

REVIEW OF LANDSCAPE AND VISUAL IMPACT ASSESSMENT

23/0427/DNS- Twyn Hywel Energy Park Land Noth-West Of Caerphilly

Undertaken by: Richard Bryan CMLI, Landscape Architect (Team Leader) for Caerphilly County Borough Council. Date of Review: August 2023

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1. Preface

Review undertaken following Landscape Institutes Technical Guidance Note 1/20 (10 Jan 2020). The technical notes states:

“The third edition of the Guidelines for Landscape and Visual Impact Assessment (GLVIA3) was published in April 2013. It has been widely welcomed, accepted and adopted for use in assessing the effects of projects on landscape and visual amenity and since publication been promoted by Landscape Institute (LI) training events. GLVIA3 sets out that assessment of effects on the landscape and visual resource that may result from a development proposal may be undertaken formally as Landscape and Visual Impact Assessment (LVIA) typically as part of an Environmental Impact Assessment (EIA) or less formally as a Landscape and Visual Appraisal (LVIA). The LI strongly recommends that GLVIA 3 is followed when undertaking these assessments and that the resulting LVIA should be objective with clear thinking, easy to follow, and demonstrate how they have informed appropriate siting, design, and mitigation.”

A Landscape and Visual Impact assessment (LVIA) has been submitted as part of this application. The purpose of the LVIA is to identify and assess the likely landscape and visual effects that would result from the construction of the proposed Twyn Hywel Wind Farm.

A defined 28km study area was agreed to suffice based on the type, size of the development, location, topography, Zone of Theoretical Visibility (ZTV) and local knowledge.

A Cumulative Landscape and Visual Impact assessment also forms part of this application. This considers existing and proposed turbines, wind farms and Cwm Ifor Solar Farm, as advised and agreed with the LPA.

2. Introduction

The “Landscape and Visual Impact Assessment” undertaken, is well structured and broadly follows the guidelines set down in the third edition of “Guidelines for Landscape and Visual Impact Assessment” published jointly by the Landscape Institute and the Institute of Environmental Management and Assessment.

Chapter 6 of the Environmental Impact Assessment (EIA) covers Landscape and Visual Impact assessment (LVIA) of the proposed development and meets the following.

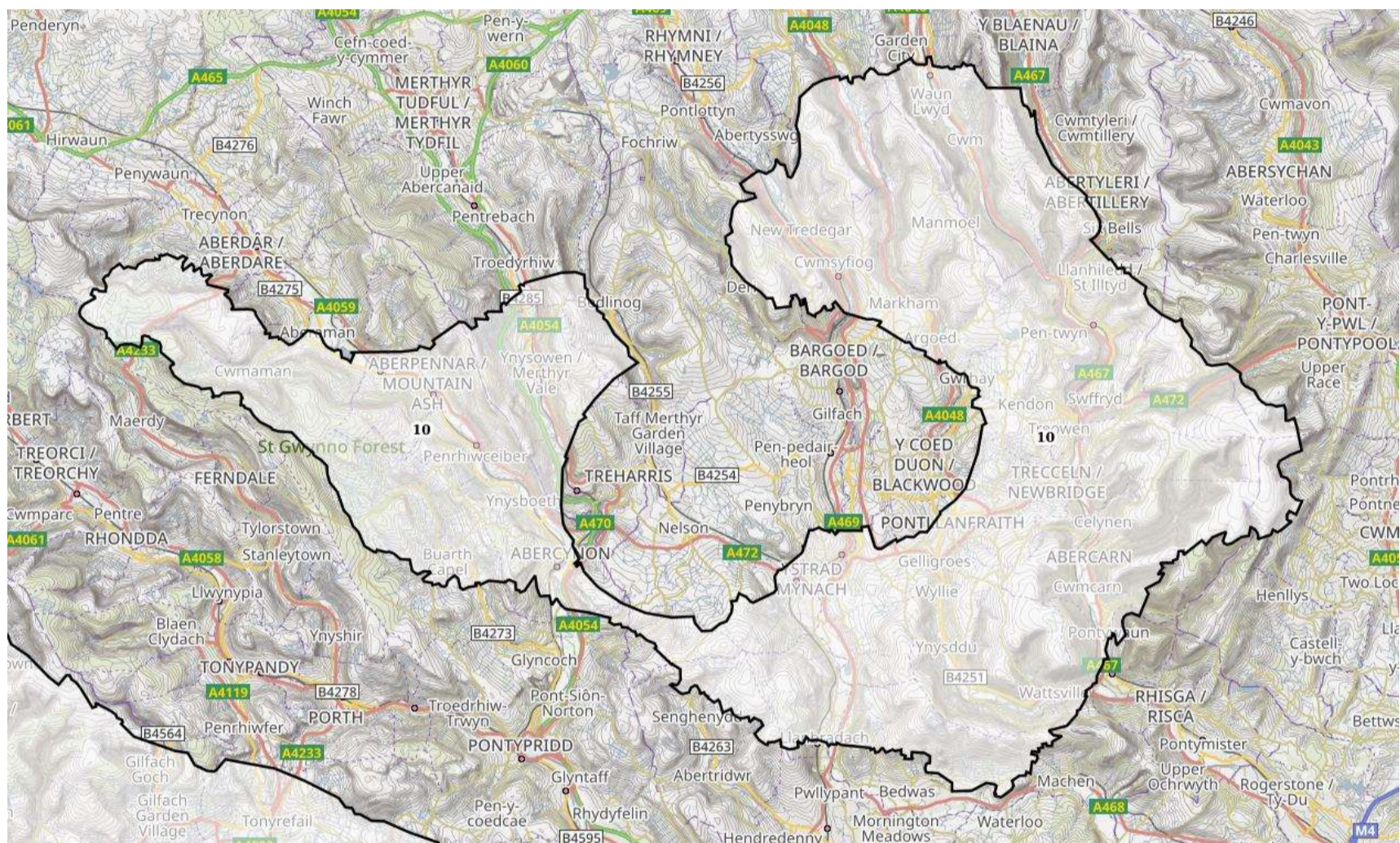
- the methodology is acceptable and follows relevant guidance and good practice, with some exceptions in terms of turbine height / scale in relation to the landscape scale.
- the LVIA adequately assesses baseline landscape, with exception to the scale of the receptor site landscape character scale.
- is appropriate and in proportion to the scale and nature of the proposed development.
- meets the requirements agreed in discussions held between the applicant’s consultants with CCBC Landscape Architect and the Local Planning Authority (LPA).

