

Proposed Solar Farm on Land North of Pelham National Grid Substation, Berden Hall Farm, Berden, Essex
Application Ref: S62A/22/0006

Representation on Landscape and Visual Matters

1. Introduction

- 1.1 My name is Peter Radmall, MA, B.Phil, CMLI. I am a consultant landscape planner experienced in landscape and visual impact assessment (LVIA), including renewable energy projects. I am instructed by "Protect the Pelhams", a local action group, to prepare a representation on landscape and visual matters in relation to the above application.
- 1.2 I have visited the site and have reviewed relevant information, including the published landscape sources, the policy context and the applicant's landscape and visual impact assessment (LVIA). I have reviewed the LVIA in terms of its compliance with best practice (GLVIA3)¹.
- 1.3 This review has not included technical scrutiny of the visual material (photography and visualizations), which I have taken as read for the purposes of this exercise. However, experience suggests that such a review should be carried out as part of the validation process.
- 1.4 The remainder of this document is organised as follows:
 - Section 2 describes the site, its setting and its wider landscape context;
 - Section 3 considers the key features of the development and its landscape/visual impact;
 - Section 4 comments on the LVIA and the degree of reliance that can be placed upon it;
 - Section 5 reviews the relevant policy context and comments on the degree to which the relevant tests would be met; and
 - Section 6 provides a summary and conclusion.

2. The Site and its Landscape Context

- 2.1 **Figure 1** below shows the application site. It comprises c72ha of mainly arable farmland divided into 4-5 medium-sized fields, which at the time of

¹ Guidelines for Landscape and Visual Impact Assessment, Landscape Institute/IEEMA, 2013

my visit were under cereals. The fields are defined by a combination of hedgerows (in various states of management) and ditches, together with some associated trees. Its terrain is gently undulating, forming a shallow valley, which opens out eastwards towards Berden, between ridgelines along its northern, southern and western boundaries. There is a dense network of public rights-of-way, several of which cross the site or follow its boundaries. As a result of the combination of terrain, relative openness and accessibility, the site is perceptible as a coherent unit within the landscape, and its full extent can largely be discerned from a range of viewpoints within it and on its periphery.

Figure 1: Application Site



- 2.2 The site forms the greater part of the open countryside that separates the villages of Stocking Pelham and Berden. These retain a nucleated form and strongly historic character. They have a vegetated appearance, which distinguishes them from the surrounding countryside, and limits their inter-visibility with the site. However, buildings within Berden are glimpsed from several locations around the site, including the tower of Grade I listed St. Nicholas Church. This is visible, for example, from PRow 5/21, which runs east/west across the centre of the site (**Figure 2**). PRow references are shown on LVIA Figure 9.

- 2.3 The Pelham sub-station is located on rising ground immediately to the south-west of the site, together with the battery storage facility. Both are visible from the western part of the site (**Figure 3**), whilst the sub-station can also be seen from locations in the surrounding area. One of the high-voltage power lines serving the sub-station passes to the south-east of the site.

Figure 2: View towards St Nicholas Church from Footpath 5/21



Figure 3: View towards the Substation from Footpath 5/26



- 2.4 The site is located within:
- National Character Area (NCA): South Suffolk and North Essex Clayland;
 - Essex Landscape Character Type A1: Chalk Upland Landscape and North West Essex Chalk Farmland character area; and
 - Uttlesford Landscape Character Area: Berden and Farnham Chalk Upland.
- 2.5 The key characteristics of the North West Essex Chalk Farmland are identified at LVIA 3.19 as follows:

- *Strongly rolling landform of broad round-backed ridges;*
- *Large scale arable farmland;*
- *Distinctive elevated, expansive and generally open character;*
- *Panoramic views from ridgetops;*
- *Dispersed blocks of woodland and isolated copses;*
- *Sparse settlement pattern, small linear villages alongside stream courses, and hamlets with greens; and*
- *Mostly tranquil and remote character.*

