

Brynwell Farm Solar Project

Supplementary LVIA responses to requests from the Planning Inspector and Vale of Glamorgan Council

A formal request for 'further information' under Regulation 15(2) of the DNS Regulations for further information from the parties named in the relevant section to be submitted no later than 23 September 2021

This report covers items listed in Annex A: Landscape and Visual

Further information request	Information provided
The submission of the bare earth Zone of Theoretical Visibility (ZTV) maps for the 5km study area.	3 separate ZTV maps are provided extending beyond 3Km. These map the Zone of Theoretical Visibility which has been interrogated through site investigations. ZTV. 01 – Bare Earth Scenario ZTV.02 – Actual visibility accounting for obstructions in the form of buildings and woodland ZTV.03 – Cumulative ZTV with Woden Park Solar Farm Analysis of the ZTV modelling is covered later in this report.
Clarification for the chosen study limited to 1km area in the Landscape and Visual Impact Assessment (LVIA).	The study area modelled through the ZTV exercise and site investigations extends to beyond 3Km and close to 4Km to the east and west.
Additional information of representative views from the edge of Cwrt Yr Ala House and Michaelston-le-Pit Conservation Area.	13 viewpoints have been added to the LVIA to capture the visual effect from the wider study area. A list of the viewpoint locations and associated assessment is included below this table. Viewpoints 6 and 8 are included to illustrate the visual effect of the development from this wider area. These two viewpoints have been selected from the ZTV where cumulative visual effects with Woden Park Solar Farm are identified by the ZTV model.

<p>Additional information of representative photomontages of the constructed development as it would appear in the identified viewpoints.</p>	<p>5 Accurate Visual Representation (AVR) viewpoints have been modelled to illustrate the visual effect of the development in winter.</p>
<p>Clarification is needed in relation to landscaping works / filling of gaps in hedgerows</p>	<p>The draft LEMP explains that gaps in hedgerows will be filled with a native species and sets out proposals for how this would take place. It also explains that some additional hedgerow planting would take place at the point of entry to the site in order to further screen views into the adjacent field, containing the battery storage units.</p> <p>It is proposed that a pre-commencement planning condition requiring a full LEMP which would provide details of long-term management and the precise locations of hedgerow strengthening works. Proposals to be detailed in the final LEMP will allow for a certain amount of natural regeneration that would be anticipated following the cessation of grazing on Site in accordance with NRW advice (letter dated 23 June 2021).</p>
<p>Allowing hedges to grow and the maintenance regime of hedgerows as identified in the Landscaping and Ecology Management Plan. This is also identified by Natural Resources Wales (NRW) letter dated 23 June 2021 in relation to ecology (page 3).</p>	<p>Retained hedgerows will be managed with the aim to deliver hedgerows which are bushy and minimum 3m tall and 2m wide. Long-term management of hedgerows will be on a minimum 3 year rotation, with a third of the hedgerow allowed to grow for a minimum of 5 to 7 years, allowing vegetation to fruit, which provides a food source for biodiversity. This is provided in line with NRW advice and full details would be provided within the LEMP.</p>
<p>Details of the CCTV columns.</p>	<p>These are shown on the proposed site block plan. However it is also proposed that a condition would be applied to agree the final model of this componentry, and that the colour of these units would be limited to either dark green or brown.</p>

Response to the issue raised by the Vale of Glamorgan Council (VOG) in relation to the cumulative impact of the development having regard to the existing solar farm in place.	This is covered later in this report.
Details of hedgerow removal and compensation in relation to achieving visibility splays for the access and areas associated with passing places along the route.	<p>Transport Consultants have reviewed the access arrangements and proposed passing bays to consider whether any hedgerow removal is required. Due to the bays already being in existing locations, it is anticipated that there will be minimal requirement for hedgerow to be removed as the bays utilise the existing available passing places.</p> <p>If any hedgerows are required to be removed or trimmed for the purposes of the temporary passing bays, then they will be fully re-instated to their original condition or alternatively a new native species hedgerow of local provenance will be planted.</p>

Additional Viewpoint Locations have been produced by Tetra Tech and are appended to this report.

