nearby associated barns. The garden is located to the southeast of the property and is contained by tall boundary vegetation and a narrow belt of trees is located to the south along a stream. Views from the garden and ground floor windows are largely contained and screened by nearby structures and vegetation. Solar Area West would lie adjacent to the east, south and west of this property. Ground floor views to the northeast of the adjacent development located in Solar Area West would be largely screened by adjacent barns. Views to the south, east and northeast from the garden to the Proposed Development located in Solar Area West would be filtered by garden vegetation and the narrow tree belt located to the south of the property. Views of the Proposed Development located within Solar Area West from first floor windows and the farm track that provides access to the property would be more open with extensive views of the Proposed Development in Solar Area West predicted.	Medium	Moderate	**P13 is identified as a Step 4 property for further assessment.** Private access required to ground truth the desk-based findings from within this property.

Table 1.1: Property Analysis						
			Views of the Proposed Development in Solar Area East from first floor windows would be limited due to topography.			
P14	Mynydd-unchiaf	129m to east of Solar Area West	This is a detached farmhouse with an associated barn located to the east. The front elevation is southeast facing, and primary views are also obtained to the northwest. The property appears to be partly covered with overgrown vegetation and may not be occupied. Views from the property to the west towards Solar Area West are heavily screened by vegetation and oblique views to the northeast would be partially screen by the adjacent barn. Therefore, there would be limited opportunity for views of the Proposed Development.	Negligible	Minor	No further surveys required
P15	Un-named	78m to east of Solar Area West	Two storey detached residential property with a sperate stable block located to the east of P2 - Penrheol and adjacent to the south of an un-named lane. The front elevation of this property is south facing and oblique views from first floor elevations to the southwest towards Solar Area West are in the context of P2 - Penrheol and the stable block located adjacent to the southwest that would screen views from the ground floor of this property. Oblique views from eastern elevation to the northeast towards Solar Area East are heavily filtered by the mature hedgerow located to the north of the adjacent un-named lane.	Low	Minor	No further surveys required

Table 1.1: Property Analysis						
			Therefore, there would be limited opportunity for views of the Proposed Development.			
P16	Nantygoetre	1km to north of Solar Area West. 1km to north of Solar Area East.	Detached farmhouse and associated barns located to the north and west. The property is accessed via a short farm track located to the south. The farm and farmhouse are situated to the west of an un-named lane. The front elevation of this property is south facing, and the elevated aspect affords this property extensive views of undulating agricultural land that is dissected by field boundary hedgerows, lanes, small woodlands and a series of pylons in the east. Both Solar Area East and Solar Area West lie to the south and views to the south would be obtained from the front elevation, the front garden and farm track. Distant views of areas of the Proposed Development located within both Solar Area East and Solar Area West forming a sizable area within view are predicted.	Medium	Major	**P16 is identified as a Step 4 property for further assessment.** Inside of property visited April 2025. No further surveys required
P17	Penyrheol	87m to east of Solar Area West	Detached bungalow with adjacent barn located to the east of P15 – Nonam House and adjacent to the south of an un-named lane. The front elevation of this property is east facing and views to the northeast towards the Solar Area East are obtained beyond a low boundary wall and garden vegetation. A mature hedgerow runs along the north of the adjacent un-named lane and heavily filters views towards Solar Area East.	No change	No change	No further surveys required

Table 1.1: Property Analysis						
			The rear of this property is west facing and adjacent barns located at P15 - Nonam House and the residential property P2 - Penrheol would screen views of Solar Area West from this bungalow.			

1.5 Summary of Step 4 Properties

1.5.1 Steps 1 to 3 of the RVAA process identified the following individual properties would experience the greatest magnitude of change (Medium and above) and require further detailed assessment, Step 4, to identify weather the Residential Visual Amenity Threshold would be engaged:

- P2 Nonam House
- P3 Un-named bungalow
- P13 Maesmawr
- P16 Nantygoetre

1.5.2 Property Survey Sheets are provided at Section 2 for all Step 4 properties to set out the Step 4 analysis. For the four properties considered at Step 4, it is confirmed that the RVAA threshold would not be breached. Further detail is set out in the Property Survey Sheets.

1.6 Mitigation incorporated as part of the Proposed Development

1.6.1 The Proposed Development has been designed to minimise environmental impacts on landscape character, visual amenity and residential (visual) amenity and as part of the iterative design process has been informed by the findings of both the LVIA and the RVAA.

1.6.2 A Landscape and Ecological Design Scheme has been prepared, and as part of the Step 4 assessment, consideration of the long-term effects of the establishment and maintenance/management of mitigation measures are taken into to consideration (e.g. hedgerows to be maintained at 3/4m in height). This is of particular relevance to the RVAA when considering the screening effects of native species tree and shrub planting located within Field 13 and how this will affect views from nearby residential properties.

