Heckington Fen Solar Park

ENO10123

Environmental Statement | Volume 3: Technical Appendices

Appendix 7.1: RVAA Methodology

Applicant: Ecotricity (Heck Fen Solar) Limited

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APPENDIX 7.1: RESIDENTIAL VISUAL AMENITY ASSESSMENT METHODOLOGY

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1. RESIDENTIAL VISUAL AMENITY METHODOLOGY

1.1 The Residential Visual Amenity Assessment (RVAA) draws upon the overarching best practice within the Landscape Institute's 'Guidelines for Landscape and Visual Impact Assessment' 3rd Edition (GLVIA3) and 'Residential Visual Amenity Assessment (RVAA) Technical Guidance Note 2/19' (LI TGN 2/19).

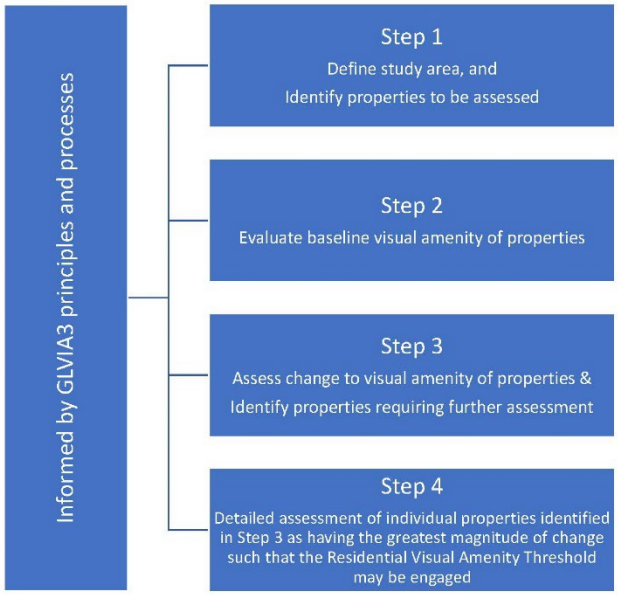
1.2 The Technical Guidance Note advises in paragraph 1.6 that:

> **"It is not uncommon for significant adverse effects on views and visual amenity to be experienced by people at their place of residence as a result of introducing new development in the landscape. In itself this does not necessarily cause a planning concern. However, there are situations where the effect on the outlook / visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions where they did not exist before."[1]**

1.3 In accordance with the LI TGN 2/19, the RVAA would comprise a four stage process including:

- Definition of the scope and study area for the assessment – informed by the description of the proposed development, defining the study area extent and scope of the assessment with respect to the properties to be included;
- Evaluation of the baseline visual amenity for the surrounding residential properties – having regard to the landscape and visual context and the development proposed;
- Assessment of the likely change to the visual amenity of the residential properties in accordance with GLVIA3 principles and processes; and
- Further assessment in respect of the acceptable threshold for residential visual amenity and living conditions in the public interest.

1.4 The process is summarised within the diagram below as an extract on page 7 of the Technical Guidance Note 2/19 as shown below:



[1] Paragraph 1.6, Technical Guidance Note 2/19, Residential Visual Amenity Assessment

Definition of the Scope and Study Area

1.5 The scope and study area of residential properties included within the RVAA has been informed by the findings of the Zone of Theoretical Visibility (ZTV) mapping prepared during the PEIR stage and updated for the purpose of **Chapter 6 – Landscape and Visual Impact Assessment** of the ES (document reference 6.1.6), post code data and consultations during the Scoping and PEIR stage, together with the subsequent responses received from the local residents. However, given the type and scale of the proposed solar modules and the revised location for the Onsite Substation and Energy Storage System, coupled with the dispersed nature of the surrounding residential properties, the likelihood of any significant visual effects is anticipated to be restricted to those within the immediate surroundings of the site, due mainly to the predominantly level local topography and limited amount of structural planning around the site of the proposed Energy Park.