Viewpoint locations are shown on the 3 ZTV maps:

Viewpoint number and location
VP01 - North-west from public footpath heading towards Bryn Well
VP02 - North-west from public footpath to south of Beggan
VP03a – West from public footpath on west side of Cock Hill
VP03b - West from public footpath on west side of Cock Hill
VP04 – North-west from public footpath between Brynwell and Meadowvale Farm
VP05 - North-west from public footpath to north of Meadowvale Farm
VP06 – North from public footpath to north of Cwrt-yr-ala
VP07a – East from Caerau hillfort
VP07b - East from Caerau hillfort
VP08 – North from Cwrt-yr-ala
VP09 – East from Downs
VP10 – South-east from Western Cemetery
VP11 – South from Pentreban

Accurate Visual Representation (AVR) Viewpoints

VP1 – View north from public footpath crossing fields between Meadowvale Farm and Brynwell	AVR.01 (01-03)
VP2 – View north-west from public	AVR.02 (01-03)

footpath between Brynwell and Beggan	
VP4 – View north from public footpath crossing fields between Meadowvale Farm and Brynwell	AVR.03 (01-03)
VP6 – View north-east from public footpath between Cwrt-yr-ala and Meadowvale Farm	AVR.04 (01-03)
VP7 – View south-east from Caerau Fort	AVR.05 (01-03)

Response to the DNS Local Impact Report – Proposed Solar Farm at land at Brynwell Farm provided by The Vale of Glamorgan Council
Ref DNS/3261558

This section responds to comments and requests for further information included in the DNS Local Impact Report.

Extracts from the report are included *in italics* in black text. Responses are in roman (normal) text and in blue.

Visual and Landscape Impacts upon Cwrt-Yr-Ala Special Landscape Area (SLA)

The location of the site within a sensitive landscape area is further emphasised by the designation of a Special Landscape Area (SLA) which covers the site and the wider area. LDP Policy MG17 – Special Landscape Areas lists the designated areas for SLAs and sets out the policy considerations for developments located in these areas. The proposed development is located in SLA 6 – Cwrt-yr-Ala Basin. Within SLA areas proposals “will be permitted where it is demonstrated they would cause no unacceptable harm to the important landscape character of the area” (LDP, p.84, 2017).

The SLA designations were informed following an assessment of the LandMap dataset and formed part of the evidence base to the adopted LDP and the formation of the Policy MG17. The Background Paper Designation of Special landscape Areas (2013) contains the assessment of the LandMap dataset undertaken by the consultants TACP on behalf of the Vale of Glamorgan Council, which informed the SLA designations. The assessment identified the primary landscape qualities and features of the Cwrt-yr-Ala Basin stating:

“The majority of the SLA area landscape is focused on the Cwrt-yr-ala valley, forming the headwaters of the Cadoxton Valley. There is a strong sense of place with streams, dammed ponds, wooded valley sides and pleasant settlement in the valley bottom. The farmland is generally well maintained but there are signs of urban fringe pressure on lanes. The enclosed topography in association with woodland creates a sense of enclosure and the steep sided valleys dominate the character of the landscape and habitats. Woodland is semi-natural and planted broadleaf and includes a SSSI. There is potential to sympathetically manage and thus improve the quality of this mixed woodland resource.

To the north and east a scarp slope acts as a western edge to Cardiff basin. The slope is dominated by broadleaf and mixed woodland giving way to riverside vegetation and limited commercial development. The exposed hillside rises steeply to overlook the flat land of Cardiff Bay and City. There are detractive views to Leckwith Industrial Estate and noise from the A48. The natural landscape has been significantly altered by urban expansion and, despite the SLA area itself having few settlements, it feels very settled due to the proximity to Cardiff.

There is an extensive area of current and former parks of Cwrt-yr-ala House.

Allotments, orchards, and reservoirs/artificial lakes add to the character. There is an irregular field-scape of small fields and two medieval settlements to the north of Dinas Powys and Barry. Smaller roads are hedgerowed and have a feeling of being tranquil and sheltered. The SLA boundary has been extended to include the open space buffer between Penarth and Dinas Powys, which should be maintained for Dinas Powys' character as one of few such large villages in SE Wales. The eastern boundary abuts Llandough District General Hospital which has high cultural associations, being identified with this area. The area offers attractive views, but many are affected by inappropriate built form and hedgerows are gappy and poorly managed in places. The southeast boundary is Penarth, which provided housing for dock workers in the 19th century.” (TACP, p.46, 2013)