2.6 The site and local area are highly representative of these characteristics.

2.7 The key characteristics of the Berden and Farnham Chalk Upland are identified at LVIA 3.23 as follows:

- *Broad undulating upland slopes that flatten at the highest elevations;*
- *Distinctly elevated, open, arable fields;*
- *Field patterns mainly regular, with large farms and becoming smaller and more organic in shape in the valleys and around villages;*
- *Scrubby, often fragmented hedgerows or scattered tree groups, with distant blocks of trees framing views, particularly towards the middle and southern part of the area, where it is dissected by Bourn Brook;*
- *A complex array of pylons leading to electricity substation near Berden dominates views in the high plateau; and*
- *Few roads; sense of emptiness and openness.*

2.8 Apart from those characteristics more typical of the southern and central parts of the landscape character area, the site and local area are highly representative of it. This includes the reference to energy infrastructure. However, whilst such infrastructure may be characteristic, it is not desirably so, since it has a generic appearance, conflicts with the historic and natural land-use patterns of the landscape, and (in relation to the pylons and taller sub-station structures) is out-of-scale with it.

2.9 Whilst this infrastructure is clearly perceived to be intrusive, its influence on character is only determinative where the sub-station or pylons are seen

at relatively close range, or where the converging transmission lines result in a proliferation of pylons across the horizon. My analysis of the 15 assessment views confirms that energy infrastructure is not visible in about a third of them, and is a prominent or material influence on character in only a further third.

- 2.10 Energy infrastructure represents only one of the six identified characteristics, the remainder of which are overwhelmingly positive and continue to predominate. The character of the local area remains that of attractive countryside, in which historic land-use and settlement patterns are legible, and which supports a high level of tranquillity and visual amenity. Without the energy infrastructure, the landscape would be considered highly attractive.
- 2.11 The relationship between the energy infrastructure and its landscape setting is, however, finely balanced. Whilst the influence of the infrastructure can be said to reduce the sensitivity of the area, as is argued in the LVIA, landscapes have a finite capacity to accommodate adverse change without outweighing their positive characteristics. That is the case here, where the introduction of further energy infrastructure could tip the local landscape away from its perceived identity as part of the Chalk Upland. There is currently no obvious energy infrastructure within the site itself, apart from that part of the red line which extends into the battery storage facility.
- 2.12 The landscape character assessment (LCA) identifies the following attributes of the Berden and Farnham Chalk Upland as sensitive to change:
- *Small patches of woodland;*
 - *Open nature of the skyline;*
 - *Overall sense of tranquillity; and*
 - *Sense of historic integrity and continuity, resulting from [inter alia] the widely dispersed settlement pattern.*
- 2.13 These attributes are all evident within the site or its immediate vicinity. The LCA concludes that the area is of “moderate to high” sensitivity to change overall. This contrasts with the “medium” level of sensitivity attributed to the site and the surrounding landscape in the LVIA [LVIA3.6]. Attributes such as openness, tranquillity and historic integrity (as evidenced through factors such as field pattern and views of the church) are intrinsically of high sensitivity to changes such as the introduction of more energy infrastructure.

3. The Proposals and their Sources of Impact

3.1 Since the development is fully described in the application material, I confine myself to those elements that will be the main sources of long-term landscape and visual impact. These are:

- Its permanent features;
- Changes to land cover;
- Changes to vegetation pattern; and
- Operational noise.

3.2 The proposed layout is shown in **Figure 4** below. The solar panels would cover the greater part (c81%) of the site. They would be arranged in east/west rows and would be c2.5m high. This is higher than the average eye-level assumed for visual assessment purposes². The rows would therefore either obstruct close-range views, or divide such views into a series of tightly-framed views (when seen end-on). Their appearance will vary, appearing slate-grey when the underside of the panels is visible or in cloudy weather, and reflecting light in sunny conditions.

Figure 4: Proposed Layout



² Typically 1.6m for visibility studies such as ZTVs.