3. Consideration of policy

National Policy

The site partially falls within Pre-Assessed Area for Wind Energy (Area 10) Policy 18 within Future Wales: The National Plans 2040 (2021).

The national policy context has recently changed with part of the site now being within a Pre-Assessed Area for Wind Energy (Area 10) where there is a presumption in favour of wind energy development subject to meeting the provisions of Policy within Future Wales: The National Plans 2040 (2021).



The above extract is from Future Wales - National Plan 2040 Policy 17 – Pre-assessed areas for wind energy. This details that part of the site is within this area, however 3 proposed outlying turbines to the west of Senghenydd fall outside of this area, turbines No 1, 2 and 3.

Caerphilly County Borough Local Development Plan up to 2021 Adopted November 2010.

NH1 Special Landscape Areas (SLAs)

The site falls within the NH1.3 Mynydd Eglwysilan

3.100 “Special Landscape Areas (SLAs) are local non-statutory designations that seek to protect areas that exhibit distinctive landscape, historical, cultural, biodiversity and geological features and characteristics within the County Borough. They are locally important elements of the natural heritage of the rural and urban environments, and provide a living history of the evolution of the area’s landscape as well as cultural backdrop and visual setting. The designation of SLAs highlights

the holistic consideration of the landscape, with emphasis placed on the ‘special’ nature of the distinctive landscape features and characteristics in these areas.”

The section on the LDP is particular relevance as the site is located wholly within this local designation Special Landscape Areas (SLAs) Mynydd Eglwysilan . The SLA designation being awarded for its local important landscape and overall, above average LANDMAP aspect areas assessment.

The Mynydd Eglwysilanand Meio areas represent an important and remarkably well preserved historic landscape containing a wealth of archaeological evidence. The area is an extensive enclosed area of mountain moorland that has remained substantially intact and unaffected by 19th –20th Century industrial exploitation or modern forestry plantations.

It’s important to note that the SLA designation does not seek to preclude development but does seeks to reduce the long term and midterm impacts presented by development that have the potential to effect both the SLA’s landscape and visual qualities.

CCBC Planning Guidance

Caerphilly County Borough Smaller Scale Wind Turbine Development -Landscape Sensitivity and Capacity Study, November 2015. Prepared by Gillespies Landscape Architects and Caerphilly County Borough Council.

This study although discounted by the LVIA, still has bearing and relevance notably in respect of the Landscape Character study which highlights the site and NH 1.3 Mynydd EglwysilanSLA being of a **Medium scale** landscape and not **large scale** as stated in the LVIA. This is of high importance given the height of up to 200m tip height for the proposed turbines.