The assessment of the LandMap dataset also identified the key policy and management issues for the Cwrt-yr-Ala Basin SLA stating “Promote Forestry Commission grant uptake to extend, plan and manage woodland compartments paying particular attention to those around the SSSI; Pursue favourable management of neutral grassland, especially close to conurbation; Manage woodland to maintain continuous tree cover, especially on the skyline; Maintain hedgerows and as a strong visual framework and the rural qualities and vegetated nature of the valley; and, Maintain the green wedge between Dinas Powys and Penarth, improve management of boundaries and improve structures.” (TACP, p.47, 2013)

It should be noted that the designation of an SLA is not intended to prevent development but to ensure that where development is considered acceptable, careful consideration is given to the impact the proposal has on the special qualities and characteristics for which the SLA has been designated. This should be reflected in the design of the proposal including the siting, orientation, layout, and landscaping which should be implemented to address the key issues identified in the SLA Background Paper and maintain the key qualities and characteristics of the area identified.

The surrounding landscape is predominantly rural with scattered farmsteads and farm land, interspersed with a number of pockets of woodland (including Leckwith Woods to the east) and established agricultural field boundaries. Noting the sporadic nature of development to the south and west, there are relatively few properties within the Vale of Glamorgan that overlook it, although clear views are possible from the immediately adjacent Beggan Farm. The surrounding landscape is undulating in its form including an approximately 20-30 metre drop in levels from the north of the site to the south. PROWs cross the local landscape, affording a degree of visual access to the site and providing some, short and medium range views (as indicated within the LVIA).

As required by the supporting text of Policy MG17 (paragraph 6.120) and supported by Policy MD19, the application is supported by a Landscape and Visual Impact Assessment (LVIA) which provides an assessment of the likely visual impacts of the proposed solar farm. In conclusion, the LVIA considers ‘the site has a moderate sensitivity to solar energy production, and there are no significantly adverse effects upon landscape character’. The LVIA considers that the proposal provides an opportunity to improve the described landscape character in the medium to long term

and that slight adverse effects from suggested viewpoints could be mitigated by suggested measures including retention of existing boundary features.

However, the submitted LVIA states at paragraphs 6.7.1 and 8.4.2 that the site has no national or local landscape designations. As aforementioned the surrounding landscape forms part of the Cwrt Yr Ala Basin Special Landscape Area as defined by the LDP. Whilst this is referenced within the Design and Access Statement (DAS), this is considered to be a significant error / omission in the applicant's LVIA.

Response: This is an error and omission in the original reporting. The importance and significance of the Cwrt Yr Ala Basin Special Landscape Area is fully understood and has informed the assessment of landscape and visual effects throughout the reporting period. From the outset, a critical part of the design process has been to ensure that the proposal retains the existing historic field pattern and all existing hedgerows and that the extent of the visual impacts are limited to the immediate vicinity of the site. This has been achieved through an iterative design process to reduce any adverse visual effects and to protect the character of the designated landscape.

Critical to the evolution of the proposal has been a focus on ensuring that, after decommissioning, the site can be returned to its baseline condition.

The extent and scope of the ZTV model

The visual baseline described at paragraph 6.6 of the LVIA indicates that bare earth Zone of Theoretical Visibility (ZTV) maps were generated and cover the 5km study area although this has not been provided in support of the LVIA. However, the ZTV included within the accompanying 'Plans and Representative Views' document forming part of the LVIA appears to be limited to approximately 1 kilometre. This would appear to result in the extent of ZTV being 'cut off' particularly to the south-west of the site, where the ZTV extends to the edge of the plan adjacent to Cwrt Yr Ala House.

The LVIA should provide a wider ZTV to indicate or exclude potential for longer distance views noting the elevated position of the proposed array particularly in relation to land to the south and to include potentially sensitive longer range receptor sites including those adjacent to areas of greater populous.

Response: 3 separate ZTV maps are provided extending beyond 3Km. These map the Zone of Theoretical Visibility which has been interrogated through site investigations.

ZTV. 01 – Bare Earth Scenario

ZTV.02 – Actual visibility accounting for obstructions in the form of buildings and woodland

ZTV.03 – Cumulative ZTV with Woden Park Solar Farm

The bare earth ZTV (ZTV.01) reveals potential visibility towards the site from an area wider than the earlier LVIA studies. In particular from Downs approximately 3Km to the west (VP9); Western Cemetery approximately 2Km to the north west (VP10); and an area of housing at Pentrebanne approximately 2.5Km to the north (VP11).

