Cottam Solar Project

PEIR – Volume 2

Appendices to Chapter 8: Landscape and Visual Impact

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Cottam
SOLAR PROJECT

Contents

8.1 LVIA Methodology

8.1.1: LVIA Methodology

8.1.2: Visual Assessment Methodology

8.1.3: Cumulative Methodology

8.1.4: Zone of Theoretical Visibility Methodology

APPENDIX 8.1.1 LVIA METHODOLOGY

1.1 GUIDANCE

1.1.1 The assessment methodology follows the 'Guidelines for Landscape and Visual Impact Assessment' Third Edition (GLVIA3)[1] . As recommended by GLVIA3, the process concentrates on principles and process and states (page x, Preface) that *'It does not provide a detailed or 'formulaic' recipe that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand'.* The methodology that underpins this LVIA process has therefore been tailored to be proportionate to the assessment and nature and location of the proposed development. The methodology also considers the following guidance:

- An Approach to Landscape Character Assessment (October 2014)[2] ;
- Landscape Institute (17 September 2019) Technical Guidance Note 06/19 Visual Representation of Development Proposals.

1.2 INTRODUCTION

1.2.1 The significance of landscape and visual effect is determined through consideration of the 'sensitivity' and 'susceptibility' of the landscape or visual receptor to the proposed development and the 'magnitude of change' that would be brought about by the proposed development were it to be constructed.

1.2.2 The time period for the assessment covers the construction of the proposed development and associated infrastructure, to completion of the works and the commencement of its operation and decommissioning.

1.2.3 The assessment has involved a process of iterative design and re-assessment of any remaining, residual effects that could not otherwise be mitigated or 'designed out'. The type of effect is also considered and may be direct or indirect; temporary or permanent (reversible); and positive, neutral or negative. The landscape and visual appraisal unavoidably involves a combination of both quantitative and qualitative assessment and wherever possible a consensus of professional opinion has been

[1] Landscape Institute and Institute of Environmental Management and Assessment, 2013, Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Routledge, London.
[2] An Approach to Landscape Character Assessment (October 2014) (Christine Tudor, Natural England) Countryside Agency and Scottish Natural Heritage (SNH), (2002) Landscape Character Assessment: Guidance for England and Scotland. [Online] Available at landscape-character-assessment.pdf (publishing.service.gov.uk) (Last accessed 13/12/2021)

sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach.

1.3 TERMINOLOGY

1.3.1 A description of the definitions, scope and context of the terminology used in the LVIA process is provided in the Glossary in Section 1.10.

1.3.2 GLVIA3 (paragraph 1.15) identifies with regard to impacts, effects and significance that 'Terminology can be complex and potentially confusing in this area, particularly in the use of the words 'impact' and 'effect' in LVIA within EIA and SEA'. In this case, it encourages the consistent use of the terms 'impact and 'effect' but recognises that there may be circumstances where this is not appropriate, for example where other practitioners involved in an EIA are adopting a different convention and states that:

1.3.3 "This applies to 'appraisals' of landscape and visual impacts outside the formal requirements of EIA as well as those that are part of formal assessment."

1.3.4 For the purpose of this LVIA process, the methodology adopts the consistent use of terms to ensure that the same meaning and ultimate judgements are applied in a transparent way throughout the assessment process. Clarity on the use of terms in this LVIA process is set out below:

Sensitivity of Receptor

1.3.5 This judgement is established by considering the concept of value of the landscape receptor combined with the susceptibility of the landscape resource to change. The combination of these two criteria then inform the sensitivity of landscape and visual receptors as set out in Sections 1.5.11 and 1.6.19.

1.3.6 For the purpose of this LVIA process, a receptor sensitivity is classified on a four-point scale of: very low, low, medium, and high (refer to Tables 8.1.4 and 8.1.9).

Resource / Receptor Value

1.3.7 For the concept of value of the landscape receptor, this is related to the range of factors and indicators that are attached to different landscapes by society. This list of factors is not fixed as the criteria need to be appropriate to each designation process.

1.3.8 In terms of visual receptors, this could for example relate to recreation and enjoyment and to the recognition attached to a particular view by visitors (through appearances in guidebooks or on tourist maps and the provision of facilities such as car parking and interpretation).

1.3.9 In terms of landscape receptors, this could for example relate to local distinctiveness and sense of place where the landscape may be designated for it's cultural associations.

1.3.10 For the purpose of this LVIA process, a receptor value is classified on a four-point scale of: very Low, low, medium, and high (refer to Tables 8.1.1, 8.1.2 and 8.1.8).

Susceptibility to Change

1.3.11 For the susceptibility to change, this should not be recorded as part of the baseline situation, but should be considered as part of the assessment of effects and tailored to the project.

1.3.12 In terms of landscape receptors, this means the ability to accommodate a proposed development without undue consequences for the maintenance of the baseline situation and/or achievement of landscape planning policies and strategies

1.3.13 In terms of visual receptors, this is a product of the occupation or activity of people experiencing the view and the extent to which their attention or interest may therefore be focused on the views and visual amenity they experience.

1.3.14 For the purpose of this LVIA process, susceptibility to change is classified on a four-point scale of: very low, low, medium, and high (refer to Tables 8.1.3 and 8.1.7).

Magnitude of Change

1.3.15 For magnitude of change, this is gauged by assessing the type and amount of change predicted to occur in relation to the landscape or visual receptor. Factors influencing the magnitude of change include: size or scale ; geographical extent; and duration and reversibility of effect as set out in Sections 1.5.14 to 1.5.16

1.3.16 For the purpose of this LVIA process, the magnitude of change is classified on a five-point scale of: no change, very low, low, medium, and large (refer to Tables 8.1.6 and 8.1.10)

1.3.17 Where there is no change to the receptor, or indeed no view of the proposed development, the magnitude of change is assessed as No Change which would result in No Effects.

Significance of Effects

1.3.18 For the significance of landscape and visual effects, these are gauged by considering the magnitude of change along with the sensitivity of the receptor using professional judgement.

1.3.19 For the purpose of this LVIA process, the significance of effects are classified on a six-point scale of: no change, negligible, minor, moderate, moderate to major and major (Tables 8.1.11).

1.3.20 In line with best practice guidance set out in GLVIA3 (paragraph 1.17), in addition to assessing significance, effects are classified as: beneficial, adverse or neutral, as well as direct and indirect. An effect is understood to be neutral when the predicted residual change would, on balance, result in neither an improvement, nor a deterioration of the landscape and visual resource compared with the existing situation.

1.4 BASELINE CONDITIONS

1.4.1 The landscape and visual baseline conditions of the assessment is established by undertaking a detailed desk study, fieldwork, and analysis of findings to create a detailed understanding of the existing landscape and visual context of both the site and surrounding landscape within the proposed study area.

1.4.2 Establishing the landscape baseline included gathering data on the landscape character and how this varies through the proposed study area; together with its geographic extent; and how it is experienced and valued. The desk-based assessment began with a review of legislation, policy and guidance including published landscape and townscape character assessments of the area and its wider context. This developed an understanding of the wider baseline environment within which the study area is located.

1.4.3 The visual baseline established the areas from where the new components of the proposed development would be seen, who would see them, the places where those who would see them would be affected and the nature of views and visual amenity.

1.4.4 Together the established baseline provides an understanding of the components of the landscape and visual resource that may be affected by the proposed development, which includes the identification of key landscape receptors and viewpoints which represent the existing situation. The baseline for this LVIA process is of sufficient detail to enable a well-informed assessment of the likely landscape & visual effects on the baseline conditions.

1.4.5 The desk-based assessment has involved the following key activities:

- Familiarisation with the landscape and visual resources of the area within which the proposed development would be located;
- Identification of landscape and visual resources likely to be significantly affected by the proposed development;
- Preparation of Zone of Theoretical Visibility (ZTV) maps;

- Identification of the location of viewpoints, informed by the ZTV, that were used to inform the assessment of effects of both landscape and visual resources; and

- Identification of suitable study areas for the LVIA.

1.4.6 Viewpoints identified through consultation and during desk studies were ground-truthed through fieldwork and their positions fixed prior to photography being undertaken. Landscape character types (LCTs) were reviewed during fieldwork and the descriptions contained in the published landscape character assessment were augmented where necessary. Landscape and visual receptors were also assessed to ensure they are accurately represented through desk-based assessment.

1.5 ASSESSMENT OF LANDSCAPE EFFECTS

1.5.1 In accordance with GLVIA3 (paragraph 2.21), the assessment of landscape and visual effects are separate but linked procedures; the landscape is assessed as an environmental resource in its own right, whereas visual effects are assessed on views and visual amenity experienced by people.

1.5.2 Landscape effects are concerned wholly with the effects of a development on the character of the landscape, the individual elements, the aesthetic and perceptual aspects and the condition of the landscape and are defined by GLVIA3 (paragraph 5.34), as follows:

- *"The first step is to identify the components of the landscape that are likely to be affected by the scheme, often referred to as the landscape receptors, such as overall character and key characteristics, individual elements or features, and specific aesthetic or perceptual aspects.*

- *The second step is to identify interactions between these landscape receptors and the different components of the development at all different stages, including construction, operation and, where relevant, decommissioning and restoration/reinstatement."*

1.5.3 For the purpose of this LVIA process, both landscape and visual effects have been assessed at construction stage, and during operation and decommissioning of the proposed development.

Landscape Sensitivity

1.5.4 As noted above, the sensitivity of landscape receptors is assessed through consideration of their value and susceptibility to change. The process for determining landscape sensitivity is set out below.

Landscape Value

1.5.5 For landscape receptors, value concerns the importance of the landscape resource as evidenced by the presence of landscape designations and professional judgement. Susceptibility is concerned with the landscapes ability to absorb change brought about by the proposed development.

1.5.6 Table 8.1.1 below illustrates how the value has been determined.

Table 8.1.1: Landscape Receptor Value

Value	Recognition	Features / Quality	Condition
High	Typically, a landscape / feature of international or national recognition e.g. World Heritage Sites, National Parks, Scheduled Monuments and Grade I and II* Listed Buildings, Registered Parks and Gardens	A strong sense of place with landscape / features worthy of conservation; Absence of detracting features.	A very high-quality landscape / feature; attractive landscape / feature; exceptional
Medium	Regional recognition e.g. Conservation Areas; Grade II Listed Buildings, Registered Parks and Gardens	A number of distinguishing features worthy of conservation; evidence of some degradation and occasional detracting features.	Ordinary to good quality landscape / feature with some potential for substitution; a reasonably attractive landscape / feature.
Low	Undesignated, but locally valued landscape / features	Few landscape features worthy of conservation; evidence of degradation with some detracting features.	Ordinary landscape / feature with high potential for substitution; quality that is fairly commonplace.
Very Low	Typically, an undesignated landscape / feature.	No landscape features worthy of conservation; evidence of degradation with many detracting features.	Low quality landscape / feature with very high potential for substitution; limited variety or distinctiveness; commonplace

1.5.7 The European Landscape Convention[3] promotes the need to take account of all landscapes, with less emphasis on the special and more recognition that ordinary landscapes, such as community landscapes also have their own value.

1.5.8 Table 8.1.2 below illustrates the criteria used to assess undesignated (community value) landscapes as set within GLVIA3[4] (Box 5.1).

Table 8.1.2: Factors for Assessing the Value of Undesignated Landscapes

Factor	Criteria
Landscape quality (condition)	A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.
Scenic quality	The term used to describe landscapes that appeal primarily to the senses (primarily but not wholly the visual senses).
Rarity	The presence of rare elements or features in the landscape or the presence of a rare Landscape Character Type.
Representativeness	Whether the landscape contains a particular character and/or features or elements which are considered particularly important examples.
Conservation interests	The presence of features of wildlife, earth science or archaeological or historical and cultural interest can add to the value of the landscape as well as having value in their own right.
Recreation value	Evidence that the landscape is valued for recreational activity where experience of the landscape is important.
Perceptual aspects	A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity.
Associations	Some landscapes are associated with particular people, such as artists or writers, or events in history that contribute to perceptions of the natural beauty of the area.

Susceptibility of the Landscape Receptors to Change

1.5.9 This means the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the

[3] The European Landscape Convention for the UK. Available on line at https://www.gov.uk/government/publications/european-landscape-convention-guidelines-for-managing-landscapes

[4] Landscape Institute Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Box 5.1, Page 84.

baseline situation and/or the achievement of landscape planning policies and strategies.[5]

1.5.10 Table 8.1.3 below illustrates how susceptibility of landscape receptors to change has been assessed.

Table 8.1.3: Landscape Receptor Susceptibility to Change

Susceptibility	Criteria
High	The landscape receptor is highly susceptible to the proposed development, and a low ability to accommodate the specific proposed change, because the key characteristics of the landscape have no or very limited ability to accommodate the specific proposed change without undue adverse effects taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.
Medium	The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.
Low	The landscape receptor has low susceptibility to the proposed development, and a high ability to accommodate the specific proposed change, because the relevant characteristics of the landscape are generally able to accommodate it with little, or no, undue consequences for the maintenance of the baseline situation, taking account of the existing character and quality of the landscape.
Very Low	Very high ability to accommodate the specific proposed change; no undue consequences for the maintenance of the baseline situation (receptor value) and/or achievement of relevant planning policies and strategies.

Landscape Sensitivity

1.5.11 GLVIA3 (paragraph 5.5) indicates that combining susceptibility and value can be achieved in a number of ways and needs to include professional judgement. However, it is generally accepted that a combination of high susceptibility and high value is likely to result in the highest sensitivity, whereas a low susceptibility and low value is likely to resulting in the lowest level of sensitivity. It should be noted that the

[5] Landscape Institute Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Paragraph 5.40, Page 88.

levels are indicative and in practice there is not a clear distinction between criteria levels.

1.5.12 Table 8.1.4 below provides a summary of the likely characteristics of the differing levels of sensitivity.

Table 8.1.4: Landscape Sensitivity Criteria

Landscape Resource Sensitivity	Characteristics
High	Landscape character, characteristics, and elements where, through consideration of the landscape resource and characteristics, there would generally be a lower landscape capacity or scope for landscape change or positive enhancement, and higher landscape value and quality. Often includes landscapes which are highly valued for their scenic quality, including most statutorily (nationally / internationally designated landscapes). Elements/features that could for example be described as unique or are nationally scarce. Mature vegetation with provenance such as ancient woodland or mature parkland trees, and/or mature landscape features which are characteristic of and contribute to a sense of place and illustrates time- depth in a landscape and if replaceable, could for example not be replaced other than in the long term.
Medium	Landscape character, characteristics, and elements where, through consideration of the landscape resource and characteristics, there would be a medium landscape capacity or some scope for landscape change. Often includes landscapes of medium landscape value and quality which may be locally designated. Areas that have a positive landscape character but include some areas of alteration/degradation/or erosion of features. Perceptual/aesthetic aspects has some vulnerability to unsympathetic development; and/or features/elements that are locally commonplace; unusual locally but in moderate/poor condition; or mature vegetation that is in moderate/poor condition or readily replicated.
Low	Landscape character, characteristics and elements where, through consideration of the landscape resource and characteristics, there would be higher landscape capacity or scope for landscape change or positive enhancement. Damaged or substantially modified landscapes with few characteristic features of value.

Landscape Resource Sensitivity	Characteristics
	Capable of absorbing major change, and landscape elements/features that might be considered to detract from landscape character such as obtrusive man-made features (e.g. power lines, large scale developments, etc.).
Very Low	Landscape character, characteristics and elements where there is a high landscape capacity or a planned desire for landscape change. Usually applies to landscapes with a lower landscape susceptibility or higher landscape capacity for the proposed development. May also apply to derelict landscapes, spoil heaps, and de-graded urban fringe areas that require restoration or re- development / re-planting. Areas that are relatively bland or neutral in character with few/no notable features. A landscape that includes areas of alteration/degradation or erosion of features, and/or landscape elements/features that are common place or make little contribution to local distinctiveness. Opportunities for the restoration of landscape through mitigation measures associated with the proposal.

Magnitude of Landscape Change

1.5.13 The determination of the magnitude of landscape change combines an assessment of the size or scale of change likely to be experienced as a result of each effect[6], the geographical extent of the area likely to be influenced and the duration and reversibility of effects.

Size or Scale

1.5.14 Judgements are needed about the size or scale of change in the landscape that is likely to be experienced as a result of each effect. GLVIA3 (paragraph 5.49), states that 'The judgements should, for example, take account of:

- The extent of the existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape – in some cases this may be quantified;
- The degree to which aesthetic and perceptual aspects of the landscape are altered either for example, removal of existing components of the landscape or by addition of new ones – for example, removal of hedges may change a

[6] Guidelines for Landscape and Visual Impact Assessment (page 90)

small scale, intimate landscape into a large-scale, open one, or introduction of new buildings or tall structures may alter open skylines;

- Whether the effects change the key characteristics of the landscape, which are critical to its distinctive character.'

Geographical Extent

1.5.15 The geographical area over which the landscape change would be felt is also considered. This is dependent upon the nature of the proposal and the scale of effects upon the receiving landscape / landscape; however GLVIA3 (paragraph 5.5), notes that, in general effects may have an influence at varying scales and states that 'this will vary according to the nature of the project and may not always be relevant on every occasion:

- at the site level, within the proposed development site itself;
- at the level of the immediate setting of the site;
- at the scale of the landscape type or character area within which the proposal lies;
- on a larger scale, influencing several landscape types or character areas.'

Duration and Reversibility of the Landscape Effects

1.5.16 GLVIA3 (paragraph 5.51), notes that duration and reversibility are separate but linked considerations. Duration can usually be simply judged on a scale such as:

- Short-term: 0-5 years;
- Medium-term: 5-10 years; and
- Long-term: 10-40 years.

1.5.17 For the purpose of this LVIA process, this proposed development has been assessed as a long term duration.

1.5.18 Reversibility is a judgement about whether or not a development can be removed, and once removed can the landscape be reinstated and/or fully restored.

1.5.19 Table 8.1.5 below indicates the type of land use and the respective assessment of reversibility defined by GLVIA3 (paragraph 5.2).

Table 8.1.5 Magnitude of Landscape Change: Reversibility

Category	Description
Permanent	Permanent, is irreversible change to the landscape, such as housing development, as it not possible to remove the development and restore the land to the original state.
Partially Reversible	Partially Reversible, change to the landscape, where the landscape can be restored to something similar to the landscape that was removed. For example, mineral developments, as it is possible to restore the land to something similar to the original state, but not the same state.
Reversible	Reversible, change to the landscape where the landscape can be fully restored. For example, a marine fish farm development, as it is possible to wholly remove the remove the development and to restore the landscape to the original state. This also includes construction activities which are of temporary nature.

Overall Magnitude of Landscape Change

1.5.20 The overall magnitude of landscape change combines size and scale, geographical extent and duration and reversibility. Not all aspects of a criterion need to be met for an evaluation to be given.

1.5.21 Table 8.1.6 below sets out the criteria used to assess the overall magnitude of landscape change.

Category	Description
Large	A large extent of existing landscape elements would be lost / adjusted, the proportion that this represents within the landscape is considerable and the resultant change to the landscape character resulting from such a loss is large. Large scale alteration of the aesthetic and perceptual aspects of the landscape such as the removal of existing components of the landscape or by addition of new ones – for example, removal of hedges may change a small scale, intimate landscape into a large-scale, open one, or introduction of new buildings or tall structures may alter open skylines. The effects change the key characteristics of the landscape & landscape, which are critical to its distinctive character. The change would affect all of the landscape receptors being assessed, as the proposed development would occupy a large geographical extent, e.g., the change would be on a large scale, influencing several landscape types or character areas. The effects are either of a long duration, permanent, or irreversible /reversible change to the landscape.
Medium	A medium extent of existing landscape elements would be lost / adjusted, the proportion that this represents within the landscape is medium and the resultant change to the landscape character resulting from such a loss is medium.

Category	Description
	Medium scale alteration of the aesthetic and perceptual aspects of the landscape such as the removal of existing components of the landscape or by addition of new ones. The effects change some of the key characteristics of the landscape & landscape, which are critical to its distinctive character. The change would affect a medium extent of the landscape receptors being assessed, as the proposed development would occupy a moderate geographical extent, e.g., at the scale of the landscape type or character area within which the proposal lies. The effects are either of a long / or medium duration, permanent, or irreversible /reversible change to the landscape.
Low	A small extent of existing landscape elements would be lost / adjusted, the proportion that this represents within the landscape is low and the resultant change to the landscape character resulting from such a loss is low. Small scale alteration of the aesthetic and perceptual aspects of the landscape such as the, removal of existing components of the landscape or by addition of new ones. The effects change a small number of the key characteristics of the landscape & landscape, which are critical to its distinctive character. The change would affect a small part of the landscape receptors being assessed, as the proposed development would occupy a small geographical extent, e.g., at the level of the immediate setting of the site. The effects are either of a Medium / or short duration and reversible change to the landscape.
Very Low	A barely perceptible extent of landscape features and elements of importance to the character of the baseline are lost / adjusted. There is a barely discernible change to aesthetic and / or perceptual attributes of landscape & landscape character and such changes occurs across a very limited geographical area and / or proportion of the landscape receptor. The effects change a barely discernible number of the key characteristics of the landscape, which are critical to its distinctive character. The change would affect only a negligible part of the landscape receptors being assessed, as the proposed development would occupy a limited geographical extent, e.g., the site level, within the proposed development site itself. The effects are of short duration and reversible.
No Change	The proposals would not affect any of the landscape receptors being assessed

1.6 ASSESSMENT OF VISUAL EFFECTS

1.6.1 Visual effects are concerned wholly with the effect of the a development on views, and the general visual amenity and are defined by the Landscape Institute in GLVIA 3 (, paragraphs 6.1), as follows:

1.6.2 *"An assessment of visual effects deals with the effects of change and development on views available to people and their visual amenity. The concern … is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the context and character of views."*

1.6.3 Visual effects are identified for different receptors (people) who will experience the view at their places of residence, during recreational activities, at work, or when travelling through the area. The visual effects may include the following:

- Visual effect: a change to an existing static view, sequential views, or wider visual amenity as a result of a development or the loss of particular landscape elements or features already present in the view.

1.6.4 The visual assessment for this LVIA process aims to determine from which points the proposed development can be seen in the surrounding landscape; this is known as the visual envelope. Once determined, a series of representative, specific and illustrative viewpoints were chosen (i.e. areas within the visual envelope from where it may be possible to see the proposed development from publicly accessible viewpoints), such as residential areas, public open spaces, PRoW / public footpaths and roads.

1.6.5 Visual effects relate to changes in available views of the landscape and the effect of those changes on people, including:

- The direct effects of the proposed development on the content and character of views through the intrusion or obstruction and/or the change or loss of existing elements.
- The overall effect on visual amenity, be it degradation or enhancement.

1.6.6 In predicting the effects of the proposed development on the visual receptors from the viewpoints being assessed, GLVIA3 (para 6.27), states that it is helpful to consider (but not restricted to) the following issues:

- Nature of the view (full, partial or glimpsed);
- Proportion of the proposed development visible (full, most, part or none);
- Distance of the viewpoint from the proposed development and whether it would be the focus of the view or only a small element;
- Whether the view is stationary, transient or sequential; and
- The nature of the changes to the view.

1.6.7 Additionally, the seasonal effects of vegetation are to be considered, in particular the varying degree of screening and filtering of views.