- 3.3 Eleven inverters would be located along the margins of the fields. These would be the size of shipping containers, typically up to c3m high, and an olive-green colour. They would be served by internal roads, also following the field margins, which would be accessed from the enlarged farm access off Pelham Road. Each group of panels and inverters would be surrounded by deer fencing.
- 3.4 The fields occupied by the solar panels would be taken out of arable use and laid down to "short solar farm grass mix", with the possibility of being grazed by sheep. The LVIA states that the development would require no loss of existing hedgerows or trees, and I have no reason to doubt this.
- 3.5 The proposed landscape strategy would include the "gapping up" of existing hedgerows and the planting of new hedgerows and woodland blocks. The latter would be located around parts of the site perimeter and along the PRowS within the site, with the primary aim of screening views of the panels. Once established, this planting would have the effect of reinforcing (and in some cases duplicating) the existing field pattern.
- 3.6 This effect would take several years (typically 10-15) to become apparent, and would be outweighed by the infilling effect of the solar panels. As a result, the visibility of the new grassland cover and the new/existing hedgerows would be reduced, resulting in a substantial loss of openness and greenfield appearance across the site, together with a reduction in the legibility of its field pattern.
- 3.7 Whilst the land cover might technically remain agricultural, it would become a secondary influence in comparison with the extent and massing of the panels. The site would to all intents and purposes be transformed from a parcel of farmland into a large-scale energy installation - by way of comparison, the area covered by solar panels would be seven times larger than the existing substation. In addition, arable land cover, which would be lost from most of the site, is one of the key characteristics of the area.
- 3.8 These impacts will be most apparent in close-range views, particularly from the PRowS within the site. As described in the LVIA, these would become corridors of open land c10m wide, from which the panels and associated infrastructure would initially be highly visible. As the hedgerows and associated planting become established, these corridors would become enclosed, screening not only views of the solar farm, but also views to the surrounding countryside. These will include the views of St. Nicholas Church currently gained from footpath 5/21. These effects are shown in **Figure 5(a)-(c)** below, which are extracted from the montages for LVIA VP5.

3.9 The infilling effect of the solar farm would substantially reduce the perceived influence of the positive landscape characteristics highlighted in Section 2. It would also reduce the width of the countryside gap between Stocking Pelham and Berden by c75%-90%. Whilst the panels may not be built development in the conventional sense, the proposals would be perceived as development nonetheless, and would adversely affect the dispersed settlement pattern that is a key characteristic of the area. This infilling effect is shown in **Figures 6(a)-(c)**, from the montages for LVIA VP7.

Figure 5(a): LVIA Viewpoint 5 Existing



Figure 5(b): LVIA Viewpoint 5 Year 1



Figure 5(c): LVIA Viewpoint 5 Year 15



- 3.10 The inverters would be a source of tonal noise. The Noise Impact Report (NIR)³ concludes that “levels of sound arising from operation of the facility will not result in any significant adverse impacts at any of the nearby NSRs (noise-sensitive receptors)”. However, the NIR only considers NSRs outside the site. In view of the proximity of the inverters to the PRowWs within the site, this noise is likely to be audible to walkers, and would be perceived as an intrusion into the tranquillity that is a key characteristic of the area.
- 3.11 Finally, I wish to consider the allegedly temporary and reversible nature of the impacts. Whilst decommissioning and removal of the development is entirely feasible, and enforceable by planning condition, the likelihood that the solar farm could be re-equipped and/or life-extended through a subsequent application must be considered. This has been the experience with windfarms, which have tended to be re-engineered and/or expanded before their consents expire. As the reality of climate change becomes increasingly apparent, there is every probability that solar power will need to remain part of the UK energy mix for the foreseeable future. Once permitted, this development – or a future permutation of it – may effectively become a permanent feature of the landscape.