See the below extract from page 30 of [Microsoft Word - FINAL Caerphilly County Borough Sensitivity Study Amended Draft 26102015](#))

Caerphilly, South Wales
Wind Turbine Development Landscape Sensitivity and Capacity Study

LANDSCAPE UNIT 1: Caerphilly West (Nelson and Abertridwr)		assessed susceptibility		
		low	medium	high
LANDSCAPE				
Scale	Medium scale. VS8 Scale - medium 85%		Medium	
Landform	Upland landscape combining hills and valleys with undulating upland. VS4 Topographic form -hills/valleys 85%			High
Land cover pattern	Combination of improved, semi improved and rough grassland with areas of open moorland on hill tops. Village settlement in the valley bottoms and on lower slopes. VS class level 3 - hillside & scarp slopes mosaic 77% HL class level 3 - irregular fieldscapes 52% VS5 Land cover pattern - field pattern/mosaic 77% VS16 Pattern - regular 100%			High
Built Environment	Largely rural area with scattered farmsteads. Villages located in the valley bottom and on lower valley slopes. VS6 Settlement pattern - scattered rural/farm 80% VS20 Use of construction materials - generally appropriate 88% VS25 Sense of place - moderate 89%			High

The LVIA states “6.31 The open moorland on the highest ground (which is also open access land) contributes towards the large scale of the landscape.”

I do not concur with the above assessment. Mid Wales is an example of a non-designated large scale landscape, which stretches north from Bannau Brycheiniog (Brecon Beacons) to Eryri (Snowdonia).

4. Effects on Landscape Character

Mynydd Eglwysilan & Mynydd Meio (CYNONVS317)

Its note that the development is expected to remain operational for 45 years, and concur that it will be long-term. Although it's appreciated that the development will be partially reversible as the turbines and substation will be dismantled and removed from the site once the operational period ends. Forty-five years. however, a considerable period and does set the precedent for large scale wind tubes in this medium scale local landscape in the region.

Overall, the LVIA has assessed the development as having **significant** impact both on landscape character of the site and adjacent character areas within 1.5km and diminishing from the further away from the development the landscape is, which is understandable. However, I believed the LVIA assessment has underestimated the extent of the impact with **Major significant** landscape impact potentially experienced up to 7km, where views are afforded, as views form part of a landscapes character. That said from my site visits and viewpoint visits, I've concluded that the landscape character will potentially impact on the majority of the Mynydd Eglwysilan SLA where views are afforded.

Including notably LANDMAP Visual and Sensory Character areas.

- **Mynydd Eglwysilan & Mynydd Meio CYNONVS317**

LANDMAP OVERALL EVALUATION Upland area with strong sop and accessible views, slightly spoilt by visual detractors, but sufficient qualities to remain high value.

- **Llanfabon CYNONVS143** to the north where the grid connection will also directly impact.

LANDMAP OVERALL EVALUATION all criteria are moderate, although scenic quality and integrity are borderline mod/high, therefore of strong local importance.

I concur with the LVIA assessments and statement below, that this will result on the changing the area to a **wind farm landscape**, resulting in a **significant adverse effect** on the landscape character area.

6.127 ...“The Proposed Development will however increase the presence of modern man-made influence within the landscape and add built features to the skyline, affecting the sense of rurality, views over upland and adjoining valleys (including from the summits of Mynydd Eglwysilan and Mynydd Meio), and the sense of place that are noted as characteristics of the landscape in LANDMAP.”

*...Nevertheless, the Proposed Development will result in a large change in the character of the area directly affected by the Proposed Development, changing this area to a wind farm landscape. The large scale of effect over a long term is judged to result in a high magnitude of change to the northern part of the Landscape Unit that falls within the Site, resulting in a **Major (significant) effect**.*

Llanfabon (CYNONVS143)

Similar I concur the Llanfabon character area will be **significantly** adversely effected.

6.128...*"The Proposed Development will increase the presence of modern man-made influence within the landscape and increase the built vertical features on the skyline, affecting the sense of rurality and the rural backdrop provided in views from the nearby valley settlements, which are noted as important characteristics of the landscape in LANDMAP."*

"... the Proposed Development will result in a large change in the character to areas directly affected and up to approximately 1.5km of the turbines. This large scale of effect over a long term is judged to result in a high magnitude of change, resulting in a Major (significant) effect. The scale of effect will reduce with distance from the Proposed Development with the wind farm resulting in a medium change in character between about 1.5km and 5km from the turbines, and reducing further beyond that. The medium scale of effect over a long term is judged to result in a medium magnitude of change, resulting in a Moderate (significant) effect on the character of the landscape unit between about 1.5km and 5km from the turbines. [N.B. as the scale of effect reduces with distance there will be an area of overlap around the 1.5km mark where a moderate-major effect will apply.]"

Mynydd Eglwysilan SLA The above two areas span a wider part of the existing SLA. The SLA and landscaper character areas, significantly adverse effected will remain adverse during this 45 period, and consequently undermine the local SLA designation which is counter to current LDP policy.

Gelligaer Common (CYNONVS404)

On balance the LVIA has assessed the wider areas up to 5 to 7km as **moderate** adverse, which still remains **significant**. However, given the size of the 14, 200m height to tip of the turbines, the **Major adverse** effect will potentially stretch north beyond the 1.5km given in the LVIA to more in the region of 3km. Although I agree this will diminish as distance grows to **moderate major** but remain **significant** up to 5-7km from the turbines where they are visible in the landscape.