1.6.8 People have different responses to views which are dependent upon context such as the:

- Location;
- Time of day;
- Season; and
- Degree of exposure to views.

1.6.9 Responses to views are also dependent upon the purpose of people being in a particular place such as:

- Recreation;
- Residence;
- Employment; and
- Passing through on roads, rail or other forms of transport.

1.6.10 As people move through the landscape, certain activities or locations may be specifically associated with the experience and enjoyment of the landscape, such as:

- The use of paths such as core paths, footpaths, bridleways, byways open to all traffic (BOATs) and National Trails;
- National or local cycle routes; and
- Tourist or scenic routes, and associated viewpoints on land or water.

Evaluating Visual Susceptibility to Change

1.6.11 To determine visual effects both the sensitivity of the visual receptor and the magnitude of change must be considered. Determining visual sensitivity is the combination of susceptibility to change and value of a view. It is considered that a combination of high susceptibility to change and high value is likely to result in the highest sensitivity, whereas a low susceptibility and value is likely to result in the lowest level. The value, susceptibility to change and resultant sensitivity of a visual receptor are broadly categorised based on the following Tables 8.1.7 and 8.1.8 below. It should be noted that the levels are indicative and in practice there is not a clear distinction between criteria levels.

1.6.12 The susceptibility of visual receptors to changes in the view and visual amenity is related to activity they are engaged in and the extent to which their attention is focussed on the views and visual amenity at that location. As such those receptors most sensitive to change are likely to include people engaged in outdoor activities where an appreciation of the landscape is the focus or residents in areas where the landscape setting contributes to the setting of the properties.

1.6.13 Conversely, those considered least sensitive to change include (but are not restricted to) people engaged in outdoor sports or recreation where there is no focus on the surrounding landscape/views and people at their place of work where the focus is on the work activity.

Susceptibility of Visual Receptors to Change

1.6.14 The susceptibility of visual receptors to changes in views depends upon:

- The occupation or activity of people experiencing the view at particular locations; and
- The extent to which their attention or interest may therefore be focussed on the views and the visual amenity they experience at particular locations[7].

1.6.15 Table 8.1.7 below summarises the criteria used to assess the susceptibility of a visual receptor to change.

8.1.7 Visual Receptor Susceptibility to Change

Susceptibility	Type of Receptor
High	Residents at home. Views from well used public rights of way including strategic footpaths / long distance trails and cycle routes (where the attractive nature of the countryside is a significant factor in the enjoyment of the walk). Visitors along scenic routes and to recognized viewpoints. Visitors to protected landscapes or heritage assets where views of the surroundings are an important contributor to the experience. The location, numbers, frequency of use and visual context of the viewpoint would be high. Communities where views contribute to the landscape setting enjoyed by residents in the area.

[7] Ibid. 1. Paragraph 6.32

	Travellers on road, rail or other transport routes along scenic routes, where the appreciation of the view contributes to the enjoyment and quality of the journey.
Medium	Views experienced from boats, public rights of way / footpaths used locally and passing through the landscape and well used footpaths within settlements. Views from places of worship and associated grounds, schools, country parks and golf clubs. Views experienced by users of local roads where there are clear / open views across the landscape and low levels of traffic. The location, numbers, frequency of use and visual context of the viewpoint would be medium.
Low	Views experienced from places of work where workers and visitors are concentrating on their day to day activities. Views experienced by on near to motorways, major roads Views experienced by users of the rail network and main roads travelling at speed or local roads where the focus is upon the road ahead owing to traffic conditions and the context / composition of the view. Views experienced from less well used public rights of way which pass through less attractive landscapes or townscapes and are not used for enjoyment of the scenery. Views experienced by those playing or spectating at outdoor sports or utilising outdoor sports facilities. The location, numbers, frequency of use and visual context of the viewpoint would be low.

1.6.16 In making judgements about the value of each view, the assessment should take into account the following:

- Recognition of the value to a particular view, e.g. in relation to heritage assets or planning designations; and
- Indicators of the value attached to views by others, e.g., in guide books, tourist maps, literary references, painting etc.

1.6.17 The value attached to views should be made on judgements based on the following:

- Recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations; and

- Indicators of the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment and references to them in literature or art.

1.6.18 Table 8.1.8 below summarises the criteria used to assess the value attached to views.

Table 8.1.8 Value Attached to Views

Value	Criteria
High	Views from and within landscapes / viewpoints of national importance (National Parks, AONBs), highly popular visitor attractions where the view forms an important part of the experience, or heritage assets, or through planning designations such as conservation areas, listed buildings, Registered Parks & Gardens or with important cultural associations, or where the view is deemed by the assessor to be of a high value.
Medium	Views from landscapes / viewpoints of regional/district importance, or visitor attractions at regional or local levels where the view forms part of the experience, or local planning designations, or with local cultural associations, or where the view is deemed by the assessor to be of a medium value.
Low	Views from landscapes / viewpoints with no designations, and not particularly popular as a viewpoint, and unlikely to be visited specifically to experience the view available with minimal or no cultural associations, or where the view is deemed by the assessor to be of a low value.

Sensitivity of Visual Receptors

1.6.19 The sensitivity of visual receptors is defined in terms of the relationship between the value of views and the susceptibility of the different viewers to the proposed change. Professional judgements are made on the merit of the view based on the visual receptor and it should be noted that the levels are indicative and in practice there is not a clear distinction between criteria levels.

1.6.20 Table 8.1.9 below summarises the likely characteristics of the differing levels of sensitivity.

Table 8.1.9 Visual Sensitivity Criteria

Visual Resource Sensitivity	Characteristics
High	A well balanced view containing attractive features and notable for its scenic quality with no or very few/minimal visual detractors . A view which is an important reason for receptors being there. A view which is experienced by a large number of people and/ or recognized for its qualities. A view with a medium – high susceptibility to change and experienced by visual receptors of a high value.
Medium	An otherwise attractive view that includes some attractive or discordant features/visual detractors. A view which plays a part in the reason why a receptor would be there. A view which is locally recognized. A view with a low - medium susceptibility to change and experienced by visual receptors of a low - medium value.
Low	A view that is simplistic and contains few attractive or notable features or a number of visual detractors which may dominate the view A view which plays a small part in the reason why a receptor would be there. A view with a low susceptibility to change, and a low value.
Very Low	A view that is unattractive, discordant and/or contains many visual detractors. A view which is unlikely to be part of the receptor's experience. A view with a very low susceptibility to change, and very low sensitivity.

Magnitude of Visual Change

1.6.21 The magnitude of change to visual receptors is assessed in terms of the following:

- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development;
- The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture; and
- The nature of the view of the proposed development, in terms of the relative amount of time over which it would be experienced and whether views would be full, partial or glimpses.

1.6.22 Not all aspects of a criterion need to be met for an evaluation to be given.

Geographical Extent

1.6.23 The geographical extent of the visual change identified at viewpoints is assessed by reference to a combination of the ZTV and field work. The following factors are considered:

1.6.24 The geographical extent of a visual effect reflects:

- The angle of view in relation to the main activity of the receptor;
- The distance of the viewpoint from the proposed development; and
- The extent of the area over which the changes would be visible.

Duration and Reversibility of Visual Change

1.6.25 The following terminology, which considers whether views would be permanent and irreversible or temporary and reversible, is used to describe the duration of the visual change at representative, specific and illustrative viewpoints:

- Short-term: 0-5 years;
- Medium-term: 5-10 years; and
- Long-term: 10 to 40 years.

1.6.26 For the purposes of this assessment LVIA process, the pProposed dDevelopment has been assessed as a long term duration.

1.6.27 Reversibility is a judgement about whether or not a development can be removed, and once removed can the view be fully restored.

Overall Magnitude of Visual Change

1.6.28 Table 8.1.10 below sets out the criteria used to assess the overall magnitude of visual change.

Table 8.1.10 below sets out the criteria used to assess the overall magnitude of visual change.

Magnitude evaluation	Size, scale and nature	Geographical Extent	Duration & Reversibility
High	Occupies an extensive proportion of the view and may even obstruct a significant portion of the view. Views may become the dominant	Ranging from notable change over extensive area to intensive change over a more limited area.	Long term; permanent / non- reversible or partially reversible.

Magnitude evaluation	Size, scale and nature	Geographical Extent	Duration & Reversibility
	feature. Considerable change to the majority / many existing landscape elements and/or landscape character; fundamental changes the surroundings and baseline to a large extent; very noticeable.		
Medium	Occupies much of the view but would not fundamentally change its characteristics. Changes would be immediately visible but not a key feature of the view. Some change to existing landscape elements and /or landscape character; discernible changes the surroundings of a receptor, such that its baseline is partly altered; readily noticeable.	Moderate changes in a localised area.	Medium term; semi-permanent or partially reversible.
Low	Occupies a small portion of the view and therefore would not result in a change to the view's composition. Small change to existing landscape elements and/or landscape character; slight, but detectable impacts that do not alter the baseline of the receptor materially not readily noticeable.	Minor changes in a localised area.	Short term / temporary; partially reversible or reversible.
Very Low	Occupies a small portion of the view and therefore would not result in a change to the view's composition.	Minor changes in a localised area.	Short term / temporary; partially reversible or reversible.

Magnitude evaluation	Size, scale and nature	Geographical Extent	Duration & Reversibility
	Small change to existing landscape elements and/or landscape character; slight, but detectable impacts that do not alter the baseline of the receptor materially not readily noticeable		
No Change	There are no changes to the existing view.		

1.7 NATURE OF EFFECTS

1.7.1 The nature of an effect is also assessed. This is dependent on a number of criteria which vary between effects upon the landscape/landscape and effects on visual amenity. Effects are classified as beneficial, neutral or adverse according to the following definitions:

- **Beneficial** effects contribute to the landscape and visual resource through the enhancement of desirable characteristics or the introduction of new, positive attributes. The removal of undesirable existing elements or characteristics can also be beneficial, as can their replacement with more appropriate components;
- **Neutral** effects occur where a development neither contributes to nor detracts from the landscape and visual resource or where the effects are so limited that the change is hardly noticeable. A change to the landscape and visual resource is not considered to be adverse simply because it constitutes an alteration to the existing situation; and
- **Adverse** effects are those that detract from or weaken the landscape and visual resource through the introduction of elements that contrast in a detrimental way with the existing characteristics of the landscape and visual resource, or through the removal of elements that are key in its positive characterisation.

1.7.2 For the purpose of thisThe LVIA, the process describes the overall effects on receptors and explains the justification for each assessment. For each assessed effect, a conclusion has been drawn on whether the effect is beneficial, neutral or adverse.

1.8 SIGNIFICANCE OF EFFECT AND CRITERIA

1.8.1 The significance of landscape and visual effect and whether it is significant or not would be assessed based on a combination of the sensitivity of the receptor, and the magnitude of change, alongside the professional judgement of a chartered landscape architect.

1.8.2 The combined sensitivity and magnitude used to determine the significance of effect and is summarised within Table 7.5 below. The nature of Landscape and Visual effects can be either beneficial, neutral or adverse in nature.

1.8.3 Table 8.1.11 below shows how the combined factors of sensitivity and magnitude are used to determine the significance of effect.

Table 8.1.11 - Matrix for Determining Significance of Effect

Sensitivity / Magnitude	High	Medium	Low	Very Low
High	Major	Moderate-Major	Minor-Moderate	Negligible
Medium	Moderate-Major	Moderate	Minor	Negligible
Low	Minor-Moderate	Minor	Negligible-Minor	Negligible
Very Low	Negligible	Negligible	Negligible	Negligible
No Change	No Change	No Change	No Change	No Change

1.8.4 In accordance with Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, it is important to determine whether the predicted landscape and visual effects arising from the Proposed Development are likely to be significant. Landscape and visual effects which result in a Major, Moderate – Major, and Moderate landscape or visual effect are considered to be significant.

1.8.5 Table 8.1.12 below summarises the categories of landscape and visual effects.

Table 8.1.12 - Categories of Landscape and Visual Effects

Significance of Effect	Description of Landscape Effects	Description of Visual Effects
Major	Considerable change over an extensive area of a highly sensitive landscape, fundamentally affecting the key characteristics and the overall impression of its character.	The proposed development would become a prominent feature and would result in a very noticeable change to an existing highly sensitive and well composed view.
Moderate	Small or noticeable change to a highly sensitive landscape or more intensive change to a landscape of	The proposed development would introduce some enhancing or detracting

	medium or low sensitivity, affecting some key characteristics and the overall impression of its character.	features to an existing highly sensitive and well composed view, or would be prominent within a less well composed and less sensitivity view, resulting in a noticeable improvement or deterioration of the existing view.
Minor	Small change to a limited area of landscape of high or medium sensitivity or a more widespread area of a less sensitive landscape, affecting few characteristics without altering the overall impression of its character.	Where the proposed development would form a perceptible but not enhancing or detracting feature within a view of high or medium sensitivity or would be a more prominent feature within a poorly composed view of low sensitivity, resulting in a small improvement or deterioration of the existing view.
Negligible	No discernible improvement or deterioration to the existing landscape character.	No discernible improvement or deterioration in the existing view.
No Effect	The proposed development would not affect the landscape receptor.	The proposed development would not affect the view

1.9 ASSESSMENT OF CUMULATIVE EFFECTS

1.9.1 The assessment of cumulative effects is essentially the same as for the assessment of the stand-alone landscape and visual effects, in that the significance of landscape and visual effect is determined by assessing the combination of sensitivity of the landscape or visual receptor (ranging from high to negligible) and the magnitude of change (ranging from high to no change).

1.9.2 Types of cumulative effect are defined as follows:

- Cumulative Landscape Effects: Where more than one type of development may have an effect on a landscape designation or particular area of landscape character.
- Cumulative Visual Effects: Where the cumulative or incremental visibility of similar types of
- Development combined generate a cumulative visual effect.

1.9.3 These can be further defined as follows:

- Simultaneous or combined: where two or more developments may be viewed from a single fixed viewpoint simultaneously, within the viewer's field of view and without requiring them to turn their head.

- Successive or repetitive: where two or more developments may be viewed from a single viewpoint successively as the viewer turns their head or swivels through 360°.

- Sequential: where a number of developments may be viewed sequentially or repeatedly at increased frequency, from a range of locations when travelling along a route within the study area.

1.9.4 A cumulative landscape or visual effect simply means that more than one type of development is present or visible within the landscape. Other forms of existing development and land use such as woodland and forestry, patterns of agriculture, built form, and settlements already have a cumulative effect on the existing landscape that is already accepted or taken for granted. These features often contribute strongly to the existing character, forming a positive component of the local landscape. Landscapes however, will have a finite capacity for new development, beyond which further change or alteration to the existing landscape character may be unacceptable in landscape terms.

1.9.5 Whilst this LVIA process considers other development, it should not be considered as a substitute for an independent LVIA assessment in respect of each of the other developments concerned.

1.9.6 The methodology for cumulative assessment follows that contained within GLVIA3. GVLA3 (paragraph 7.8) which notes that 'Of greater importance for LVIA are the cumulative landscape and visual effects that may result from an individual project that is being assessed interacting with the effects of other proposed developments in the area' and therefore requires that the baseline includes additional changes to the baseline landscapes or visual resources as a result of other development.

1.9.7 Existing similar types of developments are therefore included within the baseline description, and cumulative effects of consented and proposed development are considered separately.

Magnitude of Cumulative Change

1.9.8 Cumulative landscape and visual effects may result from additional changes to the baseline landscape or visual resources, as a result of adevelopment, in conjunction with other developments.

1.9.9 The principle of magnitude of cumulative change thus makes it possible for a development to have a major effect on a particular receptor, while having only a minor cumulative effect in conjunction with other existing developments.

1.9.10 For the purpose of this LVIA process, the cumulative landscape and visual magnitude of change is determined with reference to the criteria set out above and the following considerations:

- The number of visible existing and/or potentially visible proposed developments.
- The distance to existing and/or proposed developments.

Signficance of Cumulative Effects

1.9.11 Cumulative landscape and visual effects may result from additional changes to the baseline landscape or visual resources, as a result of a development, in conjunction with other developments.

1.9.12 The principle of magnitude of cumulative change thus makes it possible for a development to have a major effect on a particular receptor, while having only a minor cumulative effect in conjunction with other existing developments.

1.9.13 For the purpose of this LVIA process, the cumulative landscape and visual magnitude of change is determined with reference to the criteria set out above and the following considerations:

- The number of visible existing and/or potentially visible proposed developments; and
- The distance to existing and/or proposed developments.

1.10 GLOSSARY

Table 8.1.13 – Glossary Terms

Term	Definition
Access land	Land where the public have access either by legal right or by informal agreement.
Baseline studies	Work done to determine and describe the environmental conditions against which any future changes can be measured or predicted and assessed.
Characterisation	The process of identifying areas of similar landscape character, classifying and mapping them and describing their character.
Characteristics	Elements, or combinations of elements, which make a contribution to distinctive landscape character.
Compensation	Measures devised to offset or compensate for residual adverse effects which cannot be prevented/avoided or further reduced.
Competent authority	The authority which determines the application for consent, permission, licence or other authorisation to proceed with a proposal. It is the authority that must consider the environmental information before granting any kind of authorisation.
Consultation bodies	Any body specified in the relevant EIA Regulations which the competent authority must consult in respect of an EIA, and which also has a duty to provide a scoping opinion and information.

Designated landscape	Areas of landscape identified as being of importance at international, national or local levels, either defined by statute or identified in development plans or other documents.
Development	Any proposal that results in a change to the landscape and/or visual environment.
Direct effect	An effect that is directly attributable to the proposed development.
'Do Nothing' situation	Continued change or evolution in the landscape in the absence of the proposed development.
Ecosystem services	The benefits provided by ecosystems that contribute to making human life both possible and worth living. The Millennium Ecosystem Assessment grouped ecosystem services into four broad categories: - Supporting services, such as nutrient cycling, oxygen production and soil formation. These underpin the provision of the other 'service' categories. - Provisioning services, such as food, fibre, fuel and water. - Regulating services, such as climate regulation, water purification and flood protection. - Cultural services, such as education, recreation, and aesthetic value.
Elements	Individual parts which make up the landscape, such as, for example, trees, hedges and buildings.
Enhancement	Proposals that seek to improve the landscape resource and the visual amenity of the proposed development site and its wider setting, over and above its baseline condition.
Environmental Impact Assessment (EIA)	The process of gathering environmental information; describing a development; identifying and describing the likely significant environmental effects of the project; defining ways of preventing/avoiding, reducing or offsetting or compensating for any adverse effects; consulting the general public and specific bodies with responsibilities for the environment; and presenting the results to the competent authority to inform the decision on whether the project should proceed.
Environmental statement	A statement that includes the information that is reasonably required to assess the environmental effects of the development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile, but that includes at least the information referred to in the EIA Regulations
Feature	Particularly prominent or eye-catching elements in the landscape, like tree clumps, church towers, or wooded skylines OR a particular aspect of the project proposal.
Geographical Information System (GIS)	A system that captures, stores analyses, manages and presents data linked to location. It links spatial information to a digital database.
Green Infrastructure (GI)	Networks of green spaces and watercourses and water bodies that connect rural areas, villages, towns and cities.

Heritage	The historic environment and especially valued assets and qualities such as historic buildings and cultural traditions.
Historic Landscape Characterisation (HLC) and Historic Land-use Assessment (HLA)	Historic characterisation is the identification and interpretation of the historic dimension of the present day landscape or townscape within a given area. HLC is the term used in England and Wales, HLA is the term used in Scotland.
Indirect effects	Effects that result indirectly from the proposed project, as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or as a result of a complex pathway. They may be separated in distance or in time from the source of the effects.
Iterative design process	The process by which project design is amended and improved by successive stages of refinement which respond to growing understanding of environmental issues.
Key characteristics	Those combinations of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
Land use	What land is used for, based on broad categories of functional land cover such as urban and industrial use and the different types of agriculture and forestry.
Land cover	The surface cover of the land, usually expressed in terms of vegetation cover or lack of it. Related to but not the same as land use.
Landform	The shape and form of the land surface which has resulted from combinations of geology, geomorphology, slope, elevation and physical processes.
Landscape	An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.
Landscape and Visual Impact Assessment (LVIA)	Landscape and Visual Impact Assessment (LVIA) is a tool used to identify and assess the likely significance of the effects of change resulting from development on both the landscape as an environmental resource in its own right and on people's views and visual amenity.
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
Landscape Character Assessment (LCA)	Landscape character assessment is the process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscapes distinctive. The process results in the production of a Landscape Character Assessment.
Landscape Character Types (LCTs)	These are single unique areas which are the discrete geographical areas of a particular landscape type.

Landscape classification	A process of sorting the landscape into different types using selected criteria but without attaching relative values to different sorts of landscape.
Landscape effects	Effects on the landscape as a resource in its own right.
Landscape quality (Condition)	A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.
Landscape receptor	A defined aspect of the landscape resource that has the potential to be affected by a proposal.
Landscape strategy	The overall vision and objectives for what the landscape should be like in the future, and what is thought to be desirable for a particular landscape type or area as a whole, usually expressed in formally adopted plans and programmes or related documents.
Landscape value	The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.
Magnitude (of effect)	A term that combines judgments about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.
Parameters	A limit or boundary which defines the scope of a particular process or activity.
Perception	Combines the sensory (that we receive through our senses) with the cognitive (our knowledge and understanding gained from many sources and experiences).
Photomontage	A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs.
Scoping	The process of identifying the issues to be addresses by an EIA. It is a method of ensuring that an EIA focuses on the important issues and avoids those that are considered to be less significant.
Seascape	Landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other.
Sensitivity	A term applied to specific receptors, combining judgments of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.
Significance	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.
Stakeholders	The whole constituency of individuals and groups who have an interest in a subject or place.
Strategic Environmental Assessment	The process of considering the environmental effects of certain public plans, programmes or strategies at a strategic level.
Susceptibility	The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.

Time depth	Historical layering - the idea of landscape as a 'palimpsest', a much written over manuscript.
Townscape	The character and composition of the built environment including the buildings, the relationships between them, the different types of urban open spaces, including greenspaces, and the relationship between buildings and open spaces.
Tranquillity	A state of calm and quietude associated with peace, considered to be a significant asset of landscape.
Visual amenity	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.
Visual effect	Effects on specific views and on the general visual amenity experienced by people.
Visual receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal.
Visualisation	Computer simulation, photomontage or other technique to illustrate the predicted appearance of a development.
Zone of Theoretical	A map, usually digitally produced, showing areas of land within
Visibility (sometimes Zone of Visual Influence)	which a development is theoretically visible.

APPENDIX 8.1.2 - VISUAL ASSESSMENT OF RESIDENTIAL PROPERTIES METHODOLOGY

1.1.1 Planning law contains a widely understood principle that individuals (i.e. visual receptors at a single residential property) have no 'right to a view' and that the outlook or view from a private property is a private interest and not therefore protected by the UK planning system.

1.1.2 However, the UK planning system also recognises situations where the effects on residential visual amenity are considered as a matter of public interest. This matter has been examined at a number of public inquiries where the key determining issue was not the identification of significant effects on views, but whether a development would have an overbearing effect and/or result in unsatisfactory living conditions, leading to a property being regarded, objectively, as an unattractive (as opposed to a less attractive) place in which to live.