1.7 References

Landscape Institute (2019) Residential Visual Amenity Assessment (RVAA) Technical Guidance Note 2/19

2 STEP 4 SURVEY SHEETS

Property Name: Nonam House	**Property Reference:** P2
Orientation Frontage: West	**Direction of Wind Farm:** West and Northeast

Property Description: Detached domra bungalow accessed via an un-named lane to the east. Driveway located to the north of the property along with a separate garage. The main garden area is located to the front of the property, adjacent to an unnamed lane and is bound by mature vegetation. A surfaced area is located to the rear of the property and a small lawned area is located to the south.

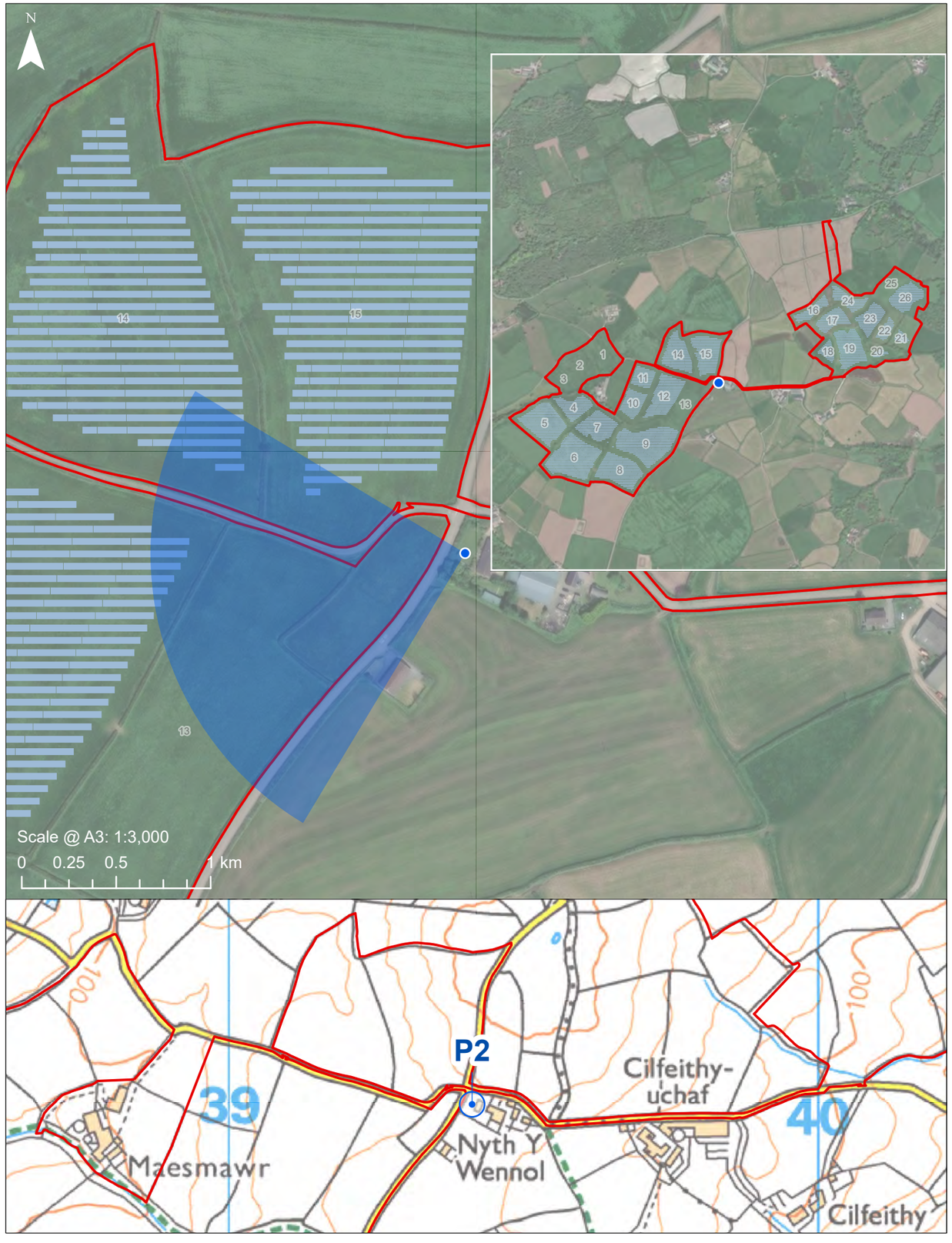
Elevations with views towards the Solar Farm: Principle living areas are located on the front elevation of this property, are west facing and look out to the front garden. Views beyond the front garden from principle living areas screened by mature vegetation located along the boundary to the garden. Views from the garden are contained with views out obtained from the far southern extents of the garden where the boundary vegetation has been maintained at a lower height and views are obtained to the adjacent un-named lane and agricultural fields located to the west of the lane. Views from first floor front elevation skylight windows are more extensive with views west being obtained beyond vegetation along the front garden boundary.

The ZTV and site visit confirmed there are no potential views available towards solar area east from the east facing rear elevation or rear garden.