A clear illustration of this is Viewpoint 22: Rhymney Valley Ridgeway Walk at Gelligaer Common. Where the larger cluster of 11 turbines visible **still dominate the skyline** views south from this SLA and historic landscape.



From observation from viewpoints made in the field, overall, the assessment has in both the assessment of landscape character effects and visual effects, from various viewpoints, have been underplayed.

5. Visual Effects

Views from Community and settlements

Local Communities (within 5km)

I concur with the LVIA that the Wind farm will have a **significant adverse visual impact** on the below communities within the Caerphilly Borough.

Senghenydd, Abertridwr, Ystrad Mynach, Penybryn, Gelligaer, Hengoed, Maesycwmmmer, Caerphilly, from Oakdale, Nelson, South-west of Blackwood, elevated southern areas of Blackwood and The Bryn Pontllanfraith Playing Fields. I would have expected all these communities where views are afforded of the turbines to have evaluated higher than moderate significant given the size of the wind farm turbined and being clearly visible in the skyline. Figure 25 Oakdale Park at 7.6 km from the nearest turbine illustrates this.

Of the communities **Senghenydd** Viewpoints 3 & 5 and **Abertridwr** Viewpoint 6 will experience **Major** adverse Visual Impact and **Significant** due to the very close proximity of approximate 1km to the nearest turbines. Senghenydd will visually be dominated by the turbines visible which will be visible from the west and east of the settlement in successive views and enclosing the settlement. Turbine arrangement and proximity has the potential to dominate of over the community, being overbearing and out of scale with the settlement pattern and steep valley slopes, which the turbines are located elevated above, which in turn extenuating the scale and distorting perspective experienced from the settlement.

The isolated buildings in the view, along with the trees, on the skyline give scale factors on which to evaluate the turbines size. This accentuates the turbines very large size. Topography with the settlement lying below also increases the overbearing nature of this turbine cluster.



Viewpoint 3: Alexandra Terrace, Senghenydd to west.



Viewpoint 3: Alexandra Terrace, Senghenydd to east.

The irregular layout in relationship the settlement, is also an issues, presenting a complex image, as the turbines will interact in varying ways with each other as well as with the underlying landscape. In this instance partial screening behind a skyline presenting an unsettling moving visual arrangement.



Viewpoint 5: Parc Terrace, Senghenydd

Images also don't show that these are dynamic not static form and will also add an element of intrusion into the view which is likely to accentuate the overbearing size and form of the turbines.



Viewpoint 6: Garth Estate, Abertridwr

Users of Open Access Land, PRowS, Promoted Walking Routes, Cycle Routes, and the Popular Hill Summits Accessed by these Routes

On balance, the visual effects during both construction and operational phase, although the assessment slightly underestimates magnitude of change and sensitivity of some receptors, its accepted that the assessment overall of PRowS, Promoted Walking Routes, Cycle Routes, and the Popular Hill Summits Accessed by these Routes is acceptable, being **major and moderate** adverse on the routes assessed, and consequently **significant** in terms of EIA.

Road Users

It's accepted that road users, both construction and operational phase, that road users have a medium sensitivity. It's accepted that users of the minor roads on and close to the site to the north within the Llanfabon to Nelson and within also seen in close proximity views – **moderate-major adverse** and consequently **significant** effect. This effect would also continue to the north and road users of Gelligaer Common travelling south on the on Heol Adam within the Historic Landscape, as turbines will clearly be seen breaking the skyline from this elevated highway.

Users of the A472 and travelling west from Pontllanfraith will also experience clear views direct of the site and development breaking the skyline, and don't accept the assessment of minor-moderate, an assessment of **moderate** adverse and **significant** would be more representative for the sections through Maesycwmmmer.

Similarly, users of the A4049 and travelling west from Pontllanfraith, south from Pengam will also experience clear and glimpsed views, both direct and oblique, of the development breaking the skyline. Consequently, the assessment of **minor** is not accepted, given the height of the turbines an assessment of **moderate** adverse and **significant** would be more representative for the sections where views are afforded.

6. Aviation Lighting Assessment

In terms of Landscape Character, although lighting will add light to an above average tranquil and dark skies to the character area and a location where night lighting is limited, its accepted, given the controlling sensors that it's unlikely that there will be any additional significant effects due to aviation lighting on landscape character.

In terms of visual effects, it agree that there is likely to be a **moderate (significant)** for Viewpoint 21: Caerphilly Common experienced during the 'reasonable maximum worst-case scenario', as the introduction of the turbine lights on the relatively dark skyline. However, its accepted that the provision for the medium intensity nacelle lights to be controlled sensors to reduce the intensity of the lights will substantially reduce the perceptibility of the proposed nacelle lights and the visual effect will not be significant.