1.1.3 As a consequence the visual assessment methodology provides for a much more detailed assessment of the closest residential properties. This allows the assessor, and consequently the determining authority, to make a judgement as to whether the residents at these properties would be likely to sustain unsatisfactory living conditions which it would not be in the public interest to create. Reviews of decisions demonstrate that significant changes to the views available from a residential property, and its curtilage, are not the decisive consideration.

1.1.4 By way of further clarification, the methodology for assessing the visual effects on views from residential properties allows for two stages of assessment as follows:

- The first stage is to identify those properties where a significant visual effect on a view from the property is likely to occur.
- The second stage is to consider the residential amenity and whether, in terms of the wider public interest, the visual effects would result in unsatisfactory living conditions, leading to a property being regarded, objectively, as an unattractive (as opposed to a less attractive) place in which to live.

1.1.5 A residential property, for the purpose of environmental impact assessment, should be one that was designed and built/converted for that purpose and currently (at the time of the assessment) remains in a habitable condition, of a safe construction, wind and water tight with appropriate vehicle access, and services (drinking water, sanitation, and power supply). Related buildings such as barns/outbuildings, garage, huts and derelict properties should generally be excluded from the assessment, unless they form part of the curtilage of an existing residence.

1.1.6 The sensitivity of individual residential receptors is assessed as high in each case.

1.1.7 The assessment of residential properties or groups of residential properties in this case has been limited to those properties within 1 km of the proposed convertor station, which appear on the Ordnance Survey 1:25,000 scale map. Whilst most of the properties can be viewed at close range from public roads and footpaths, some of these properties are accessed via private or gated roads and due to these access limitations, they have been assessed from the nearest public road or footpath which may be at greater distance from the property. The assessment, in this instance, should therefore be regarded as a 'best estimate' of the likely visual effects.

1.1.8 The assessment has been further supported by aerial and ground level photography as well as map based data. The assessment takes account of the likely views from the ground floors of properties and main garden areas, but excludes upper floors and other land that may be connected with the property. Relevant information considered as part of the assessment for this LVIA process may include, but is not limited to the following:

Scale of the proposed development:

- Number and height of the proposed development;
- The horizontal extent or AOV of the visible array; and
- Separation distance (closest and furthest buildings).

Description of the property, as far as this can be ascertained:

- Orientation and size of property and whether views from the property towards the proposed development would be direct or oblique;
- Location of principle rooms and main living areas such as living/dining rooms, kitchens and conservatories, as opposed to working areas such as farm buildings and utility areas;
- Location of principle garden areas which may include patios and seating areas as opposed to less well used areas such as paddocks or garages; and
- The effects of any screening by landform, vegetation or nearby built form.

Location and Context:

- The aspect of the property in terms of the overall use and relationship to the garden areas and surrounding landscape;
- The principle direction of main views and visual amenity; and

- The context and nature of any intervening structures e.g. other existing development, farm buildings or forestry.

APPENDIX 8.1.3 – CUMULATIVE METHODOLOGY

1.1 INTRODUCTION

1.1.1 Assessment of cumulative effects is required both by the EIA and the SEA Directives and by the associated Regulations. Cumulative effects have been defined in a broad generic sense as 'impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project' (Hyder, 1999: 7).

1.1.2 GLVIA3 states that the key for all cumulative impact assessments is to focus on the likely significant effects and in particular those likely to influence decision making.

1.1.3 GLVIA3 define cumulative effects as follows:

- **Cumulative effects** as 'the additional changes caused by a proposed development in conjunction with other similar developments or as the combined effect of a set of developments, taken together' (Scottish National Heritage (SNH), 2012, 4)
- **Cumulative landscape effects** as effects that 'can impact on either the physical fabric or character of the landscape, or any special values attached to it' (SNH, 2012:10)
- **Cumulative visual effects** as effects that 'can be caused by combined visibility, which occurs where the observer is able to see two or more developments from one viewpoint and/or sequential effects which occur when the observer has to move to another viewpoint to see different developments' (SNH 2012: 11).[1]

[1] Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. The Landscape Institute and the Institute of Environmental Management and Assessment. 2013. P120.

1.1.4 GLVIA3 states that:

"It is always important to remember that the emphasis in EIA is on likely significant effects rather than on comprehensive cataloguing of every conceivable effect that might occur." [2]

And that:

"The emphasis must always be on the main project being assessed and how or whether it adds to or combines with the others being considered to create a ***significant*** *cumulative effect"[3] (Authors emphasis).*

1.1.5 In most cases the focus of the cumulative assessment will be on the additional effect of the project in conjunction with other developments of the same type (as, for example, in the case of wind farms; see SNH, 2012). In some cases, development of another type or types may be relevant and may help to give a more complete picture of the likely significant cumulative effects.

1.1.6 In consultation with SDC, a number of developments have been requested for inclusion within this cumulative assessment including other types of development (ie not solar) that the LPA consider may be relevant and may help to give a more complete picture of the likely significant cumulative effects.

1.1.7 In consultation with the SDC the geographic extent (or study area) over which the cumulative effects will be assessed has been set to 5km. However, the proposals for a solar array at Osgodby have ben included at the request of SDC, despite being located at approximately 6.5km north of the Site. This is the only development outside of 5km that has been included within the Cumulative Assessment.

1.1.8 GLVIA3 sets out the timescale of proposals for inclusion within cumulative assessments.

"Taking 'the project' to mean the main proposal that is being assessed, it is considered that existing schemes and those which are under construction should be included in the baseline for both landscape and visual effects assessments (the LVIA baseline)."

"The baseline for assessing cumulative landscape and visual effects should then include those schemes considered in the LVIA and in addition potential schemes that are not yet present in the landscape but are at various stages in the development and consenting process:

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[2] Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. The Landscape Institute and the Institute of Environmental Management and Assessment. 2013. P121.
[3] Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. The Landscape Institute and the Institute of Environmental Management and Assessment. 2013. P129.

- schemes with planning consent;
- schemes that are the subject of a valid planning application that has not yet been determined.

Schemes that are at the pre-planning or scoping stage are not generally considered in the assessment of cumulative effects because firm information on which to base the assessment is not available and because of uncertainty about what will actually occur, that is, it is not 'reasonably foreseeable'. But there may be occasions where such schemes may be included in the assessment if the competent authority or consultation bodies consider this to be necessary. Such a request should only be made if absolutely necessary to make a realistic assessment of potential cumulative effects." [4]

1.1.9 It should be noted that SDC have requested that a number of proposals that are currently at either EIA Scoping or Screening be included within this cumulative assessment.

1.2 TYPES OF CUMULATIVE EFFECTS

Landscape

1.2.1 Cumulative landscape effects may result from adding new types of change or from increasing or extending the effects of the main project when it is considered in isolation. For example, the landscape effects of the main project may be judged of relatively low significance when taken on their own, but when taken together with the effects of other schemes, usually of the same type, the cumulative landscape effects may become more significant. The key for all cumulative impact assessments is to focus on the likely significant effects and in particular those likely to influence decision making.

1.2.2 Cumulative landscape effects are likely to include effects:

- *on the fabric of the landscape as a result of removal of or changes in individual elements or features of the landscape and/or the introduction of new elements or features;*
- *on the aesthetic aspects of the landscape – for example its scale, sense of enclosure, diversity, pattern and colour, and/or on its perceptual or experiential attributes, such as a sense of naturalness, remoteness or tranquillity;*
- *on the overall character of the landscape as a result of changes in the landscape fabric and/or in aesthetic or perceptual aspects, leading to modification of key*

[4] Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. The Landscape Institute and the Institute of Environmental Management and Assessment. 2013. P123.

characteristics and possible creation of new landscape character if the changes are substantial enough. [5]

1.2.3 Cumulative landscape effects must be considered particularly in terms of consequences for the key characteristics of the landscape in question. The most significant cumulative landscape effects are likely to be those that would give rise to changes in the landscape character of the study area so as to result in significant effects on its key characteristics and even, in some cases, to transform it into a different landscape type.

Visual

1.2.4 Cumulative visual effects are the effects on views and visual amenity enjoyed by people, which may result either from adding the effects of the project being assessed to the effects of the other projects on the baseline conditions or from their combined effect. This may result from changes in the content and character of the views experienced in particular places due to introduction of new elements or removal of or damage to existing ones.

1.2.5 The distance between the visual receptors or viewpoints and the various projects does influence the magnitude of the cumulative visual effects and so feeds into judgements of their significance. Depending on the type of development it may be considered that more distant views are not likely to be significant.

1.2.6 As a number of separate developments must be considered, it is important to understand how these may be visually experienced.

1.2.7 At one viewpoint someone looking at the view in one direction may see all the projects at the same time, or someone turning through the whole 360 degrees may see different developments in different directions and sectors of the view in succession. This is referred to as Combined visibility.

1.2.8 Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially see the different developments revealed in succession as a series of sequential views. This is referred to as Sequential visibility.

[5] Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. The Landscape Institute and the Institute of Environmental Management and Assessment. 2013. P124.

1.2.9 Both types of experience need to be considered where they are relevant.

Combined Occurs when the observer is able to see two or more developments from one viewpoint.	In Combination	Where two or more developments are or would be within the observers arc of vision at the same time without moving their head.
	In Succession	Where the features appear regularly and with short time lapses between instances depending on speed of travel and distance between the viewpoints.
Sequential Occurs when the observer has to move to another viewpoint to see the same or different developments. Sequential effects may be assessed for travel along regularly used routes such as major roads or popular paths.	Frequently sequential	Where the features appear regularly and with short time lapses between instances depending on speed of travel and distance between the viewpoints
	Occasionally sequential	Where longer time lapses between appearances would occur because the observer is moving very slowly and/or there are larger distances between the viewpoints.

1.2.10 The approach to assessing the significance of cumulative visual effects should be guided by the same principles as the approach to the initial project assessment. It should consider the following criteria:

- *"the susceptibility of the visual receptors that have been assessed to changes in views and visual amenity;*
- *the value attached to the views they experience;*
- *the size or scale of the cumulative visual effects identified;*
- *the geographical extent of the cumulative visual effects identified;*
- *the duration of the cumulative visual effects, including the timescales relating to both the project being assessed and the other projects being considered, and the extent to which the cumulative effects may be considered reversible."* [6]

[6] Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. The Landscape Institute and the Institute of Environmental Management and Assessment. 2013. P132.

1.2.11 Higher levels of significance may arise from cumulative visual effects related to:

- *"developments that are in close proximity to the main project and are clearly visible together in views from the selected viewpoints;*
- *developments that are highly inter-visible, with overlapping ZTVs – even though the individual developments may be at some distance from the main project and from individual viewpoints, and when viewed individually not particularly significant, the overall combined cumulative effect on a viewer at a particular viewpoint may be more significant."* [7]

[7] Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. The Landscape Institute and the Institute of Environmental Management and Assessment. 2013. P132.

APPENDIX 8.1.4 – ZONE OF THEORETICAL VISIBILITY METHODOLOGY

1.1.1 For the purpose of this LVIA process in order to assist with viewpoint selection and to appreciate the potential influence of the proposed development in the wider landscape, preliminary ZTV plans were used. ZTV plans illustrate the area from where it may be theoretically possible to view all, or part, of the proposed development. The ZTV does not however, take account of the screening effects of buildings, localised landform and vegetation, unless specifically mentioned (see represented by individual figures within this LVA process). As a result, there may be roads, tracks and footpaths in the vicinity of the site and in the wider setting which, although shown as falling within the ZTV, are screened or filtered by banks, walls and vegetation which would otherwise preclude viewing opportunities.

1.1.2 The ZTVs provide a starting point in the assessment process and accordingly tend towards giving a 'worst case' or greatest calculation of the theoretical visibility.

1.1.3 Ordnance Survey Terrain dataset was used as the Digital Terrain Model (DTM) for the Bare Earth ZTV. This DTM is a 5 m by 5 m raster dataset that is representative of the landform across Great Britain.

1.1.4 The ZTV was produced using QGIS 3.20 software, and the calculations were based on the proposed development. The ZTV is created by highlighting areas on the DTM where a potential piece of the proposed development may be visible, based on the DTM.

1.1.5 A further augmented ZTV was also produced utilising visual National Tree mapping (NTM) which integrates the effects of vegetation on visibility. Specific viewpoints (for example, a key view from a specific visitor attraction);

- Illustrative viewpoints (chosen to demonstrate a particular effect/specific issue);
- Any important sequential views, for example, along key transport routes; and
- Any additional viewpoints that have been requested by consultees at Scoping.
- For the purpose of this LVIA process, all of the viewpoints were taken from publicly accessible land.

8.2 Landscape Character Tables

Yellow highlight indicates potential significant effects may be identified during final assessment process on landscape receptor.				
National Character Area (NCA) / Regional Landscape Character Types (RLCT) Key Characteritsics	**Cottam 1 (Site/Study Area)**	**Cottam 2 (Site/Study Area)**	**Cottam 3a (Site/Study Area)**	**Cottam 3b (Site/Study Area)**
NCA Profile: 45 Northern Lincolnshire Edge with Coversands (NE554)	/	/ SAO	/	/
Elevated arable landscape with a distinct limestone cliff running north–south, the scarp slope providing extensive long views out to the west.	/	/	/	/
Double scarp around Scunthorpe of ironstone, and extensive areas of wind-blown sand, the Coversands, giving rise to infertile soils supporting heathland, acid grassland and oak/birch woodlands, with rare species such as woodlark and grayling butterfly.				
Underlying limestone supporting small areas of calcareous grassland.				
Few watercourses on the plateau, which lies between the rivers Trent and Ancholme which flow into the Humber, and is cut through in the south by the River Witham.				
Semi-natural habitats of acid and calcareous grassland and broadleaved woodland are small and fragmented, and often associated with disused quarries.				
Limited woodland cover, with patches of both broadleaves and conifers associated with infertile sandy soils, elsewhere occasional shelterbelts.				
Long, straight roads and tracks, often with wide verges; Ermine Street follows the route of a key Roman north–south route.	/	/	/	/
Nucleated medieval settlement patterns following major routes, especially Ermine Street; sparse on higher land, with springline villages along the foot of the Cliff and some estates and parklands.	/	/	/	/
Other development comprises the major settlements of Lincoln and Scunthorpe, with their prominent landmarks of the cathedral and steelworks, and several active and re-used airfields prominent on the ridgetop.	/	/	/	/
Vernacular architecture and walling, especially in villages, of local warm-coloured limestone with dark brown pantiles.	/	/	/	/
Several ground features, especially on the plateau, include prehistoric burial mounds, Roman artefacts and abandoned medieval villages.	/	/	/	/
NCA Profile: 48 Trent and Belvoir Vales (NE429)	/	/	/ SAO	/ SAO
A gently undulating and low-lying landform in the main, with low ridges dividing shallow, broad river valleys, vales and flood plains. The mature, powerful River Trent flows north through the full length of the area, meandering across its broad flood plain and continuing to influence the physical and human geography of the area as it has done for thousands of years.	/	/	/	/
The bedrock geology of Triassic and Jurassic mudstones has given rise to fertile clayey soils across much of the area, while extensive deposits of alluvium and sand and gravel have given rise to a wider variety of soils, especially in the flood plains and over much of the eastern part of the NCA.	?	?	?	?
Agriculture is the dominant land use, with most farmland being used for growing cereals, oilseeds and other arable crops. While much pasture has been converted to arable use over the years, grazing is still significant in places, such as along the Trent and around settlements.	/	/	/	/
A regular pattern of medium to large fields enclosed by hawthorn hedgerows, and ditches in low-lying areas, dominates the landscape.	/	/	/	/
Very little semi-natural habitat remains across the area; however, areas of flood plain grazing marsh are still found in places along the Trent.				
Extraction of sand and gravel deposits continues within the Trent flood plain and the area to the west of Lincoln. Many former sites of extraction have been flooded, introducing new waterbodies and new wetland habitats to the landscape.				
Extensive use of red bricks and pantiles in the 19th century has contributed to the consistent character of traditional architecture within villages and farmsteads across the area. Stone hewn from harder courses within the mudstones, along with stone from neighbouring areas, also feature as building materials, especially in the churches.	/	/	/	/
A predominantly rural and sparsely settled area with small villages and dispersed farms linked by quiet lanes, contrasting with the busy market towns of Newark and Grantham, the cities of Nottingham and Lincoln, the major roads connecting them and the cross-country dual carriageways of the A1 and A46.	/	/	/	/
Immense coal-fired power stations in the north exert a visual influence over a wide area, not just because of their structures but also the plumes that rise from them and the pylons and power lines that are linked to them. The same applies to the gas-fired power station and sugar beet factory near Newark, albeit on a slightly smaller scale.	/	/	/	/
NCA Profile: 39 Humberhead Levels (NE339)			/ SAO	/ SAO
A low-lying, predominantly flat landscape, with large, regular and geometric arable fields without hedges but divided by ditches and dykes, many of which form important habitats and key corridors for species movement.				
Much of the land is at or below mean high-water mark and maintained by drainage, with fertile soils giving rise to one of the most productive areas for root crops and cereals.				
Variations in underlying deposits create differences within the overall flat farmed landscape, including lowland raised mires and lowland heathland, many of which are of international ecological and historical importance.				
Sandy deposits give rise to lowland heath, which in places supports remnant birch and oak woodlands, with some conifer plantations.				
Heavier soils around Fishlake and Sykehouse result in a smaller scale pastoral landscape, with small, thickly hedged fields, ditches and ponds, and a network of small lanes.				
Important historic landscapes include the Isle of Axholme, with evidence of mediaeval open fields, the warps (land enriched by regular silting) near Goole and cables (long thin strip fields) around Thorne.				
Widespread evidence of drainage history, in particular the extensive drainage from the 17th century, revealed through canalised rivers, dykes, old river courses, canals, bridges and pumping stations.				
Views to distant horizons are often long and unbroken, with big expansive skies, and vertical elements like water towers, power stations and wind turbines are very prominent.				
Floodplains, washlands and traditionally grazed alluvial flood meadows (or ings) associated with the major rivers and canals that cross the Levels give rise to important wetland habitats, supporting large numbers of wetland birds and wildfowl, especially over winter.				
The waterlogged soils hold internationally important archaeological and palaeo-archaeological deposits.				
Despite settlements, motorways and main roads, there is still a sense of remoteness to be experienced on the Levels, in particular on Thorne and Hatfield Moors and along the Lower Derwent Valley.				

Yellow highlight indicates potential significant effects may be identified during final assessment process on landscape receptor.				
National Character Area (NCA) / Regional Landscape Character Types (RLCT) Key Characteritsics	**Cottam 1 (Site/Study Area)**	**Cottam 2 (Site/Study Area)**	**Cottam 3a (Site/Study Area)**	**Cottam 3b (Site/Study Area)**
RLCT Profile: 2b Planned and Drained Fens and Carrlands (East Midlands)			/ SAO	/ SAO
Consistently low lying terrain and simple palette of land uses and landscape features gives visual unity and strong sense of identity.			/	/
Large scale open landscape of flat farmlands with extensive and uninterrupted vistas to distant horizons beneath vast skies.			/	/
18th and 19th century enclosure characterises historic landscape patterns underpinned by complex history of drainage and enclosure stretching as far back as the late Saxon period in some places.			/	/
Significant areas at or below sea level, with modestly elevated areas acting as the focus of settlement.			/	/
Hierarchy of canalised rivers, high level drains and ditches divide the landscape up into rigid geometric patterns, dictating the grain of the landscape and patterns of movement and settlement.			/	/
Limited settlement pattern characterised by isolated farms and linear villages strung out along roads; majority of buildings in brick with tile roofs, further adding to uniform character of the landscape.			/	/
Rich and varied arable land uses, root crops, bulbs, vegetables and horticultural glass houses give the landscape a highly productive character and seasonal variations in colour and texture.				
Strong sense of remoteness in expansive and sparsely settled areas although periods of intense activity during harvest.				
RLCT Profile: 3a Floodplain Valleys (East Midlands)	/ SAO)			
Deep alluvium and gravel deposits mask underlying bedrock geology to create wide, flat alluvial floodplains surrounded by rising landform of adjacent Landscape Character Types.	/			
River channels, often along managed courses, bordered by riparian habitat.	/			
Predominance of pastoral land use, with cereal growing increasing in some areas. 'Warping' areas subject to more intensive cereal growing.	/			
Limited woodland cover; however, steep riverside bluffs and areas close to settlement or on former gravel extraction sites notable for a higher level of woodland cover.	/			
Regular pattern of medium to large fields defined by hedgerows or post and wire fencing, breaking down and becoming open in some areas.				
Hedgerow and riverside trees important component of landscape. Alder, Willow and Poplar are typical riverside trees.				
Limited settlement and development in rural areas.	/			
Sewage Treatment Works and power stations common close to larger settlements that fringe the floodplains.	/			
Roads and communication routes often define the outer edges of the floodplain.	/			
Restoration of sand and gravel extraction sites to open water creates new character across many areas.				
RLCT Profile: 4a Unwooded Valleys (East Midlands)	/	/	/	/
Extensive, low lying rural landscape underlain by Triassic and Jurassic mudstones and clays and widespread superficial deposits.	/	/	/	/
Expansive long distance and panoramic views from higher ground at the margin of the vales gives a sense of visual containment.	/	/	/	/
Low hills and ridges gain visual prominence in an otherwise gently undulating landscape.	/	/	/	/
Complex drainage patterns of watercourses that flow within shallow undulations often flanked by pasture and riparian habitats.	/	/	/	/
Limited woodland cover; shelter belts and hedgerow trees gain greater visual significance and habitat value as a result.	/	/	/	/
Productive arable and pastoral farmland, with evidence of increasing reversion to arable cropping in recent times.	/	/	/	/
Regular pattern of medium sized fields enclosed by low and generally well maintained hedgerows and ditches in low lying areas; large modern fieldscapes evident in areas of arable reversion.	/	/	/	/
Sparsely settled with small villages and dispersed farms linked by quiet rural lanes.	/	/	/	/
RLCT Profile: 4b Wooded Valleys (East Midlands)	/ SAO	/ SAO	/ SAO	/ SAO
Gently undulating landform formed over soft mudstone and clay geology, sharing many characteristics with the wider Unwooded Vales Landscape Character Type.	/	/	/	/
Deposits of superficial geology, particularly cover sands and till influences local land use and semi-natural habitat cover.	/	/	/	/
Low hills and ridges gain visual prominence; elevated landform fringing vales give broad sense of containment.	/	/	/	/
Numerous watercourses flow within shallow undulations often flanked by pasture and riparian habitat.	/	/	/	/
Relatively high levels of woodland cover, with notable tracts of ancient semi-natural woodland along outer fringes of parishes and large coniferous plantations.	/	/	/	/
Productive arable and pastoral farmland, with evidence of increasing reversion to arable cropping.	/	/	/	/
Irregular shaped assarted fields marked by belts of trees and tall hedgerows, juxtaposed with regular pattern of medium sized fields associated with enclosure of land, with low and generally well maintained hedgerows and ditches in low lying areas.	/	/	/	/
Open, modern fieldscapes created by hedgerow removal in areas of arable reversion.	/	/	/	/

Yellow highlight indicates potential significant effects may be identified during final assessment process on landscape receptor.				
National Character Area (NCA) / Regional Landscape Character Types (RLCT) Key Characteritsics	**Cottam 1 (Site/Study Area)**	**Cottam 2 (Site/Study Area)**	**Cottam 3a (Site/Study Area)**	**Cottam 3b (Site/Study Area)**
RLCT Profile: 6a Limestone Scarps and Dipsolpes (East Midlands)	/ SAO	/ SAO		
Limestone escarpment and dip-slope with strong north south alignment.	/	/		
Diverse patterns of land use and regular spring line settlements along scarp in contrast to the more open and exposed dip slope.	/	/		
Limestone villages retain strong historic character, and provide strong link to the nature of the underlying geology.	/	/		
Ermine Street forms a significant feature of the landscape, and continues to dictate landscape patterns and boundaries.	/			
Place names and some indicator species are reminders of once widespread heathland.	?	?		
Evidence of declining landscape condition across intensively farmed areas.	/	/		
LLCA Profile: 1 Laughton Woods (West Lindsey)			/	
Flat, open agricultural landscape dominated by large conifer plantations.	/	/	/	/
Large, smooth textured fields, with few hedgerow or boundary fences, subdivided by a grid of drainage ditches.	/	/	/	/
Small blocks of deciduous woodland shelter belts and occasional individual oaks.	/	/	/	/
Settlements are 'islands' of buildings and trees in the flat landscape; churches and landmarks.	/	/	/	/
String of small settlements along the River Trent with few trees and no churches.	/	/	/	/
Panoramic views and big skies.	/	/	/	/
LLCA Profile: 2 Trent Valley (West Lindsey)				
Low-lying, gently undulating landform with higher terrain to east and south of Gainsborough.				
Significant blocks of deciduous woodland, good hedgerows and hedgerow trees create a relatively enclosed landscape.				
River Trent and its adjacent washlands are enclosed by steep flood embankments.				
Historic parkland landscape including a medieval deer park, and landmarks such as the ruins of Torksey Castle.				
Main roads are significant features in the landscape; recent development concentrated along the main road, bypassing original village centres.				
Views towards the west are dominated by the power stations along the River Trent.				
LLCA Profile: 3 The Till Vale (West Lindsey)	/	/	/	/
Agricultural landscape with large, flat open fields.	/	/	/	/
Some fields have low hawthorn hedgerows, with few hedgerow trees.	/	/	/	/
Small blocks of mixed woodland and shelter belts	/	/	/	/
Extensive network of rivers, dykes and ditches, which have little visual presence in the landscape.	/	/	/	/
String of small nucleated settlements on higher undulating grounds along a minor north south route; sequence of views to landmark churches.	/	/	/	/
Large farm buildings and individual farmhouse on flatter land to the east.	/	/	/	/
Ancient enclosure roads with characteric wide verges and hedgerow boundaries, paricularly in the east.	/	/	/	/
Long westward views to the power station on the River Trent, and eastward views to the scarp face of the Lincoln 'Cliff'.	/	/	/	/
LLCA Profile: 4 The Cliff (West Lindsey)				
Straight, limestone capped scarp slope, with a due north-south alignment.				
Diverse patterns of mixed pasture and arable land with good hedgerow boundaries.				
Springline villages at the foot of the scarp with historic character and many trees.				
Historic halls and associated parkland landscapes.				
Pond and lakes along the springline.				