Predicted change in view and effects on visual amenity: Field 13 lies adjacent to the west of the un-named lane and this property. Fields 10-12 also lie to the west and are both located to the west of Field 13, Fields14 and 15 lie to the northwest. Views of solar panels located in the forementioned fields from principle living areas on the front elevation of this property and drive would be screened by vegetation located along the front garden boundary. Views from within much of the front garden would be screened by the vegetation located along the boundary except for an area in the south of the garden where the boundary vegetation has been maintained at a lower height. At this location direct views into the adjacent area of Field 13 would be obtained and long distance views of solar panels in Fields 12, 14 and 15 would be obtained.

Views from west facing first floor skylight windows at the front of the property would be more open and views of solar panels in the north of solar area west would be obtained. However, views of the solar panels would reduce over time as the native tree and shrub planting in Field 13 establishes.

Residential Visual Amenity Threshold: Views of the solar development from within the property would be limited to first floor secondary living areas located on the front elevation. Views of solar panels would be obtained from a small area in the front garden and would reduce overtime. It is therefore concluded that the RVAA threshold would not be breached.



rps A TETRA TECH COMPANY	Qualitas energy	Residential Property Name: **Nonam House**	**Heolddu Solar Farm** 794-PLN-NDIP-00319	**Residential Visual Amenity Assessment (RVAA)**	Figure **1**

Camera and Lens Type	Full Frame Sensor / 50mm	Photography Date and Time	16/09/2025 10:35	Client	Qualitas Energy
Height of Camera Lens above ground	1.5 m	Viewpoint Location	239412, 210514	Project	Heolddu Solar Farm
Horizontal Field of View	90° (cylindrical projection)			Project Number	794-PLN-NDIP-00319
Principal Distance	522mm				
Paper Print Size	841 x 297 mm				

Title: RVAA Property 2 - Nonam House
Baseline Panorama

Figure Number: 1a

NDIP/E0319-00494-01

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Camera and Lens Type	Full Frame Sensor / 50mm
Height of Camera Lens above ground	1.5 m
Horizontal Field of View	90° (cylindrical projection)
Principal Distance	522mm
Paper Print Size	841 x 297 mm

Photography Date and Time	16/09/2025 10:35
Viewpoint Location	239412, 210514

Client	Qualitas Energy
Project	Heolddu Solar Farm
Project Number	794-PLN-NDIP-00319

Title	RVAA Property 2 - Nonam House Proposed Solar Area
Figure Number	1b

NDIP/E0319-00494-01

Property Name: Un-named bungalow	**Property Reference:** P3
Orientation Frontage: West	**Direction of Wind Farm:** West and Northeast

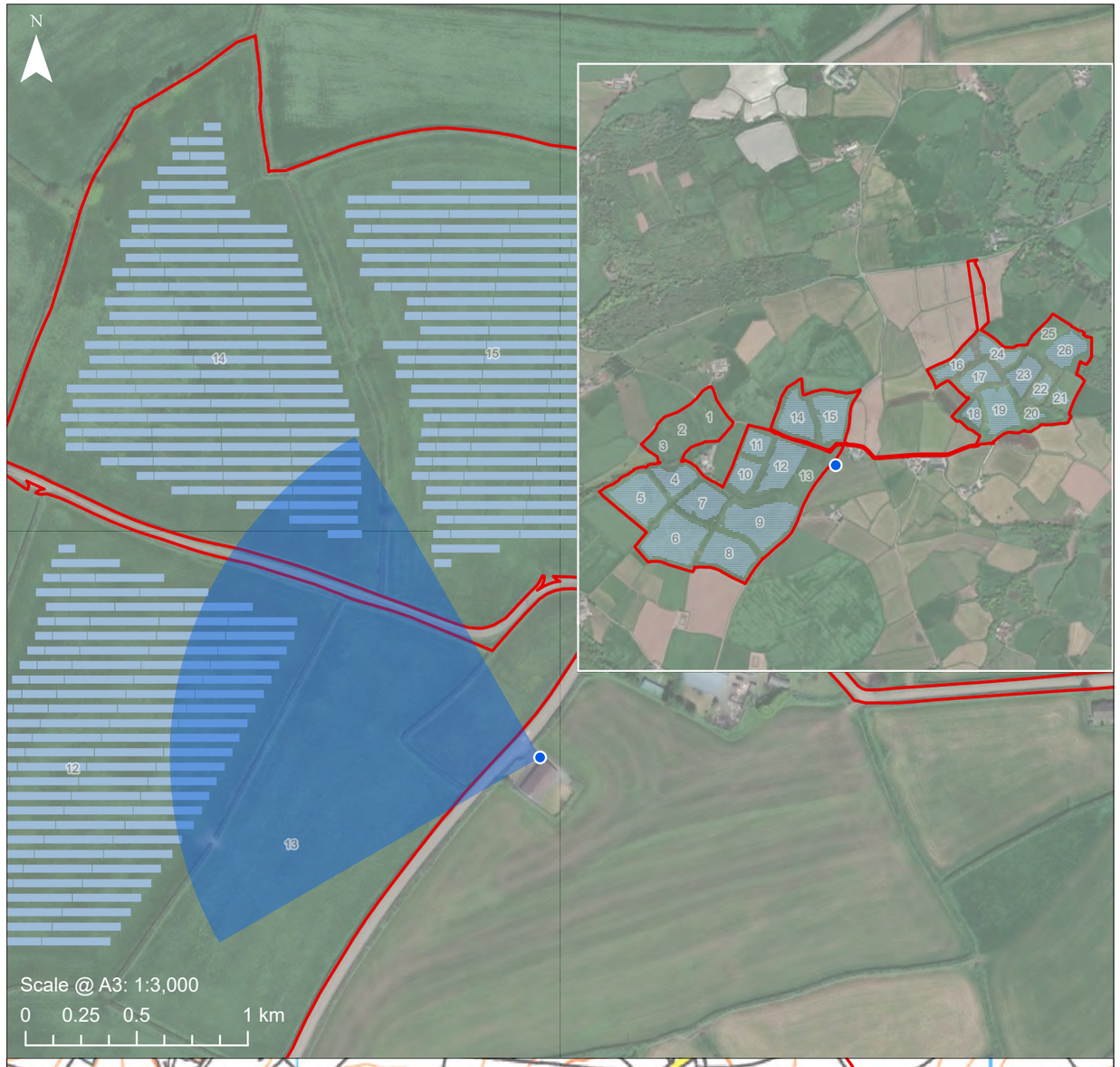
Property Description: Detached bungalow accessed via an un-named lane located to the west. A garage is located to the north of the property and a short driveway adjoins the boundary gate and the garage. The front garden area is laid to lawned and has a low boundary wall. The rear garden is laid to lawn and bound by low vegetation.