Figure 6(a): LVIA Viewpoint 7 Existing



Figure 6(b): Viewpoint 7 Year 1



³ RPS, May 2022

Figure 6(c): Viewpoint 7 Year 15



4. Review of the LVIA

- 4.1 The LVIA⁴ broadly complies with the approach required under GLVIA3. However, I have identified a number of queries and potential deficiencies, as set out below.
- 4.2 Viewpoint Selection: Whilst 15 viewpoints are considered to be an appropriate number in relation to the size of the site and the extent of its visibility, it is not clear why views from some PRowS have been omitted; for example, from footpaths 5/22 and 5/23 where they cross the site. As noted previously, the only view from footpath 5/21 is looking westwards, and does not take account of the impact on views towards the church. Only three (20%) of the views relate to locations within the site, where the impact of the development would be most apparent.
- 4.3 Landscape Sensitivity: As noted in Section 2, the LVIA considers the site and surrounding landscape to be of “medium” sensitivity. This is inconsistent with the Uttlesford LCA and is not supported by my own analysis. Whilst the presence of energy infrastructure can to a degree be regarded as a “de-sensitizing” influence, this influence varies substantially according to location and viewing direction. It also increases the relative sensitivity of the remaining, positive attributes of the area, such as openness, tranquillity, arable land-use and topography.
- 4.4 Implications for Landscape Effects: The LVIA considers the impact on site character to be “high” [LVIA 6.8], with which I would agree. However, downgrading its sensitivity allows the LVIA to identify a “moderate to major” adverse effect at Year 1, becoming “moderate adverse” by Year 15. In my view - taking account of the infilling and land-covering impact of the solar panels, the loss of openness and arable use, and the reduction in tranquillity - the Year 1 effect on the site cannot be lower than “major”.

⁴ Landscape and Visual Impact Assessment, Sightline Landscape, June 2022.

- 4.5 The LVIA concludes that the effect on the character of the surrounding countryside would be “minor” adverse [LVIA 6.10]. Whilst I would agree in relation to the overall Berden and Farnham Chalk Upland character area, I consider the effect on the immediate locality (i.e. the countryside gap between Berden and Stocking Pelham) to be moderate to major adverse in relation to the loss of separation between the villages and the cumulative increase in the influence of energy infrastructure.
- 4.6 Visual Effects: These are summarized in LVIA Table 5, and at Year 1 can be broken down as follows: 20% would be none or less than moderate, 40% would be moderate, and 40% would be greater than moderate. This reflects the preponderance of viewpoints outside or on the periphery of the site – a higher proportion of views from the PRoWs within the site would yield more above-moderate effects. In addition, the development would have a sequential effect on the amenity of people using the PRoWs across the site, many of whom are likely to be local residents, and for whom these routes would at Year 1 lose much of their attractiveness.
- 4.7 Effectiveness of Mitigation: LVIA Table 5 indicates that, by Year 15, 80% of the visual effects would be negligible or minor, with only 20% remaining above-moderate (allowing for variations due to seasonality). It is clear that the assessment focusses solely on the visibility of the solar farm, and assumes that adverse effects will be mitigated once views are screened. I have no evidence to suggest that the proposed planting would not achieve the degree of screening assumed. However, this will depend on a high level of care and maintenance, including watering during dry periods and replacement of any failures of planting stock, which will require regular monitoring.
- 4.8 In addition, the planting itself will over time close out local views and reduce openness, particularly as perceived from the PRoWs within the site, which will in effect become embedded within the solar farm. The LVIA appears not to have taken account of the overall perceptual impact on the amenity of these routes, the effects on which would remain adverse even where views may be screened.
- 4.9 Residential Properties: The LVIA concludes that there would be no significant effects on residential amenity [LVIA 6.76]. Whilst this depends on how “significance” is defined, it is noted that moderate adverse effects are predicted in Year 1 for properties at Benskins Close (Viewpoint 9), which are visible across the site from footpath 5.21. Views from other properties in Berden, such as the Old Vicarage and Dewes Green, together with properties on the eastern edge of Stocking Pelham, may also be affected.

Without visiting these properties, it is not possible to comment on whether their amenity would be significantly affected, but it cannot be ruled out.