8.3 Viewpoint Analysis Tables

Viewpoint	Location	Co-ordinates	Distance to Site (m) (distance to nearest site boundary)	Viewpoint Type: R - Representitive S - Specific	Represented Visual Receptors Eg, road, PRoW, Residential	Photograph Yes / No (Obtained / Not Obtained)	Cumulative Yes / No (List which Sites)		Field of view (90,180 or 360 Degree)	Quadrant	Photomontage Yes / No	AVR Level	Justification	Notes	Carried forward into EIA Yes / No	Viewpoint	Potential Significant Effects Yes / No
1	Tillbridge Lane	X=495419.484, Y=378364.362	4.02km	S	Road, Vantage Point	Yes (Obtained)	Yes	C1	180	C1-SE	Yes	AVR1	Specific View: location at a local well-used vantage point. Gateway from the south. First views over agricultural farmland to the north west of Lincoln. Viewpint observers, walkers and motorists. Multiple receptors.	Looking north west on Tillbridge Lane towards Cottam 1. Representative of views for walkers and motorists travelling by Middle Street. It is a locally important viewpoint.	Yes	1	No
2	Scmp/31/1	X=493860.094, Y=378854.825	2.5km	R	PRoW	Yes (Obtained)	Yes	C1	180	C1-SE	No	n/a	Representative View: location on PRoW network to SE of Cottam 1. Close to settlement of Scampton. Baseline annotated photo only.	Looking north west on Scmp/31/1 towards Cottam 1. Representative of views for walkers travelling between Roman Road and Scampton	No	2	No
3	Scmp/31/1	X=491140.541, Y=379645.244	1.02km	R	PRoW	Yes (Obtained)	Yes	C1/C2	360	C1-SW	No	n/a	Representative View: location on PRoW network to South of Cottam 1. Isolated location. Bridleway away from settlement, but close to road network. Baseline photo only. Baseline photo only. Potential to scope out.	Looking north on Scmp/31/1 towards Cottam 1. Representative of views for walkers, horse riders and motorists using the Bridleway and for residents at Tillbridge Farm.	No	3	No
4	Thorpe Lane, Bridge	X=492072.194, Y=380644.197	5m	S	Road	Yes (Obtained)	Yes	C1/C2	360	C1-SE	Yes	3	Specific View: location on local bridge crossing over watercourse. Well-used location to SE of Cottam 1 with a variety of receptors using the local road network. Close range and likely to yield significant effects.	Looking north on Thorpe Lane towards Cottam 1. Representative of views for walkers, horse riders and motorists on main road travelling between Sturton by Stow and Brattleby.	Yes	4	Yes
5	TLFE/31/2	X=491557.426 , Y=380679.320	0m	R	Road	Yes (Obtained)	Yes	C1/C2	360	C1-SW	Yes	3	Specific View: location on the local bridleway network leading from Thorpe le Fallows. There are a limited network of footpaths in this area. Close range and likely to yield significant effects.	Looking north on TLFe/31/2 towards Cottam 1. Representative of views for walkers, horse riders and motorists using the Bridleway.	Yes	5	Yes
6	Thorpe Lane	X=491225.185 , Y=380731.352	38.7m	S	Road, Residential	Yes (Obtained)	Yes	C1/C2	360	C1-SW	Yes	3	Specific View: of residential area to the south of Cottam 1. Small hamlet of Thorpe le Fallows with heriatge assets. War memorial off Thorpe Lane. Scheduled Monument. Residents and motorists. Close range and likely to yield significant effects.	Looking north on War Memorial off Thorpe Lane towards Cottam 1 sites. Representative of views for residents on Clandon House and motorists using Thorpe Lane.	Yes	6	Yes
7	Thorpe Bridge TLFe/32/1	X=490511.562 , Y=380652.148	9.1m	S	Road	Yes (Obtained)	Yes	C1/C2	360	C1-SW	Yes	3	Specific: Local bridge crossing over the watercourse. Pleasant views across the landscape. May yield potential signifcant effects.	Looking north on Thorpe Bridge , TLFe/32/1 towards Cottam 1 sites. Representative of views for walkers and motorists travelling on Fleets Road.	Yes	7	Yes
8	Stur/80/1	X=490092.694 , Y=380609.052	416.7m	R	PRoW	Yes (Obtained)	Yes	C1/C2	360	C1-SW	No	n/a	Representative: Wider context of Cottam 1 representing PRoW and public road network. Annotated baseline photo only.	Looking north east on Stur/80/1 towards Cottam 1. Representative of views for walkers travelling between Fleets Road and Thorpe Bridge.	Yes	8	No
9	Fleets Road, Stur/79/1	X=489363.428 , Y=380543.630	1143.5m	R	Road	Yes (Obtained)	Yes	C1/C2	360	C1-SW	No	n/a	Representative: Edge of Sturton by Stow. Potential to scope out.	Looking north east on Stur/79/1 towards Cottam 1 sites. Representative of views for walkers, motorists and residents on the eastern edge of the Sturton by Stow	No	9	No
10	Stur/73/1	X= 489959.305, Y=381294.928	40m	R	Road, PRoW	Yes (Obtained)	Yes	C1/C2	360	C1-SW	Yes	3	Representative: Intersection with local lane and PRoW. Local footpath network. May yield potential significant effects.	Looking north east on Stur/73/1 towards Cottam 1 sites. Representative of views for walkers and motorists using Fleets lane and footpath.	Yes	10	Yes
11	TLFe/31/2	X=491486.477, Y=381322.598	0m	R	PRoW	Yes (Obtained)	No	C1	90	C1-SW	No	n/a	Representative: Possible sequential cumulative effects. Annotated baseline photo only. Illustrative sections also suggested.	Looking south on TLFe/31/2 towards Cottam 1 sites. Representative of views for walkers and horse riders using the bridleway.	Yes	11	Yes
12	Camm/31/2	X=491406.094, Y=382043.800	14.7m	R	PRoW	Yes (Obtained)	No	C1	180	C1-SW	No	n/a	Representative: Possible sequential cumulative effects. Annotated baseline photo only. Illustrative sections also suggested.	Looking south west on Camm/31/1 towards Cottam 1 site. Representative of views for walkers and horse riders.	Yes	12	Yes
13	Fleets Lane, Stow Pasture	X=489796.401, Y=382096.138	0m	R	Road	Yes (Obtained)	No	C1	90	C1-SW	No	n/a	Representative: Possible sequential cumulative effects. Annotated baseline photo only. Illustrative sections also suggested.	Looking south on Fleets Lane near Stow pasture towards Cottam 1. Representative of views for walkers and motorists travelling on Fleets lane between Ingham Road and Fleets Road.	Yes	13	Yes
14	Ingham Road	X=489527.618, Y=382096.138	11.7m	R	Road	Yes (Obtained)	No	C1	90	C1-SW	Yes	3	Representative: Possible sequential cumulative effects. Annotated baseline photo only. Illustrative sections also suggested.	Looking north on route off Ingham Road, with public access, towards Cottam 1 site. Representative of views for walkers and riders.	Yes	14	Yes
15	Squire's Bridge	X=490397.706, Y=382378.984	39.4m	S	Road	Yes (Obtained)	No	C1	360	C1-SW	No	n/a	Specific: Local bridge crossing over the watercourse. Pleasant views across the landscape. Suggest replacement with LCC_VP_O. Provide annotated photography to decide if AVRs are necessary.	Looking south and north on Squire's Bridge towards Cottam 1. Representative of views for walkers and motorists on Ingham Road travelling between Stow, Ingham and Cammeringham.	TBC	15	No
16	Ingham Road, Furze Hill	X=490819.018, Y=382442.451	396.8m	R	Road	Yes (Obtained)	No	C1	180	C1-SW	No	n/a	Representative: Location within central part of Cottam 1. Similar to other views. Annotated Baseline photo only.	Looking south west on Ingham Road near Furze Hill towards Cottam 1 sites. Representative of views for walkers, motorists and residents travelling from Stow, Ingham and	Yes	16	No
17	Stow/83/1	X=490510.710, Y=382821.867	250.2m	S	PRoW	Yes (Obtained)	No	C1	180	C1-SW	Yes	3	Specific: Proximity to heriatge assets at Coates Hall. Set within central part of Cottam 1.	Looking west on Stow/83/1 towards Cottam 1. Representative of views for walkers travelling from Hall Farm to Ingham Road.	Yes	17	No
18	St Edith's Church and Coates Hill	X=490829.632, Y=383046.200	652.7m	S	Residential	Yes (Obtained)	No	C1	180	C1-SW	No	n/a	Specific: Proximity to heriatge assets at Coates Hall. Set within central part of Cottam 1. Provide annotated photography only.	Looking south east on St Edith's Church and Coates Hill towards Cottam 1 sites. Representative of views for residents living at Hall Farm and Coates Hall.	No	18	No
19	Bridge over River Till	X=489364.150, Y=382929.939	1.8m	S	PRoW	Yes (Obtained)	No	C1	90	C1-SW	No	n/a	Specific: Crossing point over watercourse. Provide annotated photography only. Possible significant effects.	Looking south east on Bridge ober River Till to Cottam 1 site. Representative of views for walkers.	Yes	19	Yes
20	Normanby Road	X=488241.321, Y=382936.139	11.2m	R	Road	Yes (Obtained)	No	C1	90	C1-SW	No	n/a	Representative: Strategic road network to west of Cottam 1. Provide annotated photography only. Possible significant effects.	Looking north on Normanby Road towards Willingham by Stow and Cottam 1. Representative of views for walkers, motorists travelling along Normanby Road and for residents on West Farm.	Yes	20	Yes

Viewpoint	Location	Co-ordinates	Distance to Site (m) (distance to nearest site boundary)	Viewpoint Type: R - Representitive S - Specific	Represented Visual Receptors Eg, road, PRoW, Residential	Photograph Yes / No (Obtained / Not Obtained)	Cumulative Yes / No (List which Sites)		Field of view (90,180 or 360 Degree)	Quadrant	Photomontage Yes / No	AVR Level	Justification	Notes	Carried forward into EIA Yes / No	Viewpoint	Potential Significant Effects Yes / No
21	Stow/83/1	X=492537.094, Y=383603.835	0m	R	PRoW	Yes (Obtained)	No	C1	360	C1-SE	Yes	3	Representative: Footpath passing through Cottam 3 Site. Provide annotated photography only. Possible significant effects.	Views in all directions towards Cottam 1. Significant views for walkers using PRoW. Viewpoint is in centre of Cottam 1 site.	Yes	21	Yes
22	Ingh/27/5	X=492839.906, Y=383067.011	424.3m	R	PRoW	Yes (Obtained)	No	C1	180	C1-SE	No	n/a	Representative: Footpath to SE of Cottam 3 Site. Provide annotated photography to decide if AVR is necessary.	Looking north west on Ingh/27/5 towards Cottam 1. Representative of views for walkers using the footpath to go to and from Long lane and Ingham Road.	TBC	22	No
23	Ingh/27/5	X=492869.227, Y=382672.081	117.7m	R	Road	Yes (Obtained)	No	C1	180	C1-SE	No	n/a	Representative: Footpath to SE of Cottam 3 Site. Provide annotated photography only.	Looking south and north west on Ingh/27/5 towards Cottam 1 sites. Representative of views for walkers, motorists and residents travelling on the footpath.	Yes	23	No
24	B1398	X=494804.942, Y=381860.858	1.5km	R	Road	Yes (Obtained)	No	C1	180	C1-SE	No	n/a	Representative: Local road network. Possible to scope out.	Looking west on B1398 towards Cottam 1. Representative of views for walkers, motorists and residents travelling between Cammeringham and Brattleby.	No	24	No
25	Stow Lane and Lincoln Road Crossroads	X=494921.433, Y=382797.156	1.6km	R	Road	Yes (Obtained)	No	C1	180	C1-SE	No	n/a	Representative: Local road network. Possible to scope out. Suggest replacement with LCC-VP-E. Potentially no view from here.	Looking south west on Stow Lane and Lincoln Road crossroads towards Cottam 1 sites. Representative of views for walkers, motorists and residents travelling between Ingham and Cammeringham	No	25	No
26	Ingh/24/2	X=494314.387, Y=383715.717	1.1km	R	Road, Residential	Yes (Obtained)	No	C1	180	C1-SE	No	n/a	Representative: Local road network. Possible to scope out. Suggest replacement with LCC-VP-F. Potentially no view from here.	Looking west on Ingh/24/2 towards Cottam 1. Representative of views for walkers, residents and horse riders on the northern edge of Ingham settlement	No	26	No
27	Junction of Church Hill and the B1398	X=495717.952, Y=383573.212	2.4km	R	PRoW	Yes (Obtained)	No	C1	180	C1-SE	No	n/a	Representative: Local road junction to east of Cottam 1. Possible to scope out.	Looking west on junction of Church Hill and the B1398 towards Cottam 1 sites. Representative of views for walkers travelling between Ingham and Fillingham.	No	27	No
28	Junction of Ingh/18/2, Ingh/18/1, Ingh/17/1 and Ingh/17/2	X=494754.677, Y=384250.495	1.3km	R	PRoW	Yes (Obtained)	No	C1	180	C1-NE	No	n/a	Representative: Lower lying area north of Ingham. Possible to scope out.	Looking west on junction of Ingh/18/2, Ingh/18/1, Ingh/17/1 and Ingh/17/2 towards Cottam 1. Representative of views for walkers travelling between Ingham and Fillington	No	28	No
29	Ingh/17/2 just off of B1398:	X=495651.361, Y=384336.638	2.2km	R	Road	Yes (Obtained)	No	C1	180	C1-NE	Yes	1	Representative: Part of ridgeline and open section of road.	Looking west on Ingh/17/2 just off the B1398 towards Cottam 1 sites. Representative of views for walkers using the foothpath and motorists using the road.	Yes	29	No
30	Junction of High Street and the B1398	X=495503.726, Y=385842.159	1.9km	R	Road	Yes (Obtained)	No	C1	180	C1-NE	Yes	1	Representative: Views for walkers, motorists, and residents. Part of the ridgeline and open section of road. Possible to scope out.	Looking west on junction of High Street and the B1398 towards Cottam 1 sites. Representative views for walkers, motorists and residents along the eastern edge of the	Yes	30	No
31	Fill/87/1 Just of Willingham Road	X=494672.679, Y=385292.36	1.3km	R	Road	Yes (Obtained)	No	C1	180	C1-NE	Yes	3	Representative: Views for walkers and motorists. Low-lying landscape to south of Fillingham. Possible to scope out.	Looking west on Fill/87/1 just off Willingham Road towards Cottam 1. Representative of views for walkers and motorists travelling from Fillingham, Glentworth and Ingham.	Yes	31	No
32	Fill/86/1	X=493420.739, Y=384840.108	0km	R	Road	Yes (Obtained)	No	C1	90	C1-NE	Yes	3	Representative: Views for walkers and horse riders. Possible illustrative sections. May yield potential significant effects.	Looking north on Fill/86/1 towards Cottam 1. Representative of views for walkers and horse riders travelling from Glentworth, Fillingham and Ingham.	Yes	32	Yes
33	Fill/86/1 off Willingham Road	X=493348.442, Y=385245.005	140m	R	Road	Yes (Obtained)	No	C1	90	C1-NE	Yes	3	Representative: Views for walkers, horse riders and motorists. Open views and low hedgerow.	Looking south on Fill/86/1 of Willingham Road towards Cottam 1. Representative of views for walkers, horse riders and motorists travelling between Glentworth, Fillingham and Ingham.	Yes	33	No
34	Fill/85/2	X=492753.160, Y=385714.443	300.4m	R	PRoW	Yes (Obtained)	No	C1	180	C1-NE	No	n/a	Representative: Views for walkers. Provide annotated photography to decide if AVRs are necessary.	Looking north, west and south on Fill/85/2 towards Cottam 1. Representative of views for walkers travelleing between Glentworth and Willingham by Stow.	TBC	34	No
35	Junction of Fill/85/1, Fill/85/2 and Fill/767/1	X=492518.553, Y=385766.805	388.8m	R	PRoW	Yes (Obtained)	No	C1	180	C1-NE	No	n/a	Views for walkers. Provide annotated photography to decide if AVRs are necessary.	Looking north east on Junction of Fill/85/1, Fill/85/2 and Fill/767/1 towards Cottam 1 sites. Representative of views for walkers travelling between Glentworth and Willingham by Stow.	TBC	35	No
36	Fill/767/1	X=492139.542, Y=385700.373	18.6m	R	PRoW	Yes (Obtained)	No	C1	180	C1-NE	Yes	3	Representative: May yield potential significanr effects. Possible illustrative sections.	Looking north west on Fill/767/1 towards Cottam 1. Representative of views for walkers along the footpath that leads from Glentworth to the eastern edge of Cottam 1 boundary and proposed development Next to North Farm.	Yes	36	Yes
37	Junction of Gypsy Lane and Willingham Road	X=490482.814, Y=385258.776	15.8m	R	Road	Yes (Obtained)	No	C1	90	C1-NW	Yes	3	Representative: May yield potential significanr effects. Possible illustrative sections.	Looking south east on junction of Gypsy Lane and Willingham Road towards Cottam 1. Representative of views for walkers, horse riders and motorists along both lanes	Yes	37	Yes
38	South Lane	X=489814.276, Y=384501.039	107.1m	R	Road	Yes (Obtained)	No	C1	180	C1-NW	No	n/a	Representative: Set back from lane and oblique view. Provide Annotated photo only.	Looking south west towards cottam 1. Representative of views for motorists and residents on South Lane and Lowfield Farm.	Yes	38	No
39	Junction of Cot Garth Lane and Stone Pit Lane	X=488433.302, Y=384316.388	43.9m	R	Road, Residential	Yes (Obtained)	No	C1	180	C1-NW	Yes	3	Representative: May yield potential signicant effects.	Looking south east on junction of Cot Garth Lane and Stone Pit Lane towards Cottam 1. Representative views for motorists and residents at south east edge of Willingham by Stow settlement.	Yes	39	Yes
40	Junction of Fillingham Lane and Stone Pit Lane	X=488300.788, Y=384670.032	357.9m	R	Road	Yes (Obtained)	No	C1	180	C1-NW	No	n/a	Representative: Provide annotated photo only.	Looking south east on junction of Fillingham Lane and Stone Pit Lane towards Cottam 1. Representative of views for motorists and residents at the eastern edge of Willingham by Stow settlement.	No	40	No
41	Gltw/85/1 just off Kexby Road	X=492261.662, Y=387137.371	574m	R	Road	Yes (Obtained)	No	C1	180	C1-NE	No	n/a	Representative: Provide annotated photo only.	Looking south on Gltw/85/1 just of Kexby Road towards Cottam 1. Representative view for walkers, horse riders, motorists and residents.	No	41	No