When buildings and woodland are added to the ZTV as obstructions (ZTV.02) the actual visibility reduces significantly and adheres closely to the previously reported ZTV areas illustrated in the earlier reports. The one exception are theoretical views from Downs (VP9) which was not identified in earlier reports. This area was visited and interrogated on site with views towards the site almost impossible to find on the ground. Viewpoint 9 illustrates a worse-case view as a glimpse towards the site, but with no visibility of the proposal.

The cumulative visual ZTV (ZTV.03), with the existing Woden Park Solar Farm, closely matches areas of theoretical visibility to the proposal site. The cumulative visual effect is described later in relation to the AVR produced for VP7.

Request for Photomontages

The viewpoints utilised are generally considered representative of the most publicly accessible locations from which the proposed solar array would be visible. The LVIA at paragraph 4.9.1 states that before and after photomontages have not been produced at this stage. However, owing to the sheer scale of the development it would be useful if wire framing or photomontages were provided to indicate the proposed apparatus within the viewpoints provided to allow a full assessment of the likely visual impacts of the proposal. For instance both WVP4 and WVP5 suggest that relatively clear views of the site during winter months. Further framing and/or photomontages would allow for 'slightly significant' adverse impacts to be properly assessed. It would also assist in verifying any suggested reduction in impact from viewpoints from adjacent to Beggan Farm and the adjacent PROW (including VP1, VP2 and WVP2) from the setback of panels from the southern boundary.

Response: 5 Accurate Visual Representation (AVR) Viewpoints have been modelled. These cover key views from the surrounding public footpath network. The viewpoints have been selected in order to demonstrate the nature of the impacts from a range of perspectives and as such these include close range views and views from important heritage assets and public rights of way. The assessment of the impacts revealed by these AVRs is set out as follows:

VP1 – View north from public footpath crossing fields between Meadowvale Farm and Brynwell AVR.01 (01-03)

Footpath users have a high sensitivity to development, especially in a Special Landscape Area where they may be preoccupied with enjoyment of the scenery. The site modelling and photomontage view reveals a **minor magnitude of visual**

change to the view during winter months. In summer this is likely to **reduce to negligible**.

The high sensitivity of the visual receptor (footpath users) raises the significance of the effect. This should not be confused with the magnitude of change to the view which is a minor part of the wider view.

The significance of effect is assessed as slight or moderate and slightly adverse in winter and slight and slightly adverse in summer.

Mitigation in the form of new hedgerows is not recommended to reduce these effects on the basis that they are unlikely to be effective in screening the small part of the proposed which is visible from the footpath. Moreover, new hedgerows would themselves compromise the integrity of the existing host landscape, particularly following decommissioning when the site will be returned to its baseline condition.

VP2 – View north-west from public footpath between Brynwell and Beggan AVR.02 (01-03)

From this viewpoint the solar arrays will be at their most visible. The illustrated effect is, in reality, extremely localised and moving north or south from this viewpoint the panels will start to disappear behind existing vegetation. The photomontage therefore represents a worse-case scenario.

Footpath users have a high sensitivity to development, especially in a Special Landscape Area where they may be preoccupied with enjoyment of the scenery. The site modelling and photomontage view reveals a **moderate magnitude of visual change** to the view during winter months. In summer this is likely to **reduce from moderate to minor**.

The high sensitivity of the visual receptor (footpath users) raises the significance of the effect. This should not be confused with the magnitude of change to the view which is a minor part of the wider view and experienced for only a short stretch of the overall footpath.

The significance of effect is assessed as moderate and slightly adverse in winter and moderate to slight and slightly adverse in summer.

It should be noted that the proposal illustrated in this view results from a detailed iterative design sequence which, as a key mitigation measure, removed solar panels from the lower part of the closest field. This has had a significant effect in reducing the sheer area of panels visible from the viewpoint. Like VP1, mitigation in the form of new hedgerows is not recommended to reduce these effects as any new hedgerows will themselves compromise the historic integrity of the existing host landscape following decommissioning when the site will be returned to its baseline condition.