- 4.10 Heritage Assets: Whilst the LVIA identifies relevant heritage assets in the vicinity, effects on them are reported in the Heritage Statement⁵. The main asset to experience a visual relationship with the site is the Church of St Nicholas, to which the site is stated as making a “moderately positive contribution to [its] setting by virtue of its openness and rural character” [Heritage Statement 5.19]. My own fieldwork confirms this positive relationship [**Figure 2**].
- 4.11 The Heritage Statement concludes that the development would have a “neutral” impact on the significance of the church, claiming that “the openness of the site will be maintained” and that the proposed landscaping would “largely screen” any inter-visibility with the solar farm. I disagree with the comment on openness, which would to a large degree be lost at eye-level by the infilling effect of the solar panels. In addition, the role of this asset as a parish church is reinforced by the views in which it appears as a landmark. These include the views from footpath 5/21, which are likely to be substantially obstructed by the panels and (over time) the associated planting.
- 4.12 In addition, there is a degree of inter-visibility between the site and Grade II* Berden Hall and Grade II The Crump. Whilst ground-level views of Berden Hall from the site are limited in summer by intervening trees, it is understood that views across the site are gained from the upper floor windows. Such views may well have been intentional for a building of this status and age, and can be said to contribute to its significance.
- 4.13 In summary, the conclusions of the LVIA should not necessarily be taken at face value, and I would urge officers to make their own judgments, taking account of the reservations I have identified.

5. Policy Context and the Development’s Degree of Compliance

Uttlesford Local Plan⁶

- 5.1 Chapter 5 of the Local Plan deals with the built and natural environment. The policy objectives include the following:
- *To safeguard the character of Uttlesford’s historic settlements;*

⁵ RPS, June 2022.

⁶ Adopted January 2005, all policies except Policy 2 saved 2007.

- *To conserve and enhance the historic buildings in Uttlesford and their setting; and*
- *To protect the natural environment for its own sake, particularly for its biodiversity, and agricultural, cultural and visual qualities.*

5.2 As I have demonstrated, the proposed development:

- would not safeguard the historic character of Berden village, by encroaching into its immediate setting and displacing the perceived greenfield character of the countryside that separates it from Stocking Pelham;
- would not conserve or enhance the setting of the Grade I listed parish church or Grade II* Berden Hall; and
- would not protect the visual qualities of the application site and surrounding countryside.

5.3 Landscape is not otherwise protected explicitly by Local Plan policy. However, the following policies are worthy of note:

- ENV2: Development affecting Listed Buildings, states that "Development affecting a listed building should be in keeping with its scale, character and surroundings." The development would affect the settings of St Nicholas Church, as perceived in particular from footpath 5/21, Berden Hall and The Crump, and is therefore not "in keeping" with their "surroundings".
- ENV5: Protection of Agricultural Land: Much of the site is of "best and most versatile" (BMV) quality⁷ and would mostly be taken out of arable use. Whilst this use could theoretically be restored on decommissioning, I have questioned the probability of this in relation to the likely reliance on renewable energy for the foreseeable future.

5.4 ENV15: Renewable Energy, states that "*Small scale renewable energy development schemes to meet local needs will be permitted if they do not adversely affect the character of sensitive landscapes, nature conservation interests or residential and recreational amenity.*" This proposal:

- is not small scale;
- is not intended to meet local needs; and

⁷ 72% according to the Agricultural Land Classification Report, SOYL, October 2021

- would adversely affect the character of a sensitive landscape, the recreational amenity of PRowS and the amenity of nearby residential properties.

NPPF

5.5 Paragraph 174 of the NPPF⁸ requires planning decisions to “*contribute to and enhance the natural and **local** environment*” [my emphasis]. This is to be achieved within a local frame of reference by:

- (a) “*protecting and enhancing valued landscapes...(in a manner commensurate with their statutory status or identified quality in the development plan)*”; and/or
- (b) “*recognising the intrinsic character and beauty of the countryside.*”

5.6 Landscape value can be conferred either by designation or by the intrinsic attributes of an area. The site and its surroundings do not lie within a designated area, and comprise what is often described as “ordinary countryside”. This does not mean, however, that the area is devoid of value or is not valued.

5.7 As I have demonstrated, the area is strongly representative of most of the key characteristics identified in the district-wide LCA. It supports a relatively dense network of PRowS and contributes to their amenity, to the historic pattern of dispersed settlement and to the setting of heritage assets such as the parish church. Regardless of whether the area may qualify as a valued landscape in NPPF terms, it clearly possesses a degree of value and is valued by the local community.