Viewpoint	Location	Co-ordinates	Distance to Site (m) (distance to nearest site boundary)	Viewpoint Type: R - Representitive S - Specific	Represented Visual Receptors Eg, road, PRoW, Residential	Photograph Yes / No (Obtained / Not Obtained)	Cumulative Yes / No (List which Sites)		Field of view (90,180 or 360 Degree)	Quadrant	Photomontage Yes / No	AVR Level	Justification	Notes	Carried forward into EIA Yes / No	Viewpoint	Potential Significant Effects Yes / No
42	Gltw/88/1	X=494733.355, Y=387215.547	1.4km	R	Road	Yes (Obtained)	No	C1	180	C1-NE	No	n/a	Representative: Provide annotated photo only.	Looking south west on Gltw/88/1 towards Cottam 1. Representative view for walkers and horse riders travelling along bridleway between Glentworth and Fillingham	No	42	No
43	Owmb/5/2 just off A15	X=496842.714, Y=386801.051	3.3km	R	Road	Yes (Obtained)	No	C1	180	C1-NE	No	n/a	Representative: Provide annotated photo only. Possible to scope out.	Looking west on Owmb/5/2 footpath just off the A15 towards Cottam 1. Representative of views for walkers, horse riders, motorists and residents.	No	43	No
44	Junction off School Lane and Chapel Lane	X=487728.346, Y=389815.546	1.7km	R	Road	Yes (Obtained)	No	C2	180	C2-SW	No	n/a	Representative: Provide annotated photo only. Possible to scope out.	Lookin north on junction of School Lane and Chapel Lane towards Cottam 2. Representative of views for walkers, motorists and residents at edge of Springthorpe Settlement.	No	44	No
45	A361	X=489828.572, Y=390811.981	1.1km	R	Road	Yes (Obtained)	No	C2	180	C2-SE	No	n/a	Representative: Provide annotated photo only.	Looking north west on A631 towards Cottam 2. Representative of views for walkers and Motorists on A631 travelling east from Harpswell.	Yes	45	No
46	Corringham Windmill	X=487934.901, Y=390915.989	679m	S	Road	Yes (Obtained)	No	C2	180	C2-SW	No	n/a	Representative: Provide annotated photo only.	Looking north on site of Corringham Windmill towards Cottam 2. Representative of views for walkers and motorists trvelling on the A631.	Yes	46	No
47	Junction of Mill Mere Road and Pilham Lane	X=486474.533, Y=391565.340	1.3km	R	Road	Yes (Obtained)	No	C2	180	C2-SW/ C3-SW	No	n/a	Representative: Provide annotated photo only.	Looking East on junction of Mill Mere Road and Pilham Lane towards Cottam 2. Representative of views for walkers and motorists trvalling east towards Corringham	No	47	No
48	East Lane	X=487424.782, Y=391590.817	352.6m	R	Road	Yes (Obtained)	No	C2	180	C2-SW/C3-SE	No	n/a	Representative: Provide annotated photo only.	Looking east on East Lane towards Cottam 2. Representative of views for walkers, motorists and residents on edge of settlement at Corringham.	Yes	48	No
49	East Lane	X=488129.283, Y=391576.050	25.7m	R	Road	Yes (Obtained)	No	C2	90	C2-SW/ C3-SE	No	n/a	Representative: Suggest illustrative sections. May yield potential significant effects.	Looking north on East Lane towards Cottam 2. Representative of views for walkers and motorists travelling between Corringham and Springthorpe.	Yes	49	Yes
50	Yawhthorpe	X=489641.418, Y=391851.859	533.9m	S	Road	Yes (Obtained)	No	C2	180	C2-SE/ C3-SE	Yes	3	Specific: From settlement of Yawthorpe. May yield potential significant effects.	Looking west on Yawthorpe towards Cottam 2. Representative views for walkers, motorists and residents on edge of farms.	Yes	50	Yes
51	wltn/13/1	X=492839.783, Y=393065.760	3.9km	R	PRoW	Yes (Obtained)	No	C2	360	C2-NE	No	n/a	Representative: Provide annotated photo only. Posible to scope out.	Looking south west on Wltn/13/1 towards Cottam 2. Representative of views for walkers and residents along edge of Blyborough.	No	51	No
52	Pilham Lane	X=486386.146, Y=392989.583	1.6km	R	Road	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-SW	No	n/a	Representative: Provide annotated photo only.	Looking north east on Pilham Lane towards Cottam 3. Looking south east on Pilham Lane towards Cottam 2. Representative views for walkers and motorists travelling between	No	52	No
53	Corr/22/1	X=487229.365, Y=392659.248	695m	R	PRoW	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-SE	No	n/a	Representative: Provide annotated photo only.	Looking north on Corr/22/1 towards Cottam 3. Looking south east on Corr/22/1 towards Cottam 2. Representative views for walkers travelling between Corringham and Aisby	Yes	53	No
54	Unnamed Road just north of Corringham Beck	X=487968.783, Y=392852.406	222m	R	Road	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-SE	Yes	3	Representative: Possible sequential cumulative effects with VP54, VP57, VP58 and VP59. May yield potential significant effects.	Looking north on unnamed road just north of Corringham Beck towards Cottam 3, looking south east towards Cottam 2. Representative of views for walkers and motorists.	Yes	54	Yes
55	Corr/22/1	X=486350.307, Y=393926.914	389.4m	R	Road, Residential	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-SW	No	n/a	Representative: Low-lying landscape at settlement edge. May yield potential significant effects. Provide annotated photo only.	Looking north east on Corr/22/1 towards Cottam 3. Looking south west on Corr/22/1 towards Cottam 2. Representative views of walkers motorists and residents just on edge of Pilham.	No	55	No
56	Pilh/20/1	X=486552.134, Y=394160.826	99.2m	R	PRoW, Residential	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-SW	Yes	3	Representative: Possible sequential cumulative effects with VP58. May yield potential significant effects.	Looking east on Pilh/20/1 towards Cottam 3. Looking south west on Pilh/20/1 towards Cottam 2. Representative views of walkers and residents.	Yes	56	Yes
57	Bonsdale Farm	X=487990.281, Y=393967.328	368.2m	R	Road	Yes (Obtained)	Yes	C2/C3	360	C2-NWC3-C3-SE	No	n/a	Representative: Provide annotated photo only.	Looking north west on Bonsdale Farm towards Cottam 3. Looking south on Bonsdale Farm towards Cottam 2. Representative views of walkers, motorists and residents.	Yes	57	No
58	Junction of Pilh/20/1 and Unnamed Road	X=488035.347, Y=394353.615	0m	R	Road	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-SE	Yes	3	Representative: Possible illustrative sections. May yield potential significant effects.	Looking north east on junction of Pilh/20/1 and Unnamed Road towards Cottom 3. Looking south towards Cottom 2. Representative of views for walkers and motorists.	Yes	58	Yes
59	Blyton Level Crossing	X=488027.550, Y=394953.612	7.8m	S	Road	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-SE	Yes	3	Specific; Crossing point over railway line. Possible illustrative sections. May yield potential significant effects.	Looking south west on Blyton Level Crossing towards Cottam 3. Representative views for walkers, motorists and trains.	Yes	59	Yes
60	Kirton Road	X=487737.216, Y=395275.786	1.8m	R	Road	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-NE	Yes	3	Representative: Possible illustrative sections. May yield potential significant effects.	Looking north on Kirton Road towards Cottam 3. Representative of views for motorists travelling between Blyton and Northorpe.	Yes	60	Yes
61	B1025	X=488089.981, Y=395583.382	13m	R	Road	Yes (Obtained)	Yes	C2/C3	360	C2-NW/C3-NE	Yes	3	Representative: Possible illustrative sections. May yield potential significant effects.	Looking west on B1025 towards Cottom 3. Representative of views for motorists travelling along Blyton and Northorpe.	Yes	61	Yes
62	Kirton Road	X=486096.784, Y=395097.127	120m	R	Road	Yes (Obtained)	No	C3	180	C2-NW/C3-NW	Yes	3	Representative: Potentially limited views. Suggest replacing with LCC-VP-T, which may yield potential significent effects.	Looking north east on Kirkton Road towards the edge of Cottam 3. Representative views for walkers, motorists and residents. Potentially limited view from here. Suggestion to replace with LCC-VP-T	Yes	62	Yes
63	Laughton Road	X=485745.953, Y=395842.397	48.5m	R	Road	Yes (Obtained)	No	C3	90	C2-NW/C3-NW	Yes	3	Representative: Provide annotated photograpgh to decide if AVR3 is needed.	Looking east on Laughton Road towards edge of Cottam 3. Representative views for walkers, motorists and residents travelling between Blyton and Laughton.	TBC	63	No

Viewpoint	Location	Co-ordinates	Distance to Site (m) (distance to nearest site boundary)	Viewpoint Type: R - Representitive S - Specific	Represented Visual Receptors Eg, road, PRoW, Residential	Photograph Yes / No (Obtained / Not Obtained)	Cumulative Yes / No (List which Sites)		Field of view (90,180 or 360 Degree)	Quadrant	Photomontage Yes / No	AVR Level	Justification	Notes	Carried forward into EIA Yes / No	Viewpoint	Potential Significant Effects Yes / No
64	A159	X=485971.797, Y=397758.500	1.6km	R	Road	Yes (Obtained)	No	C3	180	C3-NW	No	n/a	Representative: Potentially limited views. Suggest replacing with LCC-VP-V, which may yield better view. Provide annotated photo to decide of AVRs are necessary..	Looking South east long A159 towards Cottam 3. Representative view for walkers, motorists and residents. Pottentially limited viewfrom here. Suggestion to replace with LCC-C-V.	TBC	64	No
65	Scotton Common Nature Reserve	X=487335.526, Y=398465.975	1.5km	S	Road	Yes (Obtained)	No	C3	180	C3-NE	No	n/a	Specific: Local nature reserve. Provide annotated photography to decide if AVRs are necessary.	Looking south on Scotton Common Nature Reserve to Cottam 3. Representative view of walkers and motorists going between Laughton and Scotton.	TBC	65	No
66	Nthp/504/1	X=488214.991, Y=397346.868	724m	R	Road	Yes (Obtained)	No	C3	180	C3-NE	No	n/a	Specific: Local PRoW. Provide annotated photography to decide if AVRs are necessary.	Looking south west on Bthp/504/1 towarsds Cottam 3. Representative view of walkers, horse riders and motorists walking along the footpath to the Cottam 3 site and proposed	TBC	66	No
67	Monson Road	X=489513.185, Y=396978.939	1.7km	R	Road	Yes (Obtained)	No	C3	180	C3-NE	No	n/a	Specific: Local PRoW. Provide annotated photography to decide if AVRs are necessary.	Looking south west on Monson Road onto Cottam 3. Representative view for walkers motorists along Monson Road and for residents along the edge of Northorpe.	TBC	67	No
LCC-C-A	Ingham Road	X=488935.8381, Y=382122.8053	401.6m	S	Road	No	Yes	C1/WB4	360	C1-SW	Yes	3	Specific View: Sequential views along A15, which may be cumulative. Long distance views not considered to have significant effects.	Looking north and south towards Cottam 1 on Ingham Road at the eastern settlement edge of stow looking east.	Yes	LCC-C-A	No
LCC-C-B	PROW Stur/72/3	X=48898.3264, Y=381474.8614	1029.5m	S	PRoW	No	Yes	C1/WB4	360	C1-SW	No	n/a	Specific View: Edge of settlement. Delete. Replace with LCC-C-C.	Looking east/ north east on PROW Stur/72/3 and PROW Stow/72/1. The view is representative along the eastern settlement edges of Sturton by Stow and Stow across open fields in Cottam 1. Note- Could be removed as very similar to LCC-C-C	No	LCC-C-B	No
LCC-C-C	PROW Stur/73/1	X=489416.3886, Y=381123.2881	580m	S	PRoW	No	Yes	C1/WB4	360	C1-SW	No	n/a	Specific View: Edge of settlement. Provide annotated photography.	Looking east on PROW/73/1. The view is representative walkers using the footpath travelling east providing a vantage point across Cottam 1.	Yes	LCC-C-C	No
LCC-C-D	Blackthorn Lane	X=493330.2337, Y=382166.1129	31.2m	S	Road	Yes(Not Obtained)	No	C1	180	C1-SE	No	n/a	Specific View: Provide annotated photography.	Looking west on Blackthorn Lane looking west. The view is representative of walkers and travellers going west and have clear view of Cottam 1.	Yes	LCC-C-D	No
LCC-C-E	PROW Ingh/27/2	X=494565.0004, Y=382904.1922	1.3km	S	PRoW	Yes(Not Obtained)	No	C1	180	C1-SE	No	n/a	Specific View: Provide annotated photography.	Looking west on PROW Ingh/27/2 at intersection of Stow Lane. The view is representative of walkers who walk along the footpath with a clear view of Cottam 1.	Yes	LCC-C-E	No
LCC-C-F	PROW Ingh/24/1	X=493814.4307, Y=384405.1063	379.2m	S	PRoW	Yes(Not Obtained)	No	C1	360	C1-NE	No	n/a	Specific View: Mid range location. Provide annotated photography.	Looking north west on PROW Ingh/24/1 south east of the site. The view is representative of people travelling north west along this PROW.	Yes	LCC-C-F	No
LCC-C-G	PROW Fill/85/2	X=492862.3772, Y=385260.9004	28m	S	PRoW	Yes(Not Obtained)	No	C1	90	C1-NE	No	n/a	Specific View: Open location. Provide annotated photography.	Looking south west along PROW Fill/85/2 at intersection with Willingham Road. This view is representative of road and PROW users within a close range of Cottam 1	Yes	LCC-C-G	No
LCC-C-H	PROW Fill/767/1	X=492213.8595, Y=385500.0549	49.1m	S	PRoW	No	No	C1	90	C1-NE	No	n/a	Specific View: Picked up by VP36. Delete.	Looking south west along PROW Fill/767/1 at intersection with Willingham Road. This view is representative of road and PROW users within a close range and view of Cottam 1. Note- Could be removed as the viewpoint is ery similar to VP 36.	No	LCC-C-H	No
LCC-C-I	Willingham Road	X=4911.85.5962, Y=385270.9016	7.3m	S	Road	Yes(Not Obtained)	No	C1	90	C1-NW	No	n/a	Specific View: Picks up triangular field. Provide annotated photography.	Looking north and south on Willingham Road adjacent to Turnpin Bungalows. This view is representative of road users looking into the site within close proximity to the site	Yes	LCC-C-I	No
LCC-C-J	Fillingham Lane	X=490288.5220, Y=385165.6902	36.4m	S	Road	Yes(Not Obtained)	No	C1	90	C1-NW	No	n/a	Specific View: Provide annotated photography.	Looking south along Fillingham Road at gap in field boundary east of Ivy Cottage and Moor Bridge.	Yes	LCC-C-J	No
LCC-C-K	Fillingham Lane	X=488909.6574, Y=384809.1896	420.3m	S	Road	Yes(Not Obtained)	No	C1	180	C1-NW	No	n/a	Specific View: Provide annotated photography. To pick up on sequential views.	Looking south from Fillingham Lane east of Carisbrooke. Low hedgerows along this section of road allow for views across open fields to Cottam 1 site.	Yes	LCC-C-K	No
LCC-C-L	B1398	X=495224.8654, Y=387633.5489	2.04km	S	Road	Yes(Not Obtained)	No	C1	180	C1-NE	No	n/a	Specific View: Provide annotated photography. To pick up on wider views.	Looking south west along B1398 at Cliff Farm Cottages.The view is representetaive of road users having full panoramic view of Cottam 1.	Yes	LCC-C-L	No
LCC-C-M	Kexby Road	X=493712.0625, Y=387493.5985	767m	S	Road	Yes(Not Obtained)	No	C1	180	C1-NE	No	n/a	Specific View: Provide annotated photography. To pick up on elevated postion.	Looking south west along Kexby Road east of Northlands Road. The view is representative of Prow users having full view of the site due to the localised high point and low hedgerows.	Yes	LCC-C-M	No
LCC-C-N	Glentworth Road	X=490386.1627, Y=386466.8488	909.2m	S	Road	Yes(Not Obtained)	No	C1	180	C1-NW	No	n/a	Specific View: Provide annotated photography. To pick up on low hedgerows which give good understanding of setting.	Looking south east along Glentworth Road south of Heatons Wood. Low hedgerows along this section of the road allow for views across open fields to the site.	Yes	LCC-C-N	No
LCC-C-O	Glentworth Road	X=487836.7593, Y=385769.1971	1.5km	S	Road	Yes(Not Obtained)	No	C1	180	C1-NW	No	n/a	Specific View: Provide annotated photography. To pick up on gateway to Lincoln.	Looking west at the edge of Kexby to the site. The view is representative of road users and locals having clear view of Cottam 1 from the edge of the Kexby settlement.	Yes	LCC-C-O	No
LCC-C-P	Corringham Beck	X=487450.5359, Y=392339.4390	320.5m	S	Road	No	Yes	C2/C3	180	C2-NW	Yes	3	Specific View: To pick up on gaps in hedgerows that provide framed views.	Looking east along Corringham Beck towards edge of Cottam 2. The view is representetive of road users seeing the site through gaps in low hedgerows.	Yes	LCC-C-P	No
LCC-C-Q	Junction at Temple Field Road and Yawthorpe Road	X=490064.9705, Y=391482.8925	1.03km	S	Road	Yes(Not Obtained)	No	C2	180	C2-SE	No	n/a	Specific View: Provide annotated photography.	Looking north west on junction of Templefield Road and Yawthorpe Road. The view is representative of Road users viewing Cottam 2 through arable fields.	Yes	LCC-C-Q	No

Viewpoint	Location	Co-ordinates	Distance to Site (m) (distance to nearest site boundary)	Viewpoint Type: R - Representitive S - Specific	Represented Visual Receptors Eg, road, PRoW, Residential	Photograph Yes / No (Obtained / Not Obtained)	Cumulative Yes / No (List which Sites)		Field of view (90,180 or 360 Degree)	Quadrant	Photomontage Yes / No	AVR Level	Justification	Notes	Carried forward into EIA Yes / No	Viewpoint	Potential Significant Effects Yes / No
LCC-C-R	A159	X=484763.4122, Y=393878.5384	1.9km	S	Road	Yes(Not Obtained)	No	C3	180	C3-SW	No	n/a	Specific View: Provide annotated photography.	Looking east and north east from A159.	No	LCC-C-R	No
LCC-C-S	PROW Blyt/24/1	X=485740.0743, Y=394354.3951	906m	S	PRoW	Yes(Not Obtained)	No	C3	180	C3-SW	No	n/a	Specific View: Provide annotated photography.	Looking east and north east from PROW Blyt/24/1. The view is representative of walkers using the footpath and having clear view of Cottam 3.	Yes	LCC-C-S	No
LCC-C-T	Kirton Road	X=486213.8268, Y=395116.8030	5.4m	S	Road	No	No	C3	90	C3-NW	Yes	3	Specific View: Local road network running east to west.	Looking north along Kirton Road towards the edge of Cottam 3. The view is representative of road users having clear view of the site.	Yes	LCC-C-T	No
LCC-C-U	PROW Blyt/32/1	X=485193.6798, Y=395924.6746	587.2m	S	PRoW	Yes(Not Obtained)	No	C3	180	C3-NW	No	n/a	Specific View: Provide annotated photography.	Looking east along PROW Blyth/32/1 towards Cottam 3. The view is representative of walkers having glimpsed views to the site and proposed development.	Yes	LCC-C-U	No
LCC-C-V	Dring Lane	X=485988.1715, Y=396960.1986	1.25km	S	Road	Yes(Not Obtained)	No	C3	180	C3-NW	No	n/a	Specific View: Provide annotated photography.	Looking south on Dring Lane towards Cottam 3. The view is representative of road users and local people having clear view of the site and proposed development to the south of them.	Yes	LCC-C-V	No
LCC-C-W	Northorpe Road	X=489579.6137, Y=397707.3248	2.04km	S	Road	Yes(Not Obtained)	No	C3	180	C3-NE	No	n/a	Specific View: Provide annotated photography.	Looking south west on Northorpe Road towards Cottam 3. The view is representative of road users having a long distance glimpse of the site and proposed development, due to gaps in low hedgerows and localised high point.	Yes	LCC-C-W	No
LCC-C-X	Scotton Nature Reserve			S	Road		No	C3	180	C3-NE	No	n/a	Specific View: Provide annotated photography.	Looking south from nature reserve towards Cottam 3. The view is representative of distant receptors.	No	LCC-C-X	

8.4 Consultation and Responses

[redacted]

From: [redacted]
Sent: 03 May 2022 12:33
To: [redacted]
Subject: FW: NSIP West Burton and Cottam Solar Project viewpoint Information
Attachments: Cottam and West Burton Solar_TM01_Landscape Meeting on 07-03-22.pdf

[redacted]
[redacted]

[redacted]
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From: [redacted]
Sent: 17 March 2022 16:33
To: [redacted]
Cc: [redacted]
Subject: RE: NSIP West Burton and Cottam Solar Project viewpoint Information

All

Please find attached a brief memo following our visual amenity/viewpoint discussions last week. We are out on site this week and will subsequently provide additional information and feedback in due course. We'll be in touch again next week to organise any follow up discussions.

Please let me know if you have any comments on the attached.

Regards

[redacted]

AAH consultants

[redacted]

[redacted]

[redacted]

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AAH Consultants

From: [redacted]
Sent: 10 March 2022 12:02
To: [redacted]
Cc: [redacted]
Subject: RE: NSIP West Burton and Cottam Solar Project viewpoint Information

Morning [redacted],

Thank you for your email.

Please see a couple of responses in blue below.

I'm just organising the team at our end to send through preferred dates. I think currently there is a preference of the 31st but I will confirm shortly.

Kind regards,

[redacted]

[redacted]
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From: [redacted]
Sent: 10 March 2022 10:18
To: [redacted]
Cc: [redacted]
<[redacted]
Subject: RE: NSIP West Burton and Cottam Solar Project viewpoint Information

Morning [redacted]

Thank you for the email and information. I'll go through today and let you know if we need anything else at the moment. We'll be out on Site most of next week, so will contact you following this for some initial feedback, the next steps and meetings/workshops – but obviously happy for you to get anything set up in the meantime to expedite the process.

I think it would be beneficial to all of us to have a coordinated approach between yourselves, AAH/LCC and Nottinghamshire CC (and district councils once on board) – I'm happy for you to forward my contact details and we can get the workshop set up. I'm assuming Nottinghamshire has either an in house LA or has a consultant already lined up? Yes they have appointed Via East Midlands who I believe Nottinghamshire work with regularly. Via are also representing Battestlaw Council which is helpful. I will pass on your email and send there's to you if they are happy for me to do the same. We can also have discussions with Nottinghamshire CC separately as required.

After our meeting on Monday, I have also approached AECOM in regards to having a coordinated landscape and visual meeting/workshop including them so we can include the Gate Burton site as appropriate. [redacted] at AECOM is leading the landscape work at Gate Burton: [redacted] Brilliant. We will make contact with the team at AECOM also.

As an initial guide, for the rest of this month I currently have availability Mondays 21st and 28th, Tuesdays 22nd and 29th, Wednesday 30th, Thursdays 24th and 31st generally any time between 8am and 5pm.

Regards

[redacted]

AAH consultants

[redacted]

[redacted]

[redacted]

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AAH Consultants

From: [redacted]
Sent: 08 March 2022 11:53
To: [redacted]
Cc: [redacted]ss [redacted]
Subject: NSIP West Burton and Cottam Solar Project viewpoint Information

Dear [redacted]

Thank you for meeting with us yesterday to discuss the West Burton and Cottam NSIP solar projects.

As promised please see the Viewpoint figures and associated shapefiles for both schemes.

https://we.tl/t-yrtcGaLNhO

If you have any issues with the files please let me know.

[redacted]

We also had a meeting with Nottinghamshire County Council this morning who confirmed they would be happy to coordinate with yourself with regards to viewpoints and methodology if you are still happy to do so? Following your site visits we were hoping to do a workshop with you both potentially, as mentioned on our call.

I also just wanted to confirm is there a way you would prefer to coordinate with Nottinghamshire County Council or if you would be happy for me to pass on your email?

Kind regards,

[redacted]

[redacted]
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[redacted]

From: [redacted]
Sent: 03 May 2022 12:34
To: [redacted]
Subject: FW: NSIP Cottam Solar Project viewpoint comments
Attachments: Cottam Solar_TM02_Viewpoint Comments 29-03-22_FULL.pdf

[redacted]

[redacted]
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From: [redacted]
Sent: 29 March 2022 16:51
To: [redacted]
Cc: [redacted]
Subject: NSIP Cottam Solar Project viewpoint comments

All

Please find attached our initial viewpoint comments for Cottam Solar.

As per our previous email for West Burton, we would suggest we discuss the content of these comments at the impending workshop to refine and agree as far as we are able to at this stage and further heritage comments on the viewpoints to follow once these are available.

Please let me know if you have any initial comments or queries on the attached.