In terms of Residential Visual Amenity, similarly, given the use of control senso, its accepted that no significant effects will occur to the representative viewpoint 10 from Myrtle Grove, Hengoed and consequently unlikely breach the Residential Visual Amenity Threshold

7. Wind Farm Scale and Design

I not that the LVIA mentions reference to current guidelines and best practice including **NatureScot (2017) Siting and Designing Wind Farms in the Landscape. Version 3a**

However, the current design is at odds with this advice.

Height and scale.

I have issues with the scale and height of the proposed turbines up to 200m tip height. Its disappointing that the LVIA doesn't discuss the size of turbines that would be an appropriate scale in relation to the medium scale landscape as defined by Caerphilly County Borough Smaller Scale Wind Turbine Development -Landscape Sensitivity and Capacity Study, November 2015. Prepared by Gillespies Landscape Architects and Caerphilly County Borough Council.

From extensive viewpoints visits made during very good visibility it's clear that from all vistas that the proposed wind farm up to 200m tip height will dominate the landscape. The scale is notable where the turbines can be seen adjacent to scale indicators, existing small scale turbine, individual mature trees, isolated housing / farms and where they are seen in close proximity to residential communities, for example Senghenydd and Abertridwr.

Although the LVIA states *6.16 This assessment has also been informed by guidance contained within the following documents:*

NatureScot (2017) Siting and Designing Windfarms in the Landscape. Version 3a9

This hasn't taken on board the recommendations.

Not considered the size of the turbine in relation to the medium scale landscape, notably the **bold** aspects below where the issues are acute.

Turbine size

*2.14 Wind energy technology has developed quickly, and significantly larger wind turbines are now available. Turbines typically consist of 60 – 100 metre high towers with blades of 40 metres or more, so their overall height to blade tip is between 100 – 140 metres, though larger turbines are available. Longer blades result in a greater rotor area and this, combined with the fact that they extend upwards into higher wind velocities, means that their wind capture and energy production is significantly larger than the smaller turbines. Since 2010, mainly as a result of the Feed in Tariff, slightly smaller turbines have been more readily available, measuring between 60-80 metres to blade tip. **This provides greater flexibility in choosing a turbine appropriate to local landscape characteristics.***

*2.15 **Choice of turbine size is an integral part of the design process.** Identification of the key landscape characteristics, their sensitivity and capacity to accommodate change will inform this.*

Turbine scale

2.19 The scale of a feature – such as a wind turbine – is relative to the object it is being compared to, such as a person, building or tree. In an open and extensive large scale landscape a wind turbine may appear a relatively small scale feature. Adjacent to a large building, such as a power station, the turbine may appear a relatively medium scale feature. Conversely, within an enclosed intimate landscape the turbine will appear a large scale feature, dwarfing its surrounds. The comparison of the size of features helps people appreciate the height of a wind turbine, particularly where it is near to a known structure.

Landform

3.25 It is important to site and design a wind farm so that it appears visually balanced in relation to the underlying and surrounding landform. Turbines seen upon steep slopes often appear to be ‘unstable’. It is also important that the scale and extent of a wind farm do not seem to overwhelm the distinctive character and scale of a landform, especially prominent landforms.

The above can be seen from oblique views from Alexander Terrace Senghenydd, where turbines overwhelm the settlement and dominate the skyline, the two groups of turbines can be seen in succession from the same position, given the sense that the settlement is surrounded by the very large scale turbines.



3.26 Skylines are of critical importance. This is illustrated by the contrast between the simple, horizontal skylines of wide, flat landscapes and the more complex, vertical and diagonal components of skylines formed by mountains and hills. The viewer’s eye is naturally drawn to the skyline, although the extent to which this happens depends on the nature of the skyline, the distribution and type of other elements and foci within the scene. The skyline may be especially valued if it conveys a sense of wildness; forms the backdrop to a settlement; is a particularly distinctive landform, or where notable landmarks and/or cultural features appear on it.



3.27 Given the prominence of skylines, it is particularly important that a wind farm avoids these, or is sited and designed to relate to them. A key challenge is that the skyline will vary in relation to the position and elevation of a viewer. Nevertheless, the design of a wind farm from key viewpoints and routes should ensure it does not detract from the character of a distinctive skyline.

3.28 Care should be taken to ensure that the wind farm does not overwhelm the skyline. Distinctive and prominent skylines should not be interrupted by turbines. If the skyline is 'simple' in nature, for example over moorland and hills, it is important that wind turbines possess a simple visual relationship to this feature, avoiding variable height and spacing, the overlapping of turbines, or blade tips intermittently 'breaking' the skyline.

The wind farm brakes skylines in key viewpoints and settlements from the south, north and west, photographs where long distance views are important, notably the view from Caerphilly Town / Castle, Caerphilly Common, illustrate this which show the wind farm dominating the view and in the case of Caerphilly Common Summit with the larger group obscuring the existing view towards Pen y Fan.