VP4 – View north from public footpath crossing fields between Meadowvale Farm and Brynwell AVR.03 (01-03)

This viewpoint is similar to VP1 but from slightly elevated ground. The viewpoint is more distant from the site. Compared to VP1 the panels are slightly more visible, but at greater distance. The assessment of visual effects is the same as for VP1.

The significance of effect is assessed as slight or moderate and slightly adverse in winter and slight and slightly adverse in summer.

VP6 – View north-east from road just off public footpath between Cwrt-yr-Ala and Meadowvale Farm AVR.04 (01-03)

Views from Cwrt-Yr-Ala on rising ground are illustrated in VP6. This area has some open access land which is well wooded and with views towards the site almost impossible to find. The chosen viewpoint illustrates the worse-case scenario in winter.

From this viewpoint the majority of the site is hidden by landform and vegetation. A very small part of the southern end of the site is visible as a glimpse through trees. Here the magnitude of change is assessed as negligible.

Despite the viewpoint being taken from the road it is likely that walkers would cross this stretch of road when walking between public rights of way. Therefore, the high sensitivity of the visual receptor (footpath users) raises the significance of the effect. The magnitude of change to the view is very low as the visible element of the solar farm is almost imperceptible and forms part of the wider view of an open landscape.

The significance of effect is assessed as slight and not adverse in both winter and summer.

VP7 – View south-east from Caerau Fort AVR.05 (01-03)

Viewpoint 7 is the only location from where any cumulative visual effect with Woden Park Solar Farm is theoretically visible.

The AVR exercise reveals no additional cumulative visual effect from Careau Fort. The proposal cannot be seen from this viewpoint.

Clarification sought as to the proposed hedgerow management regime

The LVIA indicates that the species-rich hedgerow and boundary enclosures would be maintained to protect the high value and good condition of the landscape, and recommends that the existing hedgerows and trees are allowed to grow to reduce any residual effect (close range views VP1, VP2 and WVP2). Similarly views afforded from the west from Penylan would be mitigated by allowing existing gappy hedge to grow to mitigate 'slightly adverse impact' and screen completely within 7-10 years to negate any impact. The supporting Landscape and Ecology Management Plan (LEMP) provides contradictory advice suggested that half of the hedgerow will be cut/flailed alternatively each year (paragraph 2.4) whilst later it suggests that this will be left to grow to establish (within Management Schedule). The submitted Ecological Impact Assessment also indicates that hedgerow would be cut on a minimum 3 year rotation. Noting that the submitted LVIA places great emphasis on the suggested screening benefits of hedgerow planting to minimise landscape impacts or the impacts of glint and glare detailed within the accompanying assessment, this should therefore be clarified for the avoidance of doubt. Such clarification could include any specification of the heights required for screening and maintenance if to be flailed/cut.

Response:

A detailed photomontage modelling exercise, together with feedback from Vale of Glamorgan Council, has provided an opportunity to review the proposals and whether any new hedgerow planting and gapping up would be beneficial in screening landscape views.

Works to existing hedgerows will be fully described in the full, final LEMP which is anticipated to be secured by an appropriately worded planning condition as proposed through the overarching planning report submitted with this addendum.

Careful consideration has been given to the possibility of introducing new hedgerows to help reduce any adverse visual effects. The new ZTVs, site investigations, extending the study area and finding additional viewpoints reinforces the earlier assessments that the number of viewpoints from which the solar panels can be seen is minimal. When combined with the magnitude of effect as principally minor or negligible (the exception being the view illustrated in VP2) the need for new hedgerows becomes one of balance rather than necessity.

It is about reconciling a desire to mitigate against any assessed adverse change to receptors against changes to the landscape character itself, particularly following the decommissioning of the development.

For the proposed development, on balance, mitigation in the form of new hedgerows (besides the small stretch bordering the field containing the battery storage area) is not recommended. The need to protect the existing Special Landscape Area character outweighing the (minimal) visibility of panels. The gapping up and management of existing hedgerows is instead more significant as an ecological enhancement rather than an essential visual screening proposal. In this respect, retained hedgerows will be managed with the aim to deliver hedgerows which are

bushy and minimum 3m tall and 2m wide. Long-term management of hedgerows will be on a minimum 3 year rotation, with a third of the hedgerow allowed to grow for a minimum of 5 to 7 years, allowing vegetation to fruit, which provides a food source for biodiversity. This is provided in line with NRW advice and full details would be provided within the LEMP.