[redacted]

Regards

[redacted]

AAH consultants

[redacted]

[redacted]

[redacted]

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AAH Consultants

[redacted]

From: [redacted]
Sent: 03 May 2022 12:31
To: [redacted]
Subject: FW: West Burton and Cottom: LVIA Workshop 2
Attachments: LVIA Workshop Questionnaire A - Assessment Methodology - Cot.docx; LVIA Workshop Questionnaire A - Assessment Methodology - WB.docx; LVIA Workshop Questionnaire B - Visual Receptors - Cot.docx; LVIA Workshop Questionnaire B - Visual Receptors - WB.docx; LVIA Workshop Questionnaire C - Landscape Receptors - Cot.docx; LVIA Workshop Questionnaire C - Landscape Receptors - WB.docx; 2981 _LVIA_v1_0_WW_ 20220412_Cottam Meeting Minutes.docx

Consultation emails now to follow

[redacted]

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From: [redacted]
Sent: 12 April 2022 23:04
To: [redacted]
Cc: [redacted]
Subject: West Burton and Cottom: LVIA Workshop 2

Hello Oliver,

Email 1 of 2

West Burton and Cottam: LVIA Workshop 2

Thank you for attending the Cottam LVIA Workshop 2 last Thursday 7th April in support of the forthcoming PEIR stage. We trust you found the event helpful and informative and we duly attach minutes for LCC comment and approval.

We also attach the following workshop questionnaires covering the full suite of topics under discussion in this round of consultation relating to the preparation of the LVIA for both the West Burton and Cottam sites:

- Questionnaire A: Assessment Methodology - Cottam
- Questionnaire A: Assessment Methodology - West Burton
- Questionnaire B: Visual Receptors - Cottam (The majority of this topic was discussed at Workshops 1 and 2, but we have attached the sheet for completeness)
- Questionnaire B: Visual Receptors - West Burton (The majority of this topic was discussed at Workshops 1 and 2, but we have attached the sheet for completeness)
- Questionnaire C: Landscape Receptors - Cottam
- Questionnaire C: Landscape Receptors - West Burton

Can you therefore complete each of the above questionnaires by Tuesday 26th April, if possible.

We are seeking in particular, the approval of the *Assessment Methodology*, comments on the *Landscape Receptors* and any outstanding matters that LCC consider could be taken forward into the LVIA baseline. Can you also please provide comments on the extent of the *Study Areas* and those LCAs that play 'host' to the landscape and visual receptors within these areas. We also require comments on the *Cumulative Sites* please.

If you have any further questions, please do not hesitate to give me a call.

[redacted]

[redacted]
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[redacted]

From: [redacted]
Sent: 03 May 2022 12:33
To: [redacted]
Subject: FW: West Burton / Cottam NSIP Solar Project Consultation

[redacted]

[redacted]
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From: [redacted]
Sent: 27 April 2022 11:04
To: [redacted]
Cc: [redacted]
Subject: RE: West Burton / Cottam NSIP Solar Project Consultation

Dear [redacted]
Thanks very much for this.
We've decided not to take up your kind offer of a meeting, but thank you for thinking of us.
Kind regards.
[redacted] Chesterfield Canal Trust.

From: [redacted]
Sent: 07 April 2022 17:30

To: [redacted]

Subject: RE: West Burton / Cottam NSIP Solar Project Consultation

Dear [redacted]

Please see a wetransfer below to the scoping submission and comments from the Canal Trust.

https://we.tl/t-IM99smXUXj

I've also attached a pdf with additional viewpoints requested by Nottinghamshire County Council for completeness.

Please let us know if you have any issues/ queries.

Kind regard[redacted]

[redacted]

[redacted]

[redacted]

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From: [redacted]
Sent: 05 April 2022 18:11
To: [redacted] <[redacted]
Cc: [redacted]
Subject: RE: West Burton / Cottam NSIP Solar Project Consultation

Dear [redacted]
Thanks very much for this.
It would be very helpful if you could forward your initial scoping report and the scoping response from the Canal and River Trust.

Kind regards.
[redacted]

From: [redacted]
Sent: 05 April 2022 15:53
To: [redacted]
Cc: [redacted]
Subject: RE: West Burton / Cottam NSIP Solar Project Consultation

Dear [redacted]

Apologies for the delayed response. Your email sadly went into my Junk folder.

Please see attached Site location plans showing the wider solar projects and a more detailed plan of one of the Sites, located just north of Chesterfield Canal. The naming of the projects is related to where the solar schemes would feed into the Grid at both Cottam / West Burton Power Stations following their decommissioning.

We are also consulting with the Canal and River Trust and hoping to meet with them in the coming weeks. So far they have asked us to consider some additional viewpoints within our Landscape and Visual Impact Assessment (LVIA) in order to assess any effects of the proposed development upon the Canal. The LVIA will from part of the overall Environmental Statement submitted as part of the final Planning application.

If you think it would be beneficial for me to send on our initial scoping report which outlines views and receptors such as the Canal which we intend to assess, please let me know. I can also send on the scoping response from the Canal and River Trust if this is beneficial?

Please let me know if you would like me to pass on any further information and if you would like to have a meeting to discuss any additional viewpoints/ information you would like us to consider within our assessment.

Kind regards

[redacted]

[redacted]
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From: [redacted]
Sent: 29 March 2022 18:54
To: [redacted] co.uk>
Subject: RE: West Burton / Cottam NSIP Solar Project Consultation

Dear [redacted]
Thank you very much for this, but I confess that I'm at a loss as to know why we would be involved.
I presume that they footprint of the solar projects would be within that of the current power station.
Unless I'm very much mistaken, the projects are nowhere near the canal and are unlikely to affect it in any way.
If I am wrong, then please let me know.
Thanks again.
[redacted] Chesterfield Canal Trust.

From: [redacted]
Sent: 29 March 2022 10:24
[redacted]
Subject: West Burton / Cottam NSIP Solar Project Consultation

Hello,

My name is [redacted] I am a senior Landscape Architect at Lanpro.

I am emailing on behalf of IGP our client, with regards to the proposed West Burton and Cottam Solar Projects. It has been suggested by Bassetlaw District Council to consult with you regarding the Solar projects and more specifically landscape and visual concerns.

I was wondering if the Chesterfield Canal Trust would like to meet either on Site or via a teams call to discuss any concerns or things you would like us to consider within the Landscape and Visual Impact Assessment chapter of the Environmental Impact Assessment?

Kind regards,

[redacted]

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From: [redacted]
Cc: [redacted]

Subject: RE: West Burton and Cottom: LVIA Workshop 2
Date: 05 May 2022 18:31:44
Attachments: image002.png
image003.png
image004.png
image005.png
image006.png
image008.png
image033.png
image034.png
image035.png
image036.png
LVIA Workshop Questionnaire C - Landscape Receptors - Cot_AAH.pdf
LVIA Workshop Questionnaire A - Assessment Methodology - Cot_AAH.pdf
LVIA Workshop Questionnaire A - Assessment Methodology - AAH.pdf
LVIA Workshop Questionnaire C - Landscape Receptors - AAH.pdf

---

Afternoon [redacted]

As requested, please find attached our responses to your Cottam and West Burton LVIA questionnaires.

Please let me know if you need any additional information at this stage. Please note, I will now be on leave until 23rd May and will be able to respond to any queries or requests then.

If anything is urgent over the next couple of weeks, please contact my colleague [redacted] who is copied into this email.

Regards

[redacted]

AAH consultants

[redacted]

[redacted]

[redacted]

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AAH Consultants

From: [redacted]
Sent: 03 May 2022 11:26
To: [redacted]

[redacted]

Subject: RE: West Burton and Cottom: LVIA Workshop 2

Good Morning [redacted]

Thank you for the update on progress and the endeavour to provide feedback as soon as possible.

A response by Friday 13 May would be very much appreciated as we are now starting to plan for the phase two consultation by which time we would hope to have made final decisions about key aspects of the LVIA through consultation with Lincolnshire County Council.

In the meantime, if you have any further questions or need clarification on any matters, please do not hesitate to get in touch.

Regards

[redacted]

[redacted]
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From: [redacted]
Sent: 20 April 2022 11:31
To: [redacted]
Cc: [redacted]
Subject: RE: West Burton and Cottom: LVIA Workshop 2

Morning [redacted]

Thanks you for forwarding the information. We are going through it now, however it is very unlikely we will be able to provide detailed feedback by the 26th April. We will endeavour to provide this as soon as we are able and will provide an update later next week.

Regards

[redacted]

[redacted author block]

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From: [redacted]
Sent: 12 April 2022 23:04
To: [redacted]
Subject: West Burton and Cottom: LVIA Workshop 2

Hello [redacted]

Email 1 of 2

West Burton and Cottam: LVIA Workshop 2

Thank you for attending the Cottam LVIA Workshop 2 last Thursday 7th April in support of the forthcoming PEIR stage. We trust you found the event helpful and informative and we duly attach minutes for LCC comment and approval.

We also attach the following workshop questionnaires covering the full suite of topics under discussion in this round of consultation relating to the preparation of the LVIA for both the West Burton and Cottam sites:

- Questionnaire A: Assessment Methodology - Cottam
- Questionnaire A: Assessment Methodology - West Burton
- Questionnaire B: Visual Receptors - Cottam (The majority of this topic was discussed at Workshops 1 and 2, but we have attached the sheet for completeness)
- Questionnaire B: Visual Receptors - West Burton (The majority of this topic was discussed at Workshops 1 and 2, but we have attached the sheet for completeness)
- Questionnaire C: Landscape Receptors - Cottam
- Questionnaire C: Landscape Receptors - West Burton

Can you therefore complete each of the above questionnaires by Tuesday 26th April, if possible.

We are seeking in particular, the approval of the *Assessment Methodology*, comments on the *Landscape Receptors* and any outstanding matters that LCC consider could be taken forward into the LVIA baseline. Can you also please provide comments on the extent of the *Study Areas* and those LCAs that play 'host' to the landscape and visual receptors within these areas. We also require comments on the *Cumulative Sites* please.

If you have any further questions, please do not hesitate to give me a call.

[redacted]

[redacted]

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Workshop 2

Lincolnshire County Council

Cottam

LVIA Questionnaire A

Assessment Methodology

1	Do you have any comments and feedback on the scope of the Assessment Methodology which will form the basis for the assessment of the landscape and visual effects in the LVIA?
	Comments are based on information made available, and is primarily based upon the of the *Cottam Solar Project EIA Scoping Report (January 2022), Chapter 7: Landscape and Visual.* While the comments below are focussed on the methodology presented at section 7.4 of the Scoping Report, they also include general comments on the project from a landscape and visual perspective. **General Comments** The LVIA should be undertaken by suitably qualified personnel and carried out to the third edition of *Guidelines for Landscape and Visual Impact Assessment* (GLVIA3) by the Landscape Institute and IEMA, and relevant updates and Technical Guidance Notes (TGNs) produced by the Landscape Institute (LI), such as the recently published LI *TGN 2/21 Assessing landscape value outside national designations*. The methodology provided at *Section 7.4* of the *Cottam Solar Project EIA Scoping Report (January 2022)* is typical of those used for ES Chapters and standalone LVIA's where potential significant effects can be considered and generally reflects the guidance in GLVIA3. 5km (from site boundaries) provides a reasonable study area and would include more sensitive receptors in the area such as Laughton AGLV, Ridge AGLV, and Gainsborough AGLV, settlements to the east along the Limestone Escarpment and the Scampton viewing area, but the LVIA should also provide a clear statement on the justification for the extent of the study area and confirm that receptors beyond 5km would not be affected. This is particularly relevant to PROW and villages in an elevated position along the limestone escarpment such as Grayingham, Blyborough, and Kirton in Lindsey that may have views of the development. At this stage, we cannot comment on, or agree the study area (currently proposed as 500m at para. 7.1.9 of the Scoping Report) for any offsite cable runs until the final option is selected. Section 7.4 does not contain criteria and thresholds of **Susceptibility** and **Value** to inform the LVIA judgements, or how these would be combined (potentially as a matrix) to assess

Sensitivity, as required by GLVIA3. Including these would assist in transparency and provide a consistent approach as to how the Sensitivity of a receptor has been arrived at.

Landscape

In regards to the *Low* category of *Table 7.1 Sensitivity of Landscape Receptors* of the Scoping Report, in regards to power lines: The presence of power lines does not necessarily create *low* landscape sensitivity as there are examples of valuable, high sensitivity landscapes that are intercepted by power lines at local, national and international level, due to their landscape characteristics and attributes.

Published landscape character areas have been identified, however to align with GLVIA3 the LVIA should include an assessment of landscape effects at a range of scales and we would expect the assessment to include a finer grain landscape assessment that includes the Site and immediate area and that also considers individual landscape elements such as trees and hedgerows, woodlands, ponds/water features, or historic landscape features: The LVIA should include an assessment of the potential impacts of the development on local landscape features and the local landscape character.

It would be useful to take into account the information collated as part of the Historic landscape characterisation project: *The Historic Character of The County of Lincolnshire (September 2011)*, to ensure that the development is sensitive to the historic landscape. The relevant section for Cottam is TVL 1 – The Northern Cliff Foothills. The project documents and the mapping can be accessed here: Historic Landscape Characterisation – Lincolnshire County Council

An HLF funded Landscape Partnership was carried out in the Trent Vale area in 2007-2013: the archived website is here: Trent Vale Landscape Partnership. It would be useful to have an assessment of how the proposed developments will address the relevant priorities outlined in the reports:

- *Trent Vale Landscape Conservation Management Plan (June 2013).*
- *Trent Vales Landscape Character Assessment:* http://www.trentvale.co.uk/downloads/landscapecharacter.pdf

Visual

Visual receptors should also include potential users of waterways (boats), leisure cyclists and train users. Currently only road users, walkers, horse riders and residents are identified. Having visited site over the period of several days, we have observed that while many of the lanes and tracks within the study area are rural and remote in character and primarily used for motor vehicles and farm access, they are also well used by dog walkers, horse riders and leisure cyclists, and subsequently the assessment should consider this within the methodology. The presence of several well-tended benches and grass verges with swathes of spring bulb planting reinforce the local value of these networks beyond being road access, which also provide suitable PROW connections for walkers improving the connectivity of the wider recreational footpath network.

Para. 7.4.29 (RVAA) of the Scoping Report: The assessment process is unclear, for clarity, we would expect that steps 1-3 would be carried out and all phases assessed (as typical of an LVIA): construction; Operation (Year 1); and Operation (Year 15), and not just year 15

(residual). Then, as stated in para. 7.4.29, if at year 15 there remain significant effects of the highest magnitude, a RVAA would be undertaken for those affected properties.

The ZTV methodology utilises a proposed height of 4.5m, however does not contain details of the dimensions of all structures which will form part of the development, such as battery storage or sub stations. Consequently, the ZTV may be unrepresentative of the full extent of visibility and the ZTV should clearly demonstrate the full extent of the proposed development stating what has been included and the ultimate height/scale.

A full methodology of photography, photomontages and presentation should be provided that aligns with LI TGN 06/19. This should include full details of the elements that have been modelled (Solar Arrays, sub station etc.)

From a Listed Building and Scheduled Monument perspective, we would like to see the intervisibility with each of the designated assets (or groups of assets) within the study area be reviewed and evaluated as part of the study, and where appropriate the steps to mitigate the impact need to be set out. There are potential long distance views to Lincoln Cathedral and Lincoln Castle. While Lincoln lies approximately 9.0km to the south east of Cottam 1, the intervisibility between the Site and study area of these nationally important Grade I listed buildings needs to be assessed: admittedly these would be from a long distance, however due to the scale of the development (particularly cumulatively), and the elevated positions of these buildings, is such that it should be considered.

Cumulative impacts
Cumulative Landscape and Visual Impacts should be assessed, particularly in regards to the West Burton Solar Project and Gate Burton Energy Park.

Mitigation and Layout
As this is an iterative process, and the baseline elements are still being defined, at this stage we are not providing comment on any potential mitigation or layout of the development. We would expect this to be covered at forthcoming meetings/workshops. However, best practice guidance, relevant published landscape character assessments and District and County Council Policy and Guidance shall be referred to and implemented as appropriate. We would also expect the landscape and planting scheme is coordinated with other relevant disciplines, such as Heritage, ecology or civils (e.g. SuDS features), to improve the value of the landscape and reflect appropriate local and regional aims and objectives. The assessment and proposals should set out the measures to be taken to ensure the development will deliver high standards of design and green infrastructure, setting out the justification of the selected design in terms of landscape. Any Landscape Scheme and associated Outline Management Plan should accompany the LVIA.

The development of Solar provides the opportunity for enhancing the ecological and landscape value of an area. However, as the majority of the proposed development is on agricultural land, and is temporary (40 years), we would expect that any landscape and ecological mitigation ensures the future return to agricultural uses is not overly onerous, and any new field patterns (from new hedgerow and tree planting) are still of a scale and shape to be useable in the future, and any ground cover planting (such as meadow grasses and/or wildflowers) do not require excessive soil modification, ensuring availability for future agricultural uses.

Workshop 2

Lincolnshire County Council

Cottam 1,2 and 3

LVIA Questionnaire C

Landscape Receptors

1	Do you have any opinions on the scope of the Study Area which will form the basis for the assessment of the landscape effects in the LVIA?
	5km (from site boundaries) provides a reasonable study area and would include more sensitive receptors in the area such as Laughton AGLV, Ridge AGLV, and Gainsborough AGLV, settlements to the east along the Limestone Escarpment and the Scampton viewing area, but the LVIA should also provide a clear statement on the justification for the extent of the study area and confirm that receptors beyond 5km would not be affected. This is particularly relevant to PROW and villages in an elevated position along the limestone escarpment such as Grayingham, Blyborough, and Kirton in Lindsey that may have views of the development. At this stage, we cannot comment on, or agree the study area (currently proposed as 500m at para. 7.1.9 of the Scoping Report) for any offsite cable runs until the final option is selected.
2	Are there any individual components that you can you identify within the Site which you consider to be material to the assessment process of the landscape effects in the LVIA?
	Published landscape character areas have been identified, however to align with GLVIA3 the LVIA should include an assessment of landscape effects at a range of scales and we would expect the assessment to include a finer grain landscape assessment that includes the Site and immediate area and that also identifies and considers individual landscape elements such as trees and hedgerows, woodlands, ponds/water features, or historic landscape features: The LVIA should include an assessment of the potential impacts of the development on local landscape features and the local landscape character. The finer grained assessment should identify key individual components within the site. With the majority of the site comprising relatively flat, open, agricultural land the key elements are primarily focussed to field boundaries in the form of hedgerows and hedgerow trees with the fields being devoid of vegetation. Occasional woodland blocks (including ancient woodland) and shelter belts are evident within the site also, and along with field boundary vegetation should be retained, protected and enhanced where possible, incorporating appropriate setbacks. Heritage features within and adjacent to the site should also be considered in both the assessment and evolving proposals to ensure appropriate setbacks and mitigation.

3	Are there any individual components that you can you identify within the Study Area which you consider to be material to the assessment process of the landscape effects in the LVIA?
	By incorporating a 5km (from site boundaries) study area, more sensitive components/receptors would be included such as Laughton AGLV, Ridge AGLV, and Gainsborough AGLV, settlements to the east along the Limestone Escarpment and the Scampton viewing area. However, the LVIA should also provide a clear statement on the justification for the extent of the study area and confirm that receptors beyond 5km would not be affected. This is particularly relevant to PROW and villages in an elevated position along the limestone escarpment such as Grayingham, Blyborough, and Kirton in Lindsey that may have views of the development. While more of a visual consideration, having visited site over the period of several days, we have observed that while many of the lanes and tracks within the study area are rural and remote in character and primarily used for motor vehicles and farm access, however they are also well used by dog walkers, horse riders and leisure cyclists, and subsequently the assessment should consider the value and potential change in character to these lanes. The presence of several well-tended benches and grass verges with swathes of spring bulb planting reinforce the local value of these networks beyond being road access, which also provide suitable PROW connections for walkers improving the connectivity of the wider recreational footpath network.
4	Are there any specific cumulative matters you consider should be carried forward to the assessment process of the landscape effects in the LVIA?
	Cumulative Landscape and Visual Impacts should be assessed, particularly in regards to the West Burton Solar Project and Gate Burton Energy Park. The document: *LVIA Workshop Questionnaire D - Cumulative Sites – WB*, has been forwarded to West Lindsey District Council for review and comment, being better placed to identify additional sites within the area, and will be forwarded on when available.
5	Do you have any other comments on the scope, content, and appropriateness (detail, geographic extent) of the landscape baseline which will form the basis for the assessment of effects in the LVIA?
	Published landscape character areas have been identified, however to align with GLVIA3 the LVIA should include an assessment of landscape effects at a range of scales and we would expect the assessment to include a finer grain landscape assessment that includes the Site and immediate area and that also considers individual landscape elements such as trees and hedgerows, woodlands, ponds/water features, or historic landscape features: The LVIA should include an assessment of the potential impacts of the development on local landscape features and the local landscape character. It would be useful to take into account the information collated as part of the Historic landscape characterisation project: *The Historic Character of The County of Lincolnshire (September 2011)*, to ensure that the development is sensitive to the historic landscape. The relevant section for West Burton is TVL 1 – The Northern Cliff Foothills. The project documents and the mapping can be accessed here: Historic Landscape Characterisation – Lincolnshire County Council

	An HLF funded Landscape Partnership was carried out in the Trent Vale area in 2007-2013: the archived website is here: Trent Vale Landscape Partnership. It would be useful to have an assessment of how the proposed developments will address the relevant priorities outlined in the reports: • *Trent Vale Landscape Conservation Management Plan (June 2013).* • *Trent Vales Landscape Character Assessment:* http://www.trentvale.co.uk/downloads/landscapecharacter.pdf

8.5 Landscape Figures

Figure 8.1: **Cottam 1, 2 and 3: Site Location & Study Area**

Figure 8.2: **Cottam 1, 2 and 3: Aerial Photography**

Figure 8.3: **Cottam 1, 2 and 3: Landform**

Figure 8.4: **Cottam 1, 2 and 3: Landscape Character – National**

Figure 8.5: **Cottam 1, 2 and 3: Landscape Character – Regional**

Figure 8.6: **Cottam 1, 2 and 3: Landscape Receptor**

Figure 8.7: **Cottam 1, 2 and 3: Visual Receptor**

Figure 8.8: **Cottam 1: Bare Earth ZTV**

Figure 8.9: **Cottam 2: Bare Earth ZTV**

Figure 8.10: **Cottam 3: Bare Earth ZTV**

Figure 8.11: **Cottam 1: Augmented ZTV**

Figure 8.12: **Cottam 2: Augmented ZTV**

Figure 8.13: **Cottam 3: Augmented ZTV**

Figure 8.14: **Technical Photography Methodology and Viewpoint Photography**

Figure 8.15: **Cumulative Sites**

Figure 8.16: **Strategic Landscape Mitigation Measures**

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area
- Main roads
- Secondary roads
- Road (generally more than 4m wide)
- Road (generally less than 4m wide)
- Other road, drive or track
- Path
- PRoW Footpath
- PRoW Bridleway
- PRoW Byway open to all traffic
- PRoW Restricted byway
- Other routes with public access
- Recreational route
- Watercourses
- Woodlands

N

0 1000 2000 3000 4000 5000m

1:100,000 SCALE @A3

Drawn by: LH	Ref: 2893-REP-LAN-CO-8.1
Checked by: MT	Date: 27/04/2022

Figure 8.1
Cottam 1, 2 & 3
Site Location & Study Area

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area

N

0 1000 2000 3000 4000 5000m

1:100,000 SCALE @A3

Drawn by: LH	Ref: 2893-REP-LAN-CO-8.2
Checked by: MT	Date: 27/04/2022

Figure 8.2
Cottam 1, 2 & 3
Aerial Photography

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area

Landform (Digital Surface Model)

103 AOD (Above Ordinance Datum)

0 AOD

N

0 1000 2000 3000 4000 5000m

1:100,000 SCALE @A3

Drawn by: LH	Ref: 2893-REP-LAN-CO-8.3
Checked by: MT	Date: 27/04/2022

Figure 8.3
Cottam 1, 2 & 3
Landform

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro»

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area

National Character Areas (NCA)

- 39 Humberhead Levels
- 45 Northern Lincolnshire Edge
- 48 Trent and Belvoir Vales
- 49 Sherwood

N

0 1000 2000 3000 4000 5000m

1:100,000 SCALE @A3

Drawn by: LH	Ref: 2893-REP-LAN-CO-8.4
Checked by: MT	Date: 27/04/2022

Figure 8.4
Cottam 1, 2 & 3
Landscape Character - National

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area

East Midlands Regional Landscape Character Areas

- 4a: Unwooded Valleys
- 4b: Wooded Valleys
- 6a: Limestone Scarps and Dipslopes
- 3a: Floodplain Valleys
- 2b: Planned and Drained Fens and Carrlands
- 5b: Wooded Village Farmlands
- 3b: Planned and Drained Fens and Carrlands
- 10b: Sandstone Forests and Heaths

N

0 1000 2000 3000 4000 5000m

1:100,000 SCALE @A3

Drawn by: LH	Ref: 2893-REP-LAN-CO-8.5
Checked by: MT	Date: 27/04/2022

Figure 8.5
Cottam 1, 2 & 3
Landscape Character - Local

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area
- Conservation Area
- Listed buildings - Grade I
- Listed buildings - Grade II*
- Listed buildings - Grade II
- Scheduled Ancient Monuments
- Registered Parks and Gardens
- Ancient Woodlands
- Local Nature Reserves
- Local Wildlife Sites (Bassetlaw)
- Sites of Specific Scientific Interest (SSSI)
- Area of Great Landscape Value (West Lindsey)
- Statutory Main River
- Airfields / Airports
- Power Stations

Note: There are no SACs or SPAs in the area covered within this plan.