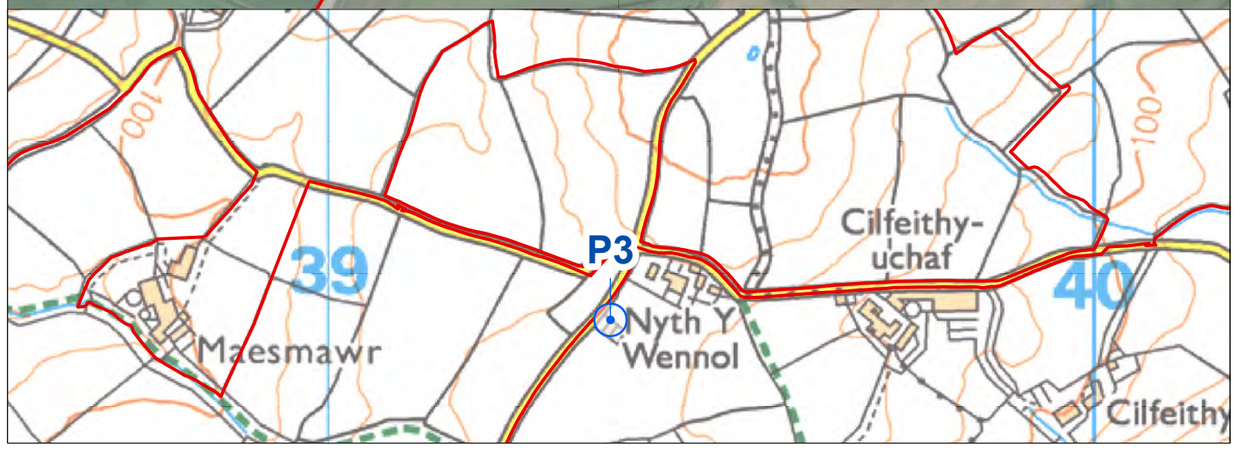
Elevations with views towards the Solar Farm: Principle living areas located on the front elevation of this property obtain views across the front garden, low boundary wall, un-named lane bound by a mature hedgerow (along its western side) to the northwest towards solar area west. The ZTV and site visit confirmed there are no potential views available towards solar area east from the east facing rear elevation or rear garden.

Predicted change in view and effects on visual amenity: Field 13 lies adjacent to the west of the un-named lane and this property. Fields 10-12 also lie to the west and are both located to the west of Field 13, Fields14 and 15 lie to the northwest. Views of solar panels located in the forementioned fields from principle living areas on the front elevation of this property, the drive and front garden would be screened by the hedgerow (located to the west of the un-named lane) at all times of the year.

As the native species tree and shrub planting located along the eastern boundary of Field 13 matures this would be visible above the hedgerow located to the west of the un-named lane from principle living areas on the front elevation of this property, the driveway and front garden.