1.6 The LI TGN 2/19 advises in Paragraph 4.4:

> **"There are no standard criteria for defining the RVAA study area nor for the scope of the RVAA, which should be determined on a case-by-case basis taking both the type and scale of proposed development, as well as the landscape and visual context, into account."**

1.7 LI TGN 2/19 continues at paragraph 4.5 that:

> **"…Simply being able to see a proposed development from a property is no reason to include it in the RVAA."**

1.8 Paragraph 4.7 of LI TGN 2/19 further advises that:

> **"…However, other development types including potentially very large but lower profile structures and developments such as road schemes and housing are unlikely to require RVAA, except potentially of properties in very close proximity (50-250m) to the development…."**

1.9 An area of land leaving the Energy Park in the south east, before crossing the A17, the South Forty Foot Drain and the railway has been identified for the Off-site Cable Route Corridor. Given the temporary and short duration nature of the construction phase associated with the Off-site Cable Route Corridor, any adverse effects, even if deemed major and significant, would not be overbearing. Therefore, the RVAA assessment focuses on the operational stage of the Energy Park only and not of the underground cable route or the substation extension.

1.10 Distant views of the proposed Energy Park may be perceptible beyond the extent of the residential properties identified on **Figure 7.1- Site Location Plan and Receptor Locations** (document reference 6.2.7). However, even with clear visibility, the effects on residential visual amenity and living conditions are not anticipated to be significant or unacceptable beyond this identified scope.

1.11 Where appropriate and in line with the guidance set out at paragraph 4.8 within LI TGN 2/19, the effects on clusters of similar properties may be considered through the assessment of representative visual amenity, rather than from each individual property:

> **"Properties are normally assessed individually, but if their outlook and / or views are in all aspects the same (for example if a**

> **development is visible from the rear gardens only of a small row of houses) they could be assessed as one (group)…."**

1.12 Letters have been sent to each of the identified residential properties (based upon post code data) to request access to the individual properties, curtilages, and private gardens for the assessment. If no response is received, 'proxy viewpoints' have been undertaken from publicly accessible locations as close as possible to the residential property / or cluster in question.

Evaluation of the Baseline Visual Amenity

1.13 The evaluation of baseline visual amenity would consider the type, nature, extent and quality of the existing views from the residential properties including building curtilages, private gardens and driveways. LI TGN 2/19 advises in paragraph 4.11 that:

> **"When evaluating the baseline, it is recommended that the following aspects are considered:**
>
> **the nature and extent of all potentially available existing views from the property and its garden / domestic curtilage, including the proximity and relationship of the property to surrounding landform, landcover and visual foci. This may include primary / main views from the property or domestic curtilage, as well as secondary / peripheral views; and**
>
> **views as experienced when arriving at or leaving the property, for example from private driveways / access tracks."[2]**

1.14 In accordance with the principles and processes of GLVIA3, the visual effects would be determined by cross-referencing the sensitivity of the visual receptor with the magnitude of change arising from the proposed Energy Park. Residential properties are generally considered to be of high sensitivity within GLVIA3. However, TGN 2/19 advocates a further detailed review and refined survey of the residential properties in question with regards to the potential sensitivities in relation to the proposed Energy Park.

1.15 Higher sensitivity areas of the residential properties might include:

- Views from ground floor windows on principal elevations of the building and are likely to correspond to primary living rooms such as lounge, dining rooms, kitchens or conservatories; and
- Views from rear gardens or heavily frequented parts of a garden where an appreciation of the surrounding landscape is likely to be fundamental to the enjoyment of the space.

1.16 Lower sensitivity areas of the residential properties might include:

- Views from upper floor windows on principal elevations of the building likely to correspond to bedrooms and study / office rooms;
- Views from front gardens or parts of the curtilage to the building where it is likely that the focus of attention is on an activity such as gardening rather than on the surrounding landscape;
- Views from windows on side elevations and from windows likely to correspond to utility rooms, bathrooms, etc; and

[2] Paragraph 4.11, Technical Guidance Note 2/19, Residential Visual Amenity Assessment

- Views from parts of the garden or building curtilage with a purely functional purpose such as a driveway or storage area, etc or land worked as part of a business.