N

0 1000 2000 3000 4000 5000m

1:100,000 SCALE @A3

Drawn by: LH	Ref: 2892-REP-LAN-CO-8.6
Checked by: MT	Date: 27/04/2022

Figure 8.6
Cottam 1, 2 & 3
Landscape Receptors

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area
- Conservation Area
- Listed buildings - Grade I
- Listed buildings - Grade II*
- Listed buildings - Grade II
- Scheduled Ancient Monuments
- Registered Parks and Gardens
- Area of Great Landscape Value (West Lindsey)
- Statutory Main River
- PRoW Footpath
- PRoW Bridleway
- PRoW Byway open to all traffic
- PRoW Restricted byway
- Main A Roads
- B Roads
- Railway

N

0 1000 2000 3000 4000 5000m

1:100,000 SCALE @A3

Drawn by: LH	Ref: 2893-REP-LAN-CO-8.7
Checked by: MT	Date: 27/04/2022

Figure 8.7
Cottam1, 2 & 3
Visual Receptors

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area
- Bare Earth ZTV
- Views of the Development may be visible

Note: Terrain data was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, without consideration of any screening elements such as trees, hedgerows or built form. This ZTV was produced to indicate theoretical visibility as a worst case, with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

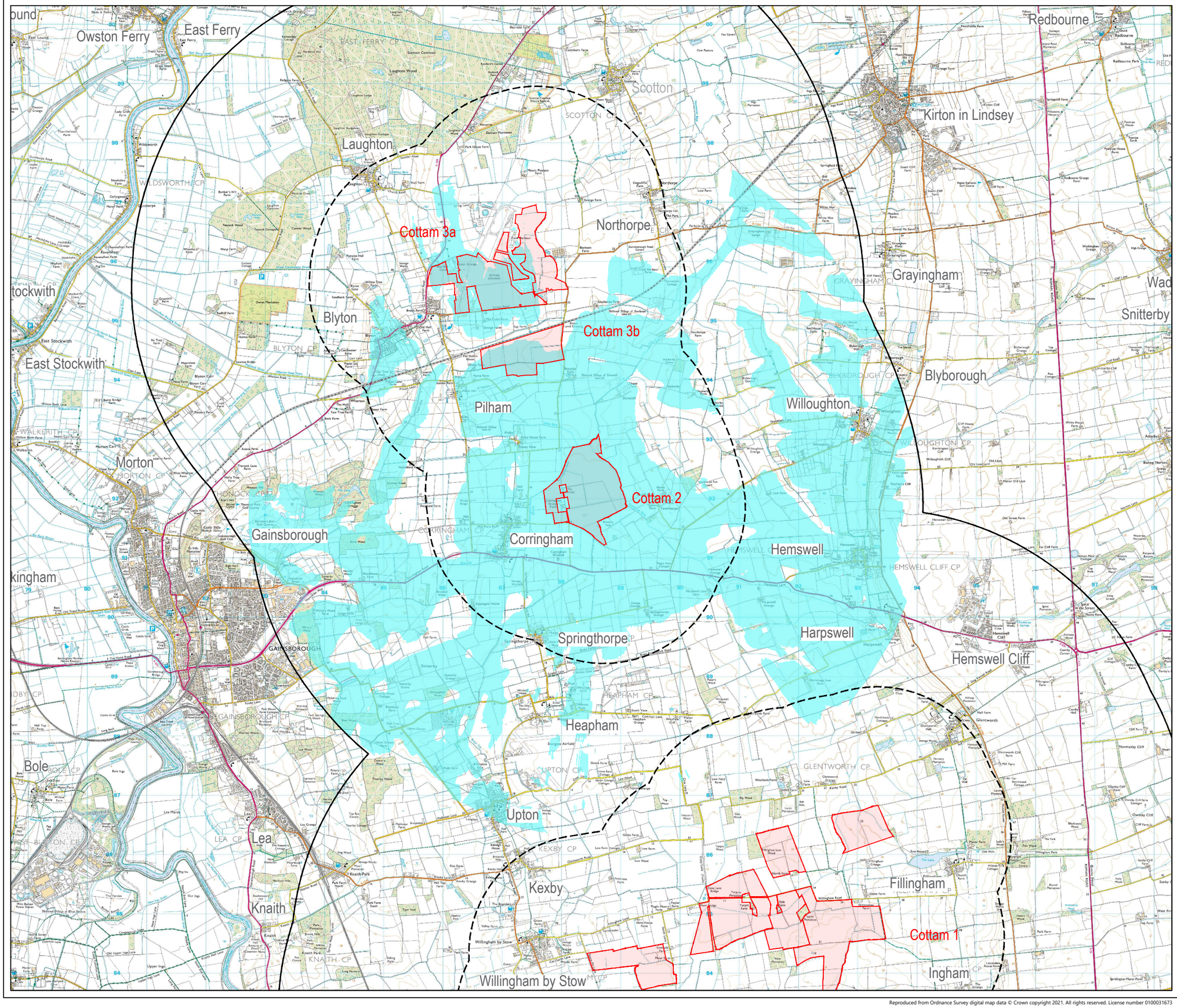
0 1000 2000 3000 4000

1:60,000 SCALE @ A3

Drawn by: LH	Ref: 2893-REP-LAN-CO-8.8
Checked by: MT	Date: 27/04/2022

Figure 8.8
Cottam 1
Bare Earth ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR



Island GREEN POWER

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area
- Bare Earth Zone of Theoretical Visibility to 5km
- Views of the Development may be visible

Note: Terrain data was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, without consideration of any screening elements such as trees, hedgerows or built form. This ZTV was produced to indicate theoretical visibility as a worst case, with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

0 1000 2000 3000 4000

1:60,000 SCALE @ A3

Drawn by: LH	Ref: 2892-REP-LAN-CO-8.9
Checked by: MT	Date: 27/04/2022

Figure 8.9
Cottam 2
Bare Earth ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 5 km Landscape Study Area
- 2 km Landscape Study Area
- Bare Earth Zone of Theoretical Visibility to 5km
- Views of the Development may be visible

Note: Terrain data was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, without consideration of any screening elements such as trees, hedgerows or built form. This ZTV was produced to indicate theoretical visibility as a worst case, with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

0 1000 2000 3000 4000

1:60,000 SCALE @ A3

Drawn by: LH	Ref: 2892-REP-LAN-CO-8.10
Checked by: MT	Date: 27/04/2022

Figure 8.10
Cottam 3
Bare Earth ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 2 km Landscape Study Area
- Augmented Zone of Theoretical Visibility to 2km
- Views of the Development may be visible
- Proposed Viewpoints
- Additional viewpoints as requested by Lincolnshire County Council to be clarified within the final Environmental Statement.

Note: A combination of Terrain data and screening features including buildings, trees and hedgerows, was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, when considering existing screening elements. This ZTV was produced with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

1:40,000 @ A3

Drawn by: LH	Ref: 2892-REP-LAN-CO-8.11
Checked by: MT	Date: 27/04/2022

Figure 8.11
Cottam 1
Augmented ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 2 km Landscape Study Area
- Augmented Zone of Theoretical Visibility to 2km
- Views of the Development may be visible
- Proposed Viewpoints
- Additional viewpoints as requested by Lincolnshire County Council to be clarified within the final Environmental Statement.

Note: A combination of Terrain data and screening features including buildings, trees and hedgerows, was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, when considering existing screening elements. This ZTV was produced with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

1:30,000 @ A3

Drawn by: LH	Ref: 2892-REP-LAN-CO-8.12
Checked by: MT	Date: 27/04/2022

Figure 8.12
Cottam 2
Augmented ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 2 km Landscape Study Area
- Augmented Zone of Theoretical Visibility to 2km
- Views of the Development may be visible
- Proposed Viewpoints
- Additional viewpoints as requested by Lincolnshire County Council to be clarified within the final Environmental Statement.

Note: A combination of Terrain data and screening features including buildings, trees and hedgerows, was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, when considering existing screening elements. This ZTV was produced with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

1:30,000 @ A3

Drawn by: LH	Ref: 2892-REP-LAN-CO-8.13
Checked by: MT	Date: 27/04/2022

Figure 8.13
Cottam 3
Augmented ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

Appendix 8.14

Technical Photography

Methodology

Cottam Solar Project

May 2022

End Barn . 58 Shaw Lane . Oxenhope . West Yorkshire . UK . BD22 9QL . www.msenvironmental.co.uk

Contents

Introduction

Michael Spence BA (Hons), MLD, CMLI, REIA, FRGS is one of the UK's leading independent exponents of technical photography, verified photomontages and visualisations. Since 2013 Mike has been a technical advisor to the Landscape Institute on 'photography and photomontage in landscape and visual impact assessment', and has been undertaking this technical work for over 25 years. He is one of the main authors of the Landscape Institute's TGN 06/19 and provided technical support to Scottish Natural Heritage(NatureScot) on their windfarm visualisation guidance. His background as a Chartered Landscape Architect, Registered EIA Practitioner and Fellow of the Royal Geographical Society working on strategic infrastructure projects has meant that the accuracy of the visualisation work is paramount, and technical photography, together with extensive surveying experience, use of GIS and detailed 3D modelling using real world co-ordinates ensures that the visualisations produced follow a clear and transparent methodology to ensure they are as accurate as possible.

Recent projects include the UNESCO World Heritage Sites at Valletta (Malta), Royal Botanic Gardens at Kew, Fountains Abbey for The National Trust, and West Cumbria Coal Mine for Friends of the Earth. Mike has also been working closely with Bath City Council on proposed development in the UNESCO World Heritage City of Bath. Mke has worked on multiple NSIP projects includinmg power station, windfarms and transmission lines, as well as other solar farms. Mike's work and objective technical checks have been used at numerous Public Inquiries and Planning Hearings, on behalf of both local authorities and developers.

In early 2021 Lanpro contacted MSE to request Technical Photography and GNSS/RTK Survey support for the NSIP photography at West Burton & Cottam.

Verified Photography

The photographs were taken with a full frame camera (Canon EOS 5D Mark III or IV) and 50mm lens combination consistent with Landscape Institute's TGN 06/19, GLVIA3 and the emerging understanding of the requirement for technical photography for visualisation work. As part of the work over 160 viewpoints were identified providing views of the sites and visited in March and April 2022. The weather was generally good with clear visibility.

Technical Photography

The camera was mounted on a Manfrotto 303 SPH panoramic tripod head, levelled using a Manfrotto Leveller, supported on a Manfrotto Tripod. The tripod head was levelled using a spirit level, to avoid pitch and roll. The camera was set on the ltripod plate to avoid foreground parallax. The camera was set with the centre of the lens 1.60m above ground level. Photographs were taken in Manual mode with an aperture of f/8 or f/11 and a fixed focal length throughout. Photographs were taken in landscape orientation. A Sigma 50mm f/1,4 lens was used for all viewpoint photographs.

A Single Frame 50mm photograph is insufficient to capture the extents of a wide, linear development. Each view was taken with a series of overlapping 50mm images, as shown above.

To ensure consistent geometry each image was cylindrically re-projected, as above. This ensures that a full 360 degree panorama can be created to match the 3D model view, as shown below:

From the 360 degree panorama a 90 degree portion can be extracted to present the visualisations as shown below:

Surveying

The position of each camera location was surveyed using Spectra Precision GNSS equipment with Real Time Kinematic Correction (RTK) which achieves an accuracy down to 1cm in eastings, northings and height (metres Above Ordnance Datum). The equipment included Spectra Precision SP80 & SP85 GNSS smart antennae with Panasonic Toughpad data recorder. Points were saved using DigiTerra software. A photograph of the camera location was taken.

50mm lens on Full Frame Sensor Camera

For decades it has been accepted that a 50mm lens on a full frame sensor camera provides the optimum image to replicate what is seen by the human eye. There are important differences between the human eye (binocular) and the camera lens (monocular). These have been explored in research by The Highland Council & the University of Stirling, as well as by myself through the Landscape Institute. We know that a single frame 50mm image on an A3 sheet of paper provides the same view as that gained in the field by someone with one eye closed. As we are binocular, and normally use both eyes, a different size of image is required, and the reason why we can also present the images as effectively a 75mm image on A2 paper. This gives what The Highland Council, University of Stirling, Scottish Natural Heritage (NatureScot) and the Landscape Institute agree is the most representative size of image to understand the nature and scale of a development on a photograph.

Planar or Cylindrical Projection

All photographs are taken as single frame planar images. Each single frame image has a single point of perspective lying at the centre of the image.To correctly match and align with the 3D modelling software the camera must be mounted on a levelled tripod, and directed towards the proposed development.

With klarge scale linear development it is not always possible to fit the development on a single frame image. The alternative is to use a series of overlapping 50mm images and generate a ‘cylindrical’ perspective view.

3D model renders can be rendered out in either planar (single frame images) or cylindrical (multiple frame images) projection to allow the precise image re-mapping to match the photography.

3D Modelling

All 3D modelling has been undertaken in metres and geo-referenced to align with OSGB36. LIDAR DTM data is used to align the photography with the 3D model highly accurately.

Summary

This work has been undertaken in accordance with the the Landscape Institute TGN 06/19, SNH's (NatureScot) Visual Representation of Wind Farms Good Practice Guidance (2017) and the developing understanding of visualisation work. The accuracy of camera locations and 3D modelling conforms with the Landscape Institute's Type 4 (the highest level of accuracy).

The photography has been undertaken in an extremely robust manner, using professional full frame sensor DSLR and 50mm lens with levelled tripod. The camera position has been surveyed using highly accurate GNSS equipment, giving high levels of accuracy of camera location.

The photography and surveying has followed a transparent methodology, and considered robust and fit for purpose to illustrate the positioning, and scale and massing of the proposed scheme in its local and wider context.

Mike Spence

M.A.Spence BA(Hons), MLD, CMLI, REIA, FRGS 4 May 2022
Principal, MSEnvironmental

Spectra Precision SP80 GNSS Receiver

The Most Connected GNSS Receiver

CONNECTED
RELIABLE
RUGGED
INNOVATIVE

TECHNOLOGY INSIDE

SP80
GNSS Receiver

The Spectra Precision SP80 is a next generation GNSS receiver that combines decades of GNSS RTK technology with revolutionary new GNSS processing. Featuring the new 240 channel "6G" chipset, the SP80 system is optimized for tracking and processing signals from all GNSS constellations.

In addition, SP80 is the most connected GNSS receiver in the industry. It is the first to offer a unique combination of integrated 3.5G cellular, Wi-Fi and UHF communications with SMS, email and anti-theft features.

These powerful capabilities, packaged in an ultra-rugged and cable-free housing with unlimited operation time (hot-swappable batteries), make SP80 an extremely versatile turnkey solution.

Key Features

- New 240-channel 6G ASIC
- Z-Blade GNSS centric
- 3.5G cellular modem
- Internal TRx UHF radio
- Built-in WiFi communication
- SMS and e-mail alerts
- Anti-theft protection
- Hot swappable batteries

Patented inside-the-rod mounted UHF antenna design

Unique 6G GNSS-centric Technology

Exclusive Z-Blade processing technology running on a next-generation Spectra Precision 240-channel 6G ASIC fully utilizes all 6 GNSS systems: GPS, GLONASS, BeiDou, Galileo, QZSS and SBAS. The unique GNSS-centric capability optimally combines GNSS signals without dependency on any specific GNSS system; this allows SP80 to operate in GPS-only, GLONASS-only or BeiDou-only mode if needed. In addition, SP80 supports the recently approved RTCM 3.2 Multiple Signal Messages (MSM), a standardized definition for broadcasting all GNSS signals from space, regardless of their constellation. This protects the surveyor's investment well into the future by providing superior performance and improved productivity as new signals become available.

SMS and Email Messaging

SP80 has a unique combination of communication technologies including an integrated 3.5G GSM/UMTS modem, Bluetooth and Wi-Fi connectivity, and optional internal UHF transmit radio. The cellular modem may be used for SMS (text message) and e-mail alerts as well as regular Internet or VRS connectivity. Likewise, SP80 can use all available RTK correction sources and connect to the Internet from the field using WiFi hotspots, where available. The internal UHF transmit/receive radio allows for quick and easy setup as a local base station. This saves time and increases the surveyor's efficiency.

Anti-Theft Protection

A unique anti-theft technology secures SP80 when installed as a field base station in remote or public places and can detect if the product is disturbed, moved or stolen. This technology allows the surveyor to lock the device to a specific location and make it unusable if the device is moved elsewhere. In this case, SP80 will generate an audio alert and show an alert message on its display. Furthermore, an SMS or e-mail will be sent to the surveyor's mobile phone or computer and provides the receiver's current coordinates allowing tracking of its position and facilitating recovery of the receiver. SP80's anti-theft technology provides surveyors with remote security and peace of mind.

The Most Powerful Tool for Reliable Field Use

The SP80's rugged housing, created by Spectra Precision's engineering design lab in Germany, incorporates a host of practical innovations. Dual hot-swappable batteries can be easily exchanged in the field as a one-hand operation for an interruption-free working day, ensuring surveyors remain productive until the job is done. The impact-resistant glass-fiber reinforced casing, designed to withstand 2m pole drops and waterproof to IP67, ensures that SP80 can handle the toughest outdoor conditions. The patented UHF antenna, set inside the rugged carbon fiber rod, extends the range of RTK radio performance at the same time as armoring protection. The sunlight-readable display offers instant access to key information like the number of satellites, RTK status, battery charge and available memory. These powerful design features combine to make SP80 the most capable, most reliable GNSS receiver, backed by a comprehensive standard 2 year warranty.

The Spectra Precision Experience

With the most advanced and rugged field data collectors from Spectra Precision, surveyors get maximum productivity and reliability every day. Spectra Precision Survey Pro or FAST Survey software is specifically tailored for the SP80 GNSS receiver providing easy-to-use, yet powerful GNSS workflows, letting the surveyor concentrate on getting the job done. Spectra Precision Survey Office Software provides a complete office suite for post-processing GNSS data and adjusting survey data, as well as exporting the processed results directly back to the field or to engineering design software packages. Combined with Spectra Precision field and office software, SP80 is a very powerful and complete solution.

TOUGHPAD FZ-G1

Panasonic recommends Windows.