Residential Visual Amenity Threshold: No views of the solar panels would be obtained. It is therefore concluded that the RVAA threshold would not be breached.





rps A TETRA TECH COMPANY	Qualitas energy	Residential Property Name: **Unnamed Bungalow**	**Heolddu Solar Farm** 794-PLN-NDIP-00319	**Residential Visual Amenity Assessment (RVAA)**	Figure **2**

Camera and Lens Type	Full Frame Sensor / 50mm	Photography Date and Time	16/09/2025 10:20	Client	Qualitas Energy
Height of Camera Lens above ground	1.5 m	Viewpoint Location	239368, 210448	Project	Heolddu Solar Farm
Horizontal Field of View	90° (cylindrical projection)			Project Number	794-PLN-NDIP-00319
Principal Distance	522mm				
Paper Print Size	841 x 297 mm				

Title: RVAA Property 3 - Unnamed Bungalow Baseline Panorama

Figure Number: 2a

NDIP/E0319-0049-01

Camera and Lens Type	Full Frame Sensor / 50mm	Photography Date and Time	16/09/2025 10:20	Client	Qualitas Energy
Height of Camera Lens above ground	1.5 m	Viewpoint Location	239368, 210448	Project	Heolddu Solar Farm
Horizontal Field of View	90° (cylindrical projection)			Project Number	794-PLN-NDIP-00319
Principal Distance	522mm				
Paper Print Size	841 x 297 mm				

Title: RVAA Property 3 - Unnamed Bungalow
Proposed Solar Area (none visible)

Figure Number: 2b

NDIP/E0319-00494-01

Property Name: Maesmawr	**Property Reference:** P13
Orientation Frontage: Northeast	**Direction of Wind Farm:** East, South and West

Property Description: Two story detached farmhouse with several associated barns located to the north and northwest. This property is accessed via a farm track located to the north which is bound by a post and wire fence to the east, agricultural land lies adjacent to the east and west. A driveway and parking area is located at the front of the property. The garden is located to the rear of the property and contains two paved areas adjoined by a path, lawn and mature vegetation is located within and along much of the boundary. To the south of the garden lies a narrow belt of trees, un-named stream and PRoW. Agricultural fields adjoin the garden, driveway and barns associated with the farm.

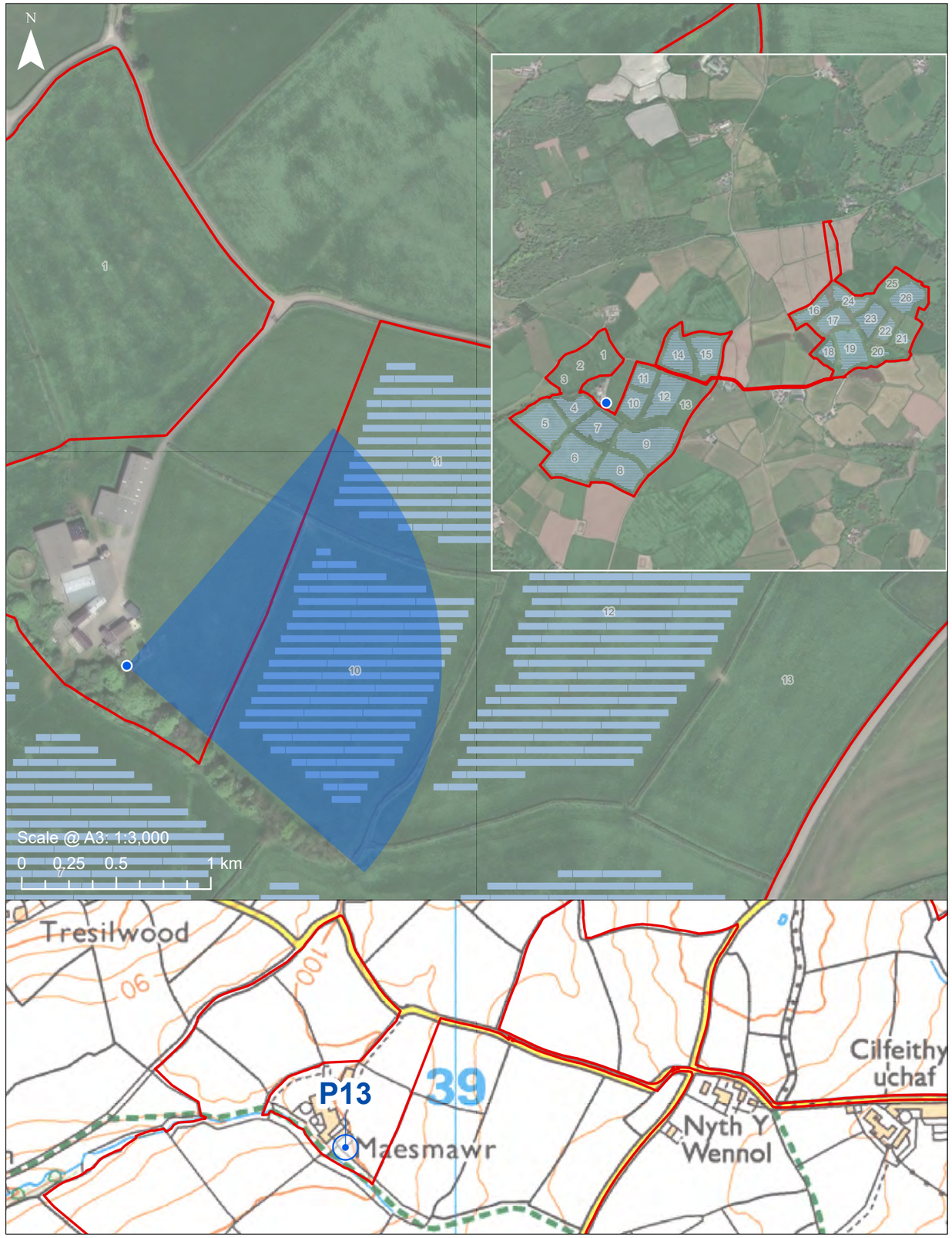
Elevations with views towards the Solar Farm: Barns located to the north and northwest of the property screen views beyond the immediate farm utility area at the front of the property from principle living areas located at the front of the property. A second living room, also forming a principle living area is located at the rear of the property along with the kitchen. Views to the southeast from the ground floor are of the immediate garden with views beyond the garden being screened by mature boundary vegetation. Views from the garden are contained and largely limited to the garden itself except for a paved area in the southeastern corner of the garden where there is a gap in the boundary vegetation and views are obtained of agricultural land to the southeast.