The below extract from *NatureScot (2017) Siting and Designing Windfarms in the Landscape. Version 3a9*, also highlights issue that have not been met in terms of landscape scale.

Landscape scale

3.30 The term 'scale' does not refer to a definite dimension, but describes the perception of relative size between elements, for example a large-scale, open moorland or mountainous landscape and a small-scale, sheltered glen. To perceive scale, we rely on elements whose size and extent are recognisable to us – common features such as trees and houses. We use these as scale indicators to gauge the size and distance of other elements and make spatial judgements.

3.31 Landscape scale and openness are particularly important characteristics in relation to wind turbines because large wind turbines can easily seem to dominate some landscapes. For this reason, landscape scale can dictate the ability of an area to accommodate wind farm development, both horizontally and vertically.

3.32 A key design objective will be finding an appropriate scale for the wind farm that is in keeping with that of the landscape. The wind farm should be: – of minor vertical scale in relation to the other key features of the landscape – of minor horizontal scale in relation to the key features of the landscape (where the wind farm is surrounded by a much larger proportion of open space than occupied by the development) – of minor size compared to other key features and foci within the

landscape; or separated from these by a sufficiently large area of open space³ (either horizontally or vertically) so that direct scale comparison does not occur.

Furthermore, although its appreciate that the wind farm is partially within in Future Wales Area 10, this doesn't mean that the current design, layout (with turbines up to 200m to tip height) is acceptable, on the contrary, a reduction in height and a revised layout, with 3 turbines to the west removed would have the potential to reduce the number of significantly impacts, both landscape and visual.

8. Cumulative Impact

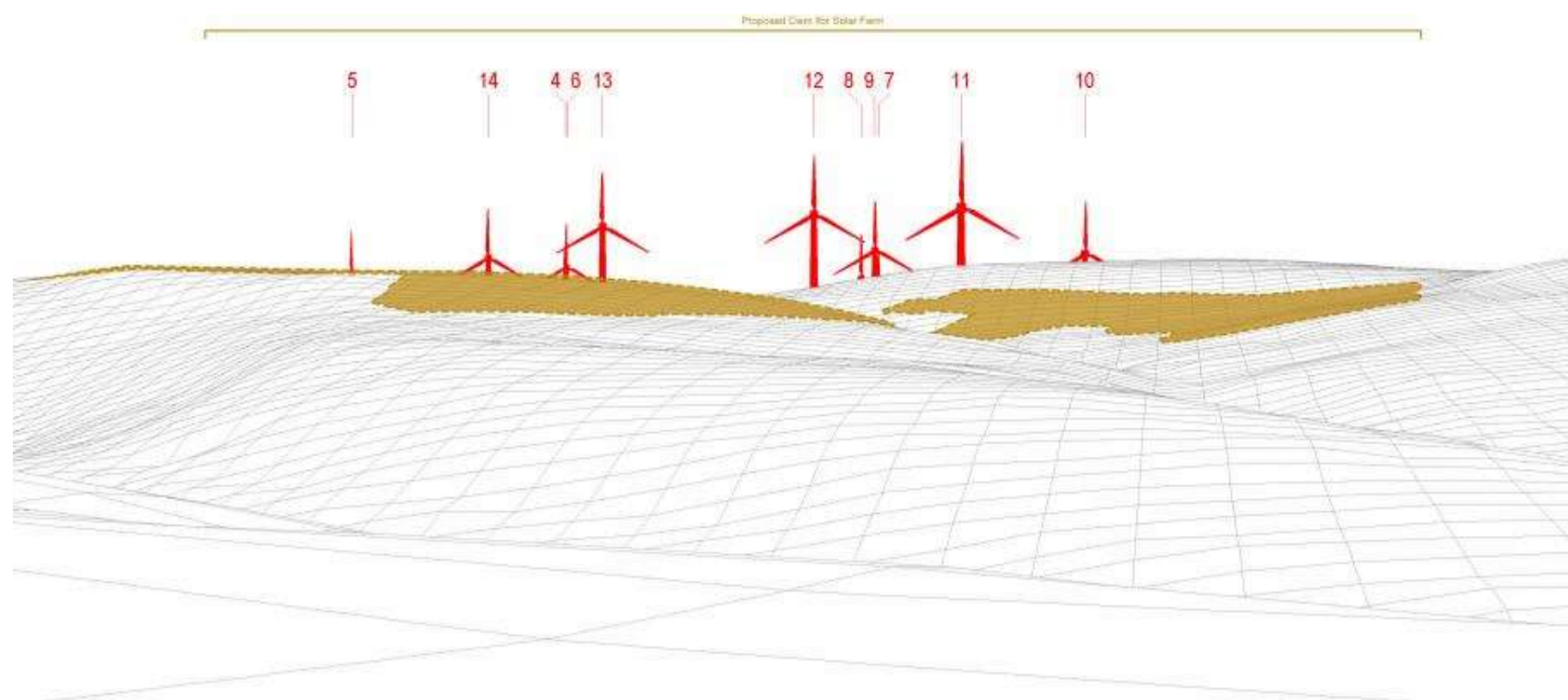
The LVIA adequately considers cumulative impacts, and concur and that there will be no cumulative impacts from other existing or proposed wind farms.