5.8 The need to recognize the intrinsic character and beauty of the countryside amounts to what in lay terms might be called a “duty of care”. This was set out in the judgment relating to the Cawrey case⁹ as follows:

“...it would be very odd indeed if the core principle at paragraph [17] of NPPF of “recognising the intrinsic beauty and character of the countryside” was to be taken as only applying to those areas with a designation. Undesignated areas – “ordinary countryside” as per Ouseley J in Stroud DC - may not justify the same level of protection, but NPPF, properly read, cannot be interpreted as removing it altogether.”

5.9 Whilst the proposal takes some care to mitigate its adverse effects in the form of the planting of new hedgerows and woodland, the residual effects remain adverse. The duty of care self-evidently cannot be fulfilled by

⁸ National Planning Policy Framework, February 2021

⁹ Cawrey Ltd v SSCLG and Hinckley and Bosworth BC, CO/5683/2015

covering the countryside with solar panels - even where countryside features such as hedgerows may be retained (and enhanced). The development is therefore considered to fail this test.

5.10 Paragraph 158 of the NPPF states that "*When determining planning applications for renewable and low carbon development, local planning authorities should:*

(c) *approve the application if its impacts are (or can be made) acceptable.*"

5.11 Whilst I am unable to comment on the overall acceptability of the development, its landscape and visual effects conflict with a series of policy tests at the Local Plan and NPPF levels, and in that context are deemed to be unacceptable. These conflicts arise from the intrinsic scale of the development and the sensitivity of the site, particularly in relation to its openness, its representativeness of the character type, and its relationship to PRowS. It is difficult to see how the current scheme, or a revised version of similar scale, could be made acceptable in landscape and visual terms.

6. Summary and Conclusion

6.1 The site comprises c72ha of mainly arable land, divided into 4/5 fields by hedgerows, ditches and associated trees. It is gently undulating and predominantly open, forming the greater part of the countryside separating Berden and Stocking Pelham. The area has a dense network of PRowS, several of which cross the site or follow its boundaries.

6.2 The site is located within the county-level Chalk Uplands landscape type and North West Essex Chalk Farmland character area, and the district-level Berden and Farnham Chalk Upland character area. The site and surrounding area are strongly representative of these types/areas. The district-level landscape character assessment (LCA) considers the Berden and Chalk Upland to be of "moderate to high" sensitivity.

6.3 The Pelham National Grid substation and battery storage facility adjoin the site to the south-west. The transmission lines serving the substation are prominent in the surrounding area. Energy infrastructure is a recognised – though adverse – characteristic of the area. Whilst this infrastructure reduces the sensitivity of the landscape, it also reinforces the sensitivity of its positive characteristics, such as openness, greenfield appearance, tranquillity and historic integrity.

6.4 The proposal would cover c81% of the site with solar panels – seven times the area of the existing substation – and would displace its arable use. The panels would obstruct views from normal eye-level, being seen to infill the

fields and reduce the visibility of the hedgerow pattern. The openness of the PRoWs within/adjoining the site would be substantially lost, particularly as the planting becomes established. Views towards the parish church are likely to be obstructed, and noise from the inverters may be audible.

- 6.5 Whilst the applicant's LVIA broadly complies with recommended practice, I have identified a number of reservations relating to viewpoint selection, site sensitivity and the effectiveness of mitigation. As a result, I believe that the LVIA is likely to have under-stated the severity of the effects.
- 6.6 The development would transform the site from a parcel of countryside to an energy installation. It would largely infill the green gap separating Berden and Stocking Pelham. Whilst the proposed planting could provide some benefits, these would be outweighed by the overall harm to local character and to the amenity of receptors such as walkers and residents. If, as seems likely, solar power must remain a part of the UK energy mix for the foreseeable future, these impacts should be regarded as potentially permanent.
- 6.7 The development would conflict with three policy objectives of the Local Plan, would fail the tests under Policy ENV15, would affect the setting of listed buildings, notably the Grade I church, and would remove a substantial area of BMV land from cultivation. It would fail to protect and enhance a locally valued landscape, or the intrinsic character and beauty of the countryside, in contravention of NPPF174, and its impacts could not be made acceptable at the scale proposed, as required under NPPF 158.
- 6.8 If landscape and visual matters were the only consideration, it is therefore my opinion that this application should be refused.

Peter Radmall, 29th August 2022

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