Views from first floor windows are more open with the first floor rear elevation obtaining views above garden vegetation to agricultural land lying to the southeast. Views from the first floor front windows include the upper extents of the adjacent barns and agricultural land to the northeast. The farm track that provides access to the property obtains open views to the east and west of the adjacent farmland.

Predicted change in view and effects on visual amenity: Views to the northwest from ground floor principle living areas and first floor living areas at the front of the property would be unchanged. Views to the southeast from principal ground floor living areas at the rear of the property would be unchanged due to screening provided by boundary vegetation. Views to the southeast from first floor living areas would be obtained above the boundary vegetation and would include distant views of the tops of solar panels in Field 10. Existing hedgerows located to the west of Field 10 would screen views of the lower extents of solar panels in this field. Whilst views from the garden are largely contained views beyond the garden to the southwest would be obtained from the southeastern extents of the garden at a gap in the boundary vegetation, distant views across the adjacent agricultural field to Field 10 would be obtained. The existing hedgerow along the western boundary of Field 10 would screen views of most of the solar panels with only the upper extents of a small number of panels being scene.

Views to the east from the farm track leading to the property would include of the tops of solar panels located in Fields 10 and 11. Views of the solar panels would be distant, largely screened by existing hedgerows and form a small additional feature in the view. Views to the west from the farm track towards Fields 1 – 3 would be unchanged.

Residential Visual Amenity Threshold: No views of the solar development would be obtained from principle living areas within the property. Whilst distant views to the southeast would feature the tops of solar panels in Fields 10 and 11 from the driveway and Field 10 from first floor rear elevations and a small area in the garden, other views from the property and its curtilage would be unchanged. It is therefore concluded that the RVAA threshold would not be breached.



Camera and Lens Type	Full Frame Sensor / 50mm	Photography Date and Time	16/09/2025 11:00	Client	Qualitas Energy	Title	RVAA Property 13 - Maesmawr Baseline Panorama
Height of Camera Lens above ground	1.5 m	Viewpoint Location	238814, 210410	Project	Heolddu Solar Farm		
Horizontal Field of View	90° (cylindrical projection)			Project Number	794-PLN-NDIP-00319	Figure Number	3a
Principal Distance	522mm						
Paper Print Size	841 x 297 mm						

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Camera and Lens Type	Full Frame Sensor / 50mm
Height of Camera Lens above ground	1.5 m
Horizontal Field of View	90° (cylindrical projection)
Principal Distance	522mm
Paper Print Size	841 x 297 mm

Photography Date and Time	16/09/2025 11:00
Viewpoint Location	238814, 210410

Client	Qualitas Energy
Project	Heolddu Solar Farm
Project Number	794-PLN-NDIP-00319

Title	RVAA Property 13 - Maesmawr Proposed Solar Area
Figure Number	3b

NDIP/E0319-00494-01

Property Name: Nantygoetre	**Property Reference:** P16
Orientation Frontage: South	**Direction of Wind Farm:** Southeast and Southwest

Property Description: Two storey detached farmhouse with adjacent barns located to the north and west. This property is accessed via a driveway located to the south of the property and a track is located to the north of the property and provides access to barns associated with the farm. Both routes of access adjoin an un-named local lane located to the east. A gravelled parking area adjoins the driveway and is located adjacent to the east of the property. A downwards sloping lawned garden is located to the front and side of the property, is south to southwest facing and adjoined by a paddock and stable block. A grassed field lies to the east of the driveway and both this field and the paddock are bound by a mature hedgerow.