Cwm Ifor Solar Farm

Its assesses both the proposed Twyn Hywel Wind Farm and proposed Cwm Ifor Solar Farm, which will be visible from properties with a north facing aspect within the settlement of Hendredenny and norther edge of Caerphilly- (limited number of properties afforded views from Brynawel and Heol Cwm Ifor along the norther the edge of Penpederheol). It's accepted with the LVIA that the two developments will not represent any obvious visual conflict, however the two developments when combined have the potential to present the image of one combined "*energy park*". The continues LVIA states "*This is likely to result in a significant change when considered against the existing baseline*" as detailed in paragraph 6.189 of the LVIA.

I concur "*This is likely to result in a significant change when considered against the existing baseline (i.e. total cumulative effect).*" However, I do not agree that the total effects arising from the two developments will be no greater than the sum of their individual effects, as the two developments sitting alongside one another give the impression of the Cwm Ifor Solar Farm stretching over and beyond the broken skyline and below the turbines. Although I acknowledge the wind farm will be the more dominate dynamic (moving) form of the two.

The extract below from Viewpoint 13 Tenby Court, Hendredenny, wireframe illustrates where the western half of the solar farm meets the skyline, this has his potential to give this impression.



9. Residential Visual Amenity Assessment (RVAA)

Having studied this information and visited key locations, on balance the assessment provided a comprehensive assessment of the residential visual amenity.

However, the settlement of Senghenydd and the residential groups S2 to S5 assessed and the settlement as a whole raises concern as detailed below.

Table 1.4: All property groups within settlement considered within the RVAA

Property Group Number	Property Group Name	Associated Settlement	Distance from 'Wireline Centrepoin' to Nearest Turbine
S1	East Cilfynydd	Cilfynydd	970m
S2	Senghenydd north properties	Senghenydd	1035m
S3	Senghenydd east (north-west facing) properties	Senghenydd	1091m
S4	Senghenydd east (west facing) properties	Senghenydd	1109m
S5	Senghenydd west properties	Senghenydd	1430m
S6	Abertridwr properties	Abertridwr	1558m

Settlement Property Group S2: Senghenydd north properties

This group of properties are afforded uninterrupted panoramic views south from the northwest and southwest. The RVAA states.

“Despite the high magnitude of change in views from these properties, the proposed development will not be in the primary outlook across the valley and will therefore not block the only available views from the properties nor be overwhelming in views from the properties. For these reasons it is

considered that the proposed development would not breach the residential visual amenity threshold.”

It's agreed that there will be a **high** magnitude of change, and although the proposed wind farm will not block the primary outlook to the south, the 200m height of turbines and location at just over 1km for both separate clusters to the west and east, has the potential to be considered as encroaching and dominate on this group of properties.

Settlement Property Group S3: Senghenydd east (north-west facing) properties

“Despite the high magnitude of change in views from these properties, the proposed development will not be in the direct line of view of the primary outlook across the valley. The turbines will not block the only available views from the properties or be overwhelming, unpleasantly encroaching or inescapably dominant in views from the properties. For these reasons it is considered that the proposed development would not breach the residential visual amenity threshold.”

It's agreed that there will be a **high** magnitude of change, the proposed wind farm will be visible in the primary outlook to the northwest, the 200m height of turbines and location at 1.1km for both separate clusters to the west and east, has the potential to be considered as encroaching and dominate on this group of properties.

It's also notable that there will be oblique views of turbines to the north-east from this residential group to the larger cluster of turbines.

Settlement Property Group S4: Senghenydd east properties (west facing)

“Although turbines will be visible from the primary outlook of properties within this group they will be at a sufficient distance (just over 1km) for them not to be overwhelming, unpleasantly encroaching or inescapably dominant in views from the properties. For these reasons it is considered that the proposed development would not breach the residential visual amenity threshold.”

Residents will have direct open panoramic views of the 3 turbines to the west, located at approximately 1.1 km from these properties. I disagree that due to the size of 200m turbine's, the direct view afforded and close location that they have the potential to be unpleasantly encroaching and dominate in the view. There will be glimpsed and oblique views of the turbine cluster to the east, with unattractive views of partial turbines and turbine blades rotating above the skyline, evident from the wire frames.