Assessment of the Magnitude of Change on the Residential Properties

1.17 Visual amenity is defined within GLVIA3 as:

> **"The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area."[3]**

1.18 Visual effects on the surrounding residential properties could potentially arise through the introduction of the solar arrays, inverters and transformers, substation, energy storage structures, security fencing, CCTV poles, access tracks etc located within the proposed solar PV development. The solar arrays are typically of lower profile and elevation with the panels fixed at a maximum height of +3.5 metres above ground level (AGL).

1.19 Visual effects can also arise through the removal of landscape features such as woodlands, hedgerows or trees to expose views of the solar arrays. However, there are few such features within the redline boundary of the solar farm.

1.20 In general terms, the magnitude of change on the residential properties will decrease with increasing distance from the site and due to the proportion of intervening landform, buildings, woodlands, hedgerows, and trees within the view. Other influencing factors affecting the magnitude of change might include:

- Whether the view of the solar arrays is in a direct or oblique angle from the primary orientation or active frontage of the property;
- The extent to which the view is obstructed by vegetation, landform or other built structures; and
- The extent to which the current view is influenced by existing built structures (e.g., buildings, roads, pylons and transmission lines, etc).

1.21 The magnitude of change on the surrounding residential properties would be assessed on the following scale:

- High – a change in the view that on balance has a defining influence on the overall visual amenity of the residential receptor;
- Medium – some change in the view that on balance is clearly visible and forms an important but not a defining influence on the overall visual amenity of the residential receptor;
- Low – some change in the view that on balance is visible although has a subservient influence on the overall visual amenity of the residential receptor; and
- Negligible – no change or small to imperceptible visual influence on the overall visual amenity of the residential receptor.

1.22 The likely significance of effects is dependent on all of the factors considered in the sensitivity and the magnitude of change upon the residential receptors. These factors are assimilated to assess whether or not the proposed Energy Park will have a likely significant or not significant effect. The variables considered in the evaluation of the sensitivity and the magnitude of change is reviewed holistically to inform the professional judgement of significance.

[3] Page 158, Glossary, GLVIA3

1.23 A likely significant effect will occur where the combination of the variables results in the proposed development having a definitive effect on the view. A 'not significant' effect will occur where the appearance of the proposed development is not definitive, and the effect continues to be defined principally by its baseline condition.

1.24 The matrix below demonstrates the relationship between sensitivity and magnitude of change based on the specific criteria given. At all times, professional judgement is used to determine the overall significance of visual effects. The major effects highlighted in dark grey are considered to be significant in terms of the EIA Regulations, and overarching Regulations concerning the national significant infrastructure project. It should be noted that whilst an individual effect may be significant, it does not necessarily follow that the proposed solar PV development would be unacceptable, either in terms of the public interest test or when considering the planning balance in relation to the other benefits arising from the solar PV development.

1.25 The relationship between sensitivity and magnitude of change is indicated within the schedule below:

		Sensitivity		
		HIGH	**MEDIUM**	**LOW**
Magnitude of Change	**HIGH**	Major	Major	Moderate
	MEDIUM	Major	Moderate	Minor
	LOW	Moderate	Minor	Minor
	NEGLIGIBLE	Negligible	Negligible	Negligible

Judgement concerning the acceptable threshold for living conditions and residential visual amenity in the public interest

1.26 In this final stage, and only for those residential properties identified as experiencing a major significant effect in the previous stage, a further judgement is required to determine whether the visual effect in question has exceeded the Residential Amenity Threshold. LI TGN 2/19 advises that this is a matter for professional judgment explained in narrative with clear, unambiguous and rational conclusions. The visual effects arising from the proposed Energy Park would need to be of such a degree and significance that the visual effects would be overbearing and widely regarded as an unattractive and thus unsatisfactory place to live, due to the effects on living conditions.