Elevations with views towards the Solar Farm: Direct views to the south from the front of this property are obtained from principle living areas located within the property itself, driveway, gravelled parking area, paddock and field. Due to the elevated aspect and sloping landform to the south, the most extensive and open views are obtained from within the property itself and adjacent areas of garden. The elevated aspect of the property and garden affords long distance views across the open, low lying agricultural fields located to the south. Foreground and middle-distance views to the southeast and southwest include open fields divided by mature hedgerows, hedgerow trees and local lanes. A series of pylons are scene in views to the southwest. Long distance views include the rising landform in the far distance beyond a low-lying area of land located in the middle distance that that follows the route of an un-named watercourse, located to the north of Port Way that is screened by a ridgeline located in the middle distance. No views from the rear and eastern elevations of this property would be obtained.

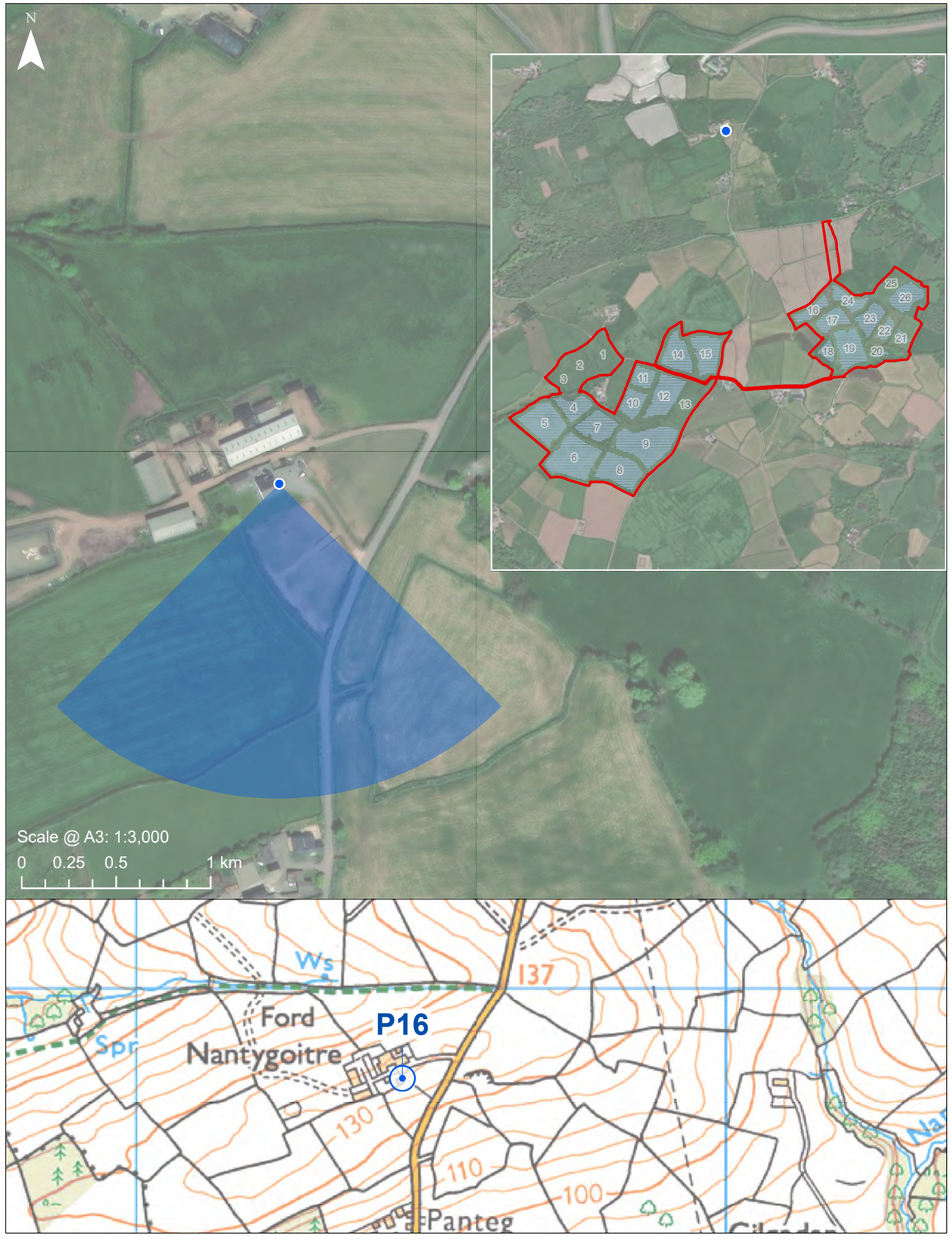
Predicted change in view and effects on visual amenity: Distant views of solar panels in Field 24 located in the northeast of solar area east would be obtained in views to the southeast. No other fields or solar panels located in solar area east would feature in views to the southeast as they would be located within an area of low-lying land that would be screened by the ridgeline in the middle distance. Solar panels in views to the southeast would be barley perceivable.