Settlement Property Group S5: Senghenydd west properties (east facing)

“Although turbines will be visible from the primary outlook of properties they will be at a sufficient distance (over 1.4km) for them not to be overwhelming, unpleasantly encroaching or inescapably dominant in views from the properties. For these reasons it is considered that the proposed development would not breach the residential visual amenity threshold.”

Residents will have direct open panoramic views of the 200m high turbines to the northeast, located in close range at 1.43 km from these properties. I disagree that due to the size of 200m turbine's, the direct view afforded and close location that they have the potential to be unpleasantly encroaching and be dominate in the view. There will also be unattractive views to the east of the partially obscured turbines, with turbine blades rotating above the skyline, which is evident from the wire frames and viewpoint photographs Figures 5.

Consequently, overall, the impact on this residential visual amenity is of concern on the settlement of Senghenydd. Having visited the settlement, I concluded that this is due to the turbines up to 2000m to tip size, close location of the turbines to the settlement, coupled with both direct, and oblique views from a large percentage of the settlement, that Senghenydd will as a whole will have a **major and significant adverse impact on its residential visual amenity** from the wind farm and its two turbines clusters.

10. Summary and Conclusion

The LVIA is well structured and provides a comprehensive assessment covering landscape character and visual effects, cumulative effects and impacts on sensitive residential properties within the Residential Visual Amenity Assessment (RVAA).

On balance, the LVIA has assessed that the proposed Twyn Hywel Wind Farm with 14 turbines up to 200m tip height, detailing that there will be **significantly** impact upon a wide area of landscape character and large number of sensitive visual receptors within the Zone of Theoretical Visibility (ZTV).

Although I broadly agree overall with the assessment, it has tended to undervalue the sensitivity of receptors and effects, with the result that in my professional opinion, the significant adverse effects would be more widespread than currently detailed, consequently significant effects will be experienced over a wide number of landscape character areas and visual receptors.

That said, the LVIA does detail that the proposed Twyn Hywel Wind Farm, with 14 turbines up to 200m tip height, has the potential to **significantly** impact on many sensitive receptors including:

- Landscape character of the site and beyond potentially up to 7km from the site.
- The Mynydd Eglwysilan SLA, significantly changing the character of the SLA to one associated with renewable energy and undermining the remaining SLA, notably where the turbines will be visible to the north, including Llanfabon where the access track and grid connection will be located.
- Sensitive visual receptors including several communities, notably Senghenydd, Abertridwr, Nelson, Gelligaer, Ystrad Mynach, Maesywmmmer and Blackwood.
- Popular local tourist attractions. Penallta Country Parc, Caerphilly Castle and Llancaiach Fawr Manor - its estate grounds and pastoral fields.
- Users of Open Access Land, PRowS, promoted walking routes and cycle routes within and beyond 5km, and the popular hill summits accessed by these routes, both within the site and beyond, publicised regional long distance routes, including the Rhymney Valley Ridgeway which passes close to the site, and beyond to all aspects. These include, Mynydd Meio, Gelligaer Common, Caerphilly Common and Twmbarlwm.
- Significantly impacting on the residential areas of Senghenydd, with turbines breaking the skyline and potentially dominating and overwhelming the community, due to the height, layout, and very close location of the proposed turbines. This includes 3 turbines to the west, which are outside of the Future Wales pre-assessed area 10 for wind turbines.

It is acknowledged that cumulative impacts do not arise, except where the Twyn Hywel Wind Farm is seen in conjunction with the proposed Cwm Ifor Solar Farm. When seen in combination this has the potential for the two to be seen as one energy park, giving the perception where the solar farm meets the skyline that the arrays stretch north. Although, I acknowledge the wind farm will be the more dominant and dynamic (moving) form of the two.

Furthermore, the size of the proposed 14 turbines up to 200m tip height presents significant concerns. Turbines of this height will be out of scale with the medium scale landscape, resulting in both widespread significant landscape and visual impact, with the turbines breaking the skyline and not following best practice as set out by *NatureScot (2017) Siting and Designing Windfarms in the Landscape. Version 3a9*.

Consequently, Twyn Hywel Wind Farm, will change the Landscape character to a landscape character associated with very large scale renewable energy infrastructure, which will totally undermine the LDP locally designated Mynydd Eglwysilian SLA.

It is appreciated that the wind farm is technically temporary, and reversable, however with an operational life of 45 years, I agree with the LVIA that this is long term period. It is important to note that once development of this nature, scale and size has been approved and constructed, the precedent has been set within this medium scale local upland landscape.

To conclude, I agree with the LVIA that the Tywn Hywel Wind Farm, will clearly bring with it a **significant visual and landscape impact**, principally as a standalone development. Resulting in significant adverse landscape and visual impact on communities, popular tourist attractions and summits and the locally valued landscape character areas. As a result, I would not recommend that the application was approved in its current form.

The above outlines landscape and visual effects, and it is appreciated that these findings will be assessed as part of the planning decision process, along with other material considerations, with a decision made in the national interest.