Views to the southwest would include part of solar area west and would include solar panels located in Fields 5, 6, 7, 8, 9, 12 and 14 and native species tree and shrub planting in Field 13. Existing vegetation located along the route of PRoW 62/54/1 and 62/54/2 would filter views of a small number of solar panels located within the Fields 9 and 7. Solar panels would form an additional low-level feature that stretches approximately half the width of the middle-distance view to the southwest.

It has been identified above that solar panels in both solar area east and solar area west would be obtained, however a considerable number of agricultural fields would be located between the solar areas and it would not be possible for both solar areas to appear in a single view from within or the curtilage of this property.

Residential Visual Amenity Threshold:

Concluding judgement: Whilst solar panels would feature in views obtained from principle living areas at the front of this property, the front garden, paddock, field and driveway they would not feature within all round views from the property or its curtilage. In addition, views of solar development would occupy a small proportion of the views to the south, would fall in the middle distance and would be low lying and not break the skyline. It is therefore concluded that the RVAA threshold would not be breached.



rps A TETRA TECH COMPANY / Qualitas energy	Residential Property Name: **Nantygoetre Isaf**	**Heolddu Solar Farm** 794-PLN-NDIP-00319	**Residential Visual Amenity Assessment (RVAA)**	Figure **4**

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Camera and Lens Type	Full Frame Sensor / 50mm
Height of Camera Lens above ground	1.5 m
Horizontal Field of View	90° (cylindrical projection)
Principal Distance	522mm
Paper Print Size	841 x 297 mm

Photography Date and Time	16/09/2025 11:00
Viewpoint Location	239400, 211827

Client	Qualitas Energy
Project	Heolddu Solar Farm
Project Number	794-PLN-NDIP-00319

Title	RVAA Property 16 - Nantygoetre Isaf Baseline Panorama
Figure Number	4a

NDIP/E0319-00494-01

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Camera and Lens Type	Full Frame Sensor / 50mm
Height of Camera Lens above ground	1.5 m
Horizontal Field of View	90° (cylindrical projection)
Principal Distance	522mm
Paper Print Size	841 x 297 mm

Photography Date and Time	16/09/2025 11:00
Viewpoint Location	239400, 211827

Client	Qualitas Energy
Project	Heolddu Solar Farm
Project Number	794-PLN-NDIP-00319

Title	RVAA Property 16 - Nantygoetre Isaf Proposed Solar Area
Figure Number	4b

NDIP/E0319-00494-01

3 SUMMARY AND CONCLUSIONS

3.1 Summary and Conclusions

3.1.1 The purpose of this RVAA is to objectively assess the likelihood that the Proposed Development would result in adverse effects on the visual amenity and liveability of residential properties within the ZTV, to such a degree, that it would not be in the public interest to permit these conditions.

3.1.2 The preliminary assessment (Steps 1 - 3) of this RVAA denoted that 4 of the 17 residential properties or groups of properties which fall within the study area and within the ZTV, required a more detailed assessment (Step 4).

3.1.3 Taking into account the findings of this RVAA, the Proposed Development is not considered to pose any oppressive, overbearing or overwhelming visual impacts which could be considered to render any properties unsatisfactory places in which to live in visual amenity terms. None of the properties accessed would obtain views of the Proposed Development in more than one direction, where views are obtained, they would be largely screened by intervening vegetation and would occupy a small portion of the view. For those properties assessed in Step 4, it has been deemed that the RVAA threshold has not been breached.

Figure 1: Zone of Theoretical Visibility

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Legend

- Site
- Study area
- Local buildings
- Woodland
- Residential receptors
- Residential receptors primary direction of view

Zone of Theoretical Visibility

- High visibility (up to 953 observer points visible)
- Low visibility (at least 1 observer point visible)

Data source	OS Terrain 5
Date sourced	2024
Coverage	Within 5km of the Application Boundary
Original cell size	5 m

ZTV calculated using following heights

Solar panels: 3 m
Inverters: 2.2 m
DNO substation: 3.3 m
Transformer: 2.5 m
Communications tower: 15.2 m
Spares container: 2.5 m

Ground cover is modelled using indicative heights of 9m for buildings, and 12m for woodland blocks. Ground cover is located using OS Open Maps.

ZTV is not calculated beyond 5 km of Application Boundary
Viewer height is 1.7 m
The effects of earth curvature and light refraction are considered.
ZTV calculation does not use mathematically approximate methods.

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Project Name	**Heolddu Solar Farm**
Drawing Title	**Residential Receptors and Zone of Theoretical Visibility**
Figure Number	**1**
Drawing Number	**NDIP00319-0032-06**

Rev	Date	Status	By	Check
06	29/07/2025	FINAL	AC	CL

Scale @ A3	Plot Size	Datum
1:15,000	**294 x 277 mm**	**OSGB 1936**

0 0.5 1 2 km

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\\CARD-PH-02\EnvPlanningProjects\Current projects\794-PLN-NDIP-00319 Heolddu SolarTech\Drawings\NDIP00319-0032-06.aprx - NDIP00319-0032-06