SOFTWARE
- Windows 10 Pro 64 bit
- Panasonic Utilities (including Dashboard), Recovery Partition

DURABILITY
- MIL-STD-810G certified (4' drop, shock, vibration, rain, dust, sand, altitude, freeze/thaw, high/low temperature, temperature shock, humidity, explosive atmosphere)
- IP65 certified sealed all-weather design
- Optional class I division 2, groups ABCD certified model
- Solid state drive heater
- Magnesium alloy chassis encased with ABS and elastomer corner guards
- Optional hand strap or rotating hand strap
- Port covers
- Raised bezel for LCD impact protection
- Pre-installed replaceable screen film for LCD protection

CPU
- Intel® Core™ i5-6300U vPro™ Processor
  - 2.4 GHz up to 3.0 GHz with Intel® Turbo Boost Technology
  - Intel Smart Cache 3MB

STORAGE & MEMORY
- 8GB DDR3L SDRAM[4,5]
- 256GB solid state drive (SSD) with heater[4,5]
- Optional 512GB
  - up to 64GB additional storage with optional microSDXC card slot

DISPLAY
- 10.1" WUXGA 1920 x 1200 with LED backlighting
- 10-point capacitive multi touch + Waterproof Digitizer pen daylight-readable screen
  - 2-800 nit
  - IPS display with direct bonding
  - Anti-reflective and anti-glare screen treatments
  - Ambient light sensor, digital compass, gyro and acceleration sensors
  - Automatic screen rotation
  - Intel® HD Graphics 520 (Built-in CPU) video controller
- Concealed mode (configurable)

AUDIO
- Integrated microphone
- Realtek high-definition audio
- Integrated speaker
- On-screen and button volume and mute controls

KEYBOARD & INPUT
- 10-point gloved multi touch + digitizer screen
  - Supports bare-hand touch and gestures and electronic waterproof stylus pen
  - Supports glove mode and wet-touch mode
- 7 tablet buttons (2 user-definable)
- Integrated stylus holder
- On-screen QWERTY keyboard

CAMERAS
- 720p webcam with mic
- 8MP rear camera with autofocus and LED light

EXPANSION
- Optional MicroSDXC3

INTERFACE

Docking connector	24-pin
HDMI	Type A
Headphones/speaker	Mini-jack stereo
Optional Serial Dongle[3]	D-sub 9-pin
USB 3.0 (x 1)[2]	4-pin
Optional second USB 2.0[3]	4-pin
Optional 10/100/1000 Ethernet[3]	RJ-45

WIRELESS
- Optional integrated 4G LTE multi carrier mobile broadband with satellite GPS
- Optional GPS (u-blox NEO M8N)[3]
- Intel® Dual Band Wireless-AC 8260 (IEEE802.11a/b/g/n/ac)
- Bluetooth v4.1, Classic mode/ Low Energy mode, Class 1 (Windows 10 pro 64-bit)
- Security
  - Authentication: LEAP, WPA, 802.1x, EAP-TLS, EAP-FAST, PEAP
  - Encryption: CKIP, TKIP, 128-bit and 64-bit WEP, Hardware AES
- Dual high-gain antenna pass-through

POWER SUPPLY
- Li-Ion battery pack:
  - Standard battery: Li-ion 11.1 V, 4200 mAh (typ.), 4080 mAh (min.)
  - Optional long life battery[2]: Li-ion 10.8V, 9300mAh(typ.), 8700mAh (min.)
- Battery operation[1]:
  - Standard battery: 14 hours
  - Optional long life battery[2]: 28 hours
- Battery charging time[1]:
  - Standard battery: 2.5 hours off, 3 hours on
  - Optional long life battery[2]: 3 hours off, 4 hours on
- Optional bridge battery[2] (1 minute swap time)

POWER MANAGEMENT
- Suspend/Resume Function, Hibernation, Standby

SECURITY FEATURES
- Password Security: Supervisor, User, Hard Disk Lock
- Kensington cable lock slot
- Trusted platform module (TPM) security chip v.2.0[12]
- Computrace® theft protection agent in BIOS8
- Optional Insertable SmartCard reader[2,7]
- Optional Contactless SmartCard/HF RFID reader[2]
  - ISO 15693 and 14443 A/B compliant

WARRANTY
- 3-year limited warranty, parts and labor

DIMENSIONS & WEIGHT[9]
- 10.6"(L) x 7.4"(W) x 0.8"(H)
- 2.4 lbs. (standard battery)
- 3.0 lbs. (optional long life battery)[7]

INTEGRATED OPTIONS[10]
- 4G LTE multi carrier mobile broadband with satellite GPS
- Choice of 1D/2D barcode reader (EA11 or EA21), GPS, Serial Dongle, Ethernet, MicroSDXC or second USB 2.0 port[2]
- Choice of bridge battery, magstripe reader, insertable SmartCard reader, insertable SmartCard reader with bridge battery, contactless SmartCard/RFID HF reader or UHF 900MHz RFID reader (EPC Gen 2)[2,7]

ACCESSORIES[10]

AC Adapter (3-prong)	CF-AA6413CM
Standard Battery Pack	FZ-VZSU84A2U
Long Life Battery Pack[7]	FZ-VZSU88U
Long Life Battery Bundle (includes rotating hand strap and corner guard set)	FZ-BNDLG1LL1ST1CG4
Single Battery Charger Bundle	FZ-BNDLG1BATCHRG
LIND 3-Bay Battery Charger	FZ-LND3BAYG1
LIND Car Adapter 120W	CF-LNDDC120
LIND Car/AC Adapter 90W (with USB port)	CF-LNDACDC90
LIND Car Adapter 90W MIL-STD	CF-LNDMLDC90
Tall Corner Guard Set	FZ-WCGG111
Rotating Hand Strap and Tall Corner Guard Set Bundle	FZ-BNDLG1ST1CG4
ToughMate G1 Always-On Case (with hand strap)	TBCG1AONL-P
ToughMate G1 Professional Portfolio	TBCG1PFLIO-BLK-P
ToughMate G1 "X" Hand Strap	TBCG1XSTP-P
Desktop Cradle	FZ-VEBG11AU
Vehicle Docks (no pass-through)	
– Gamber-Johnson	7160-0486-00-P
– Havis with LIND power supply	CF-H-PAN-702-P
Vehicle Docks (dual pass-through)	
– Gamber-Johnson	7160-0486-02-P
– Havis with LIND power supply	CF-H-PAN-702-2-P
Cradlepoint Router	
– Verizon	CP-IBR1100LPE-VZ
– AT&T	CP-IBR1100LPE-AT
Replacement Digitizer Pen Waterproof	FZ-VNPG11U-S
Tether	FZ-VNTG11U
10.1" LCD Protective Film	FZ-VPFG11U

Please consult your reseller or Panasonic representative before purchasing.

Caution: Do not expose bare skin to this product when handling this unit in extreme hot or cold environments.

[1] Approximate time. Battery operation and recharge times will vary based on many factors, including screen brightness, applications, features, power management, battery conditioning and other customer preferences. Battery testing results from MobileMark 2007.

[2] Bridge battery, magstripe reader, insertable SmartCard reader, insertable SmartCard reader with bridge battery, contactless SmartCard reader and UHF RFID reader are mutually exclusive. Please note, USB 3.0 port cannot be accessed when the unit is equipped with the magstripe reader, but optional USB 2.0 port can be accessed.

[3] GPS, Serial Dongle, Ethernet, MicroSDXC and second USB port are mutually exclusive options.

[4] 1GB = 1,000,000,000 bytes.

[5] Total usable memory will be less depending upon actual system configuration.

[6] The size of the VRAM cannot be set by the user and varies by operating system as well as the size of the RAM. Windows 7 max. VRAM is 1555MB.

[7] Magstripe reader, insertable SmartCard reader, insertable SmartCard reader with bridge battery and UHF RFID reader include tall corner guards and rotating hand strap. Bridge battery (without SmartCard reader) includes medium corner guards and rotating hand strap.

[8] Requires software and activation to enable theft protection.

[9] Length measurements do not include protrusions. Weight varies with options and digitizer pen.

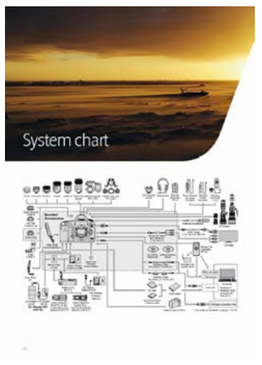
[10] Accessories and Integrated Options may vary depending on your configuration. Visit the Panasonic website for more accessories and details.

[11] Hazardous location certifications may not apply to all configurations. Consult your Panasonic representative for availability.

[12] TPM 1.2 available upon request - please contact your reseller or Panasonic representative.

1.800.662.3537
panasonic.com/toughpad/G1

APPENDIX 1.2: CAMERA EQUIPMENT (CANON 5D MARK III & IV)




SIGMA
50mm 1:1.4 DG ø77

Lanpro

Viewpoint V1 - Tillbridge Lane

Drawing Ref:	Figure 8.14.1
Viewpoint location:	53°17'37"N , 000°34'12"W
Weather:	Cloudy
Distance to nearest point of site:	4.02km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 09:43am
Direction of view:	Looking north west

Viewpoint V2 - Scmp/31/1

Drawing Ref:	Figure 8.14.2
Viewpoint location:	53°17'54"N , 000°35'35"W
Weather:	Cloudy
Distance to nearest point of site:	2.5 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 13:44 pm
Direction of view:	Looking north west

Lanpro

Viewpoint V3 - Scmp/31/1

Drawing Ref:	Figure 8.14.3
Viewpoint location:	53°18'21"N , 000°38'01"W
Weather:	Cloudy
Distance to nearest point of site:	1.02 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 13:26 pm
Direction of view:	Looking north

Lanpro

Viewpoint V4 - Thorpe Lane, Bridge

Drawing Ref:	Figure 8.14.4
Viewpoint location:	53°18'53"N , 000°37'10"W
Weather:	Cloudy
Distance to nearest point of site:	5 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	22/03/2022 13:13 pm
Direction of view:	Looking north

Viewpoint V5 - TLFE/31/2

Drawing Ref:	Figure 8.14.5
Viewpoint location:	53°18'55"N , 000°37'38"W
Weather:	Cloudy
Distance to nearest point of site:	0 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 12:30 pm
Direction of view:	Looking north

Lanpro

Viewpoint V6 - Thorpe Lane, Bridge

Drawing Ref:	Figure 8.14.6
Viewpoint location:	53°18'56"N , 000°37'56"W
Weather:	Cloudy
Distance to nearest point of site:	38.7 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	22/03/2022 12:08 pm
Direction of view:	Looking north

Lanpro

Viewpoint V7 - Thorpe Bridge TLFe/32/1

Drawing Ref:	Figure 8.14.7
Viewpoint location:	53°18'54"N , 000°38'34"W
Weather:	Cloudy
Distance to nearest point of site:	9.1 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 11:55 am
Direction of view:	Looking north east

Viewpoint V8 - Stur/73/1

Drawing Ref:	Figure 8.14.8
Viewpoint location:	53°18'53"N , 000°38'57"W
Weather:	Cloudy
Distance to nearest point of site:	416.7 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	22/03/2022 11:44 am
Direction of view:	Looking north east

Lanpro

Viewpoint V9 - Fleets Road, Stur / 79 / 1

Drawing Ref:	Figure 8.14.9
Viewpoint location:	53°18'51"N , 000°39'36"W
Weather:	Cloudy
Distance to nearest point of site:	1143.5 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	22/03/2022 11:28 am
Direction of view:	Looking north east

Lanpro

Viewpoint V10 - Stur/73/1

Drawing Ref:	Figure 8.14.10
Viewpoint location:	53°19'15"N , 000°39'03"W
Weather:	Cloudy
Distance to nearest point of site:	40 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 11:16 am
Direction of view:	Looking north east

Lanpro

Viewpoint V11 - TLFe/31/2

Drawing Ref:	Figure 8.14.11
Viewpoint location:	53°19'15"N , 000°37'41"W
Weather:	Cloudy
Distance to nearest point of site:	0 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 12:50 pm
Direction of view:	Looking south

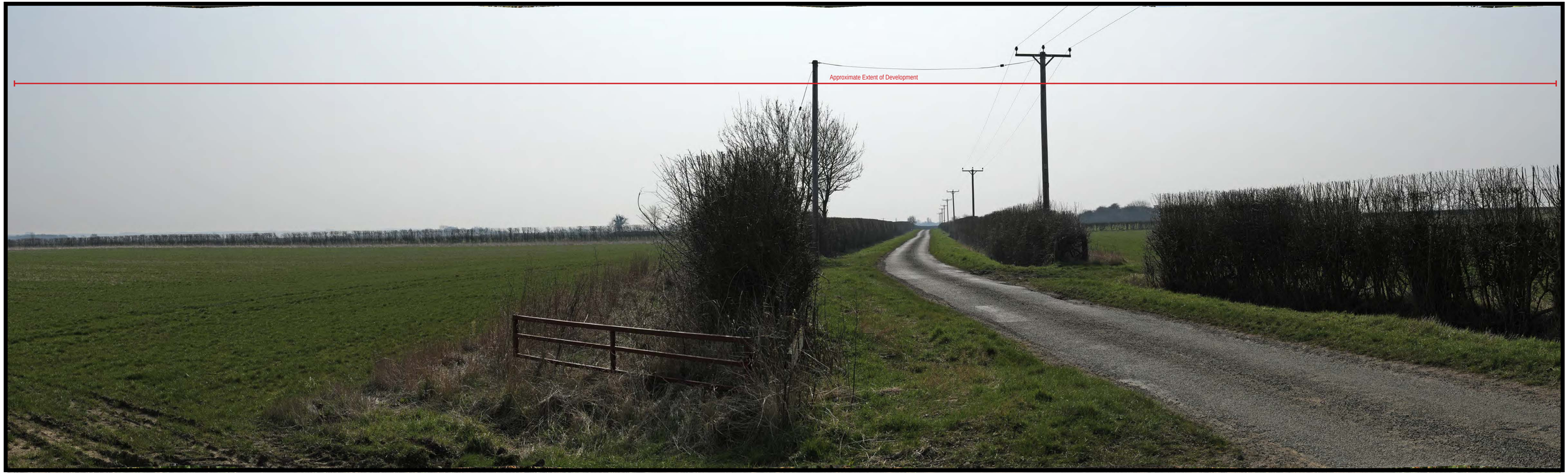
Lanpro

Viewpoint V12 - Camm/31/2

Drawing Ref:	Figure 8.14.12
Viewpoint location:	53°19'39"N , 000°37'45"W
Weather:	Cloudy
Distance to nearest point of site:	14.7 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 09:57 am
Direction of view:	Looking south west



Lanpro

Viewpoint V13 - Fleets Lane, Stow Pasture

Drawing Ref:	Figure 8.14.13
Viewpoint location:	53°19'41"N , 000°39'11"W
Weather:	Cloudy
Distance to nearest point of site:	0 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 11:05 am
Direction of view:	Looking south

Viewpoint V14 - Ingham Road

Drawing Ref:	Figure 8.14.14
Viewpoint location:	53°19'42"N , 000°39'26"W
Weather:	Cloudy
Distance to nearest point of site:	11.7 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 10:51 am
Direction of view:	Looking north

Lanpro

Viewpoint V15 - Squire's Bridge

Drawing Ref:	Figure 8.14.15
Viewpoint location:	53°19'50"N , 000°38'39"W
Weather:	Cloudy
Distance to nearest point of site:	39.4 m

Photograph

Enlargement factor:	100% at 840 x 297mm	Camera Height:	1.5m
Camera & lens:	Canon 5D Mark III FFS, 50mm	Taken on:	22/03/2022 10:29 am
Horizontal Field of View:	90° (cylindrical)	Direction of view:	Looking south
Principal distance:	522mm		

Lanpro

Viewpoint V16 - Ingham Road, Furze Hill

Drawing Ref:	Figure 8.14.16
Viewpoint location:	53°19'52"N , 000°38'16"W
Weather:	Cloudy
Distance to nearest point of site:	396.8 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	22/03/2022 09:41 am
Direction of view:	Looking south west

Viewpoint V17 - Stow / 83 / 1

Drawing Ref:	Figure 8.14.17
Viewpoint location:	53°20'04"N , 000°38'32"W
Weather:	Cloudy
Distance to nearest point of site:	250.2 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	22/03/2022 09:24 am
Direction of view:	Looking west

Lanpro

Viewpoint V18 - St Edit's Church and Coates Hill

Drawing Ref:	Figure 8.14.18
Viewpoint location:	53°20'12"N , 000°38'15"W
Weather:	Cloudy
Distance to nearest point of site:	652.7 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	22/03/2022 09:09 am
Direction of view:	Looking south east

Lanpro

Viewpoint V19 - Bridge over River Till

Drawing Ref:	Figure 8.14.19
Viewpoint location:	53°20'09"N , 000°39'34"W
Weather:	Cloudy
Distance to nearest point of site:	1.8 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	22/03/2022 08:51 am
Direction of view:	Looking south east

Lanpro

Viewpoint V20 - Normanby Road

Drawing Ref:	Figure 8.14.20
Viewpoint location:	53°20'10"N , 000°40'35"W
Weather:	Cloudy
Distance to nearest point of site:	11.2 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 08:36 am
Direction of view:	Looking east

Viewpoint V21 - Stow / 83 / 1

Drawing Ref:	Figure 8.14.21
Viewpoint location:	53°20'29"N , 000°36'42"W
Weather:	Cloudy
Distance to nearest point of site:	0 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 12:54 pm
Direction of view:	Looking north

Lanpro

Viewpoint V22 - Ingh/27/5

Drawing Ref:	Figure 8.14.22
Viewpoint location:	53°20'11"N , 000°36'26"W
Weather:	Cloudy
Distance to nearest point of site:	424.3 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	20/03/2022 13:35 pm
Direction of view:	Looking north west

Lanpro

Viewpoint V23 - Ingh/27/5

Drawing Ref:	Figure 8.14.23
Viewpoint location:	53°19'58"N , 000°36'25"W
Weather:	Cloudy
Distance to nearest point of site:	117.7 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 13:20 pm
Direction of view:	Looking south

Lanpro

Viewpoint V24 - B1398

Drawing Ref:	Figure 8.14.24
Viewpoint location:	53°19'31"N , 000°34'41"W
Weather:	Cloudy
Distance to nearest point of site:	1.5 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	20/03/2022 11:46 am
Direction of view:	Looking west

Viewpoint V25 - Stow Lane and Lincoln Road Crossroads

Drawing Ref:	Figure 8.14.25
Viewpoint location:	53°20'01"N , 000°34'34"W
Weather:	Cloudy
Distance to nearest point of site:	1.6 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	20/03/2022 11:36 am
Direction of view:	Looking south west

Lanpro

Viewpoint V26 - Ingh/24/2

Drawing Ref:	Figure 8.14.26
Viewpoint location:	53°20'31"N , 000°35'06"W
Weather:	Cloudy
Distance to nearest point of site:	1.1 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 12:08 pm
Direction of view:	Looking west

Viewpoint V27 - Junction of Church Hill and the B1398

Drawing Ref:	Figure 8.14.27
Viewpoint location:	53°20'25"N , 000°33'50"W
Weather:	Cloudy
Distance to nearest point of site:	2.4 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 11:26 am
Direction of view:	Looking west

Lanpro

Viewpoint V28 - Junction of Ingh/18/2, ../1, .../17/1, ../2

Drawing Ref:	Figure 8:14.28
Viewpoint location:	53°20'48"N , 000°34'41"W
Weather:	Cloudy
Distance to nearest point of site:	1.3 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	20/03/2022 12:26 pm
Direction of view:	Looking north west

Lanpro

Viewpoint V29 - Ingh/17/2 just off B1398

Drawing Ref:	Figure 8.14.29
Viewpoint location:	53°20'48"N , 000°34'41"W
Weather:	Cloudy
Distance to nearest point of site:	2.2 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	20/03/2022 11:15 am
Direction of view:	Looking north west

Lanpro

Viewpoint V30 - Junction of High Street and the B1398

Drawing Ref:	Figure 8.14.30
Viewpoint location:	53°21'39"N , 000°33'59"W
Weather:	Cloudy
Distance to nearest point of site:	1.9 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 09:33 am
Direction of view:	Looking west

Lanpro

Viewpoint V31 - Fill / 87 / 1 Just of Willingham Road

Drawing Ref:	Figure 8.14.31
Viewpoint location:	53°21'22"N , 000°34'45"W
Weather:	Cloudy
Distance to nearest point of site:	1.3 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 09:46 am
Direction of view:	Looking west

Viewpoint V32 - Fill / 86 / 1

Drawing Ref:	Figure 8.14.32
Viewpoint location:	53°21'22"N , 000°34'45"W
Weather:	Cloudy
Distance to nearest point of site:	0 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 10:09 am
Direction of view:	Looking west

Lanpro

Viewpoint V33 - Fill/86/1 off Willingham Road

Drawing Ref:	Figure 8.14.33
Viewpoint location:	53°21'21"N , 000°35'56"W
Weather:	Cloudy
Distance to nearest point of site:	140 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	20/03/2022 09:54 am
Direction of view:	Looking south west

Lanpro

Viewpoint V34 - Fill / 85 / 2

Drawing Ref:	Figure 8.14.34
Viewpoint location:	53°21'37"N , 000°36'28"W
Weather:	Cloudy
Distance to nearest point of site:	300.4 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	20/03/2022 10:41 am
Direction of view:	Looking south west

Lanpro

Viewpoint V35 - Junction of Fill/85/1,.../2 and Fill/767/1

Drawing Ref:	Figure 8.14.35
Viewpoint location:	53°21'38"N , 000°36'40"W
Weather:	Cloudy
Distance to nearest point of site:	388.8 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

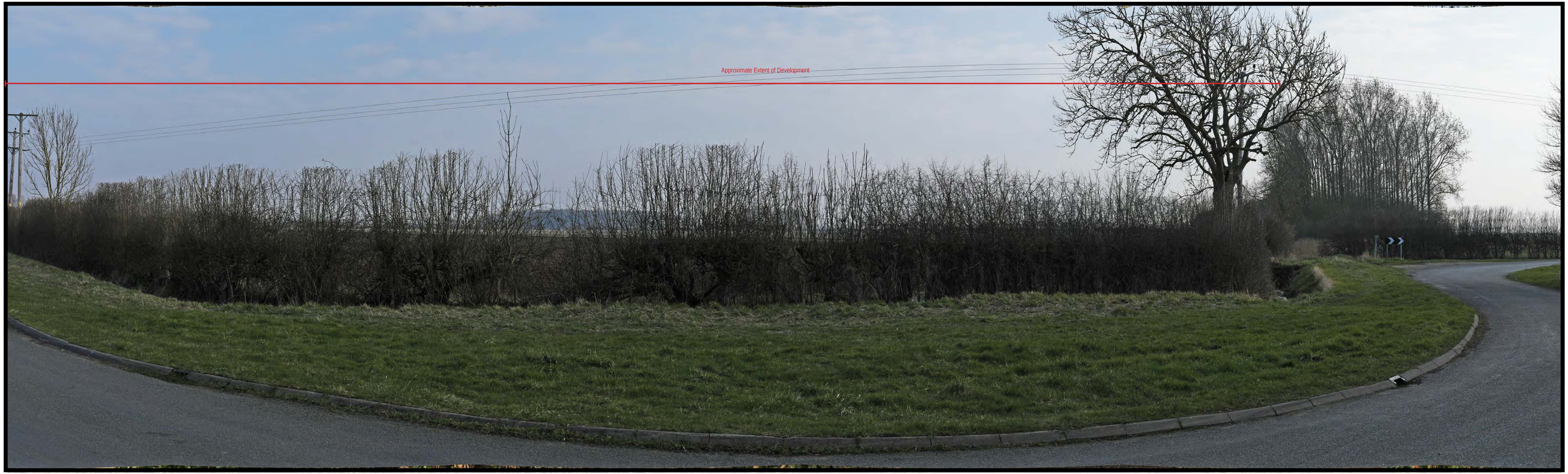
Camera Height:	1.5m
Taken on:	20/03/2022 10:33 am
Direction of view:	Looking north east

Viewpoint V36 - Fill / 767 / 1

Drawing Ref:	Figure 8.14.36
Viewpoint location:	53°21'37"N , 000°37'01"W
Weather:	Cloudy
Distance to nearest point of site:	18.6 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 10:54 am
Direction of view:	Looking north west



Lanpro

Viewpoint V37 Junction of Gypsy Lane & Willingham Road

Drawing Ref:	Figure 8.14.37
Viewpoint location:	53°21'23"N , 000°38'31"W
Weather:	Cloudy
Distance to nearest point of site:	15.8 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 14:50 pm
Direction of view:	Looking north east

Viewpoint V38 - South Lane

Drawing Ref:	Figure 8.14.38
Viewpoint location:	53°20'59"N , 000°39'08"W
Weather:	Cloudy
Distance to nearest point of site:	107.1 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 14:36 pm
Direction of view:	Looking south west

Lanpro

Viewpoint V39 - Junction of Cot Garth Ln & Stone Pit Ln

Drawing Ref:	Figure 8.14.39
Viewpoint location:	53°20'54"N , 000°40'23"W
Weather:	Cloudy
Distance to nearest point of site:	43.9 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	22/03/2022 14:24 pm
Direction of view:	Looking south east

Lanpro

Viewpoint V40 - Junction of Fillingham Ln & Stone Pit Ln

Drawing Ref:	Figure 8.14.40
Viewpoint location:	53°21'06"N , 000°40'30"W
Weather:	Cloudy
Distance to nearest point of site:	357.9 m

Photograph

Enlargement factor:	100% at 840 x 297mm	Camera Height:	1.5m
Camera & lens:	Canon 5D Mark III FFS, 50mm	Taken on:	22/03/2022 14:10 pm
Horizontal Field of View:	90° (cylindrical)	Direction of view:	Looking south east
Principal distance:	522mm		

Lanpro

Viewpoint V41 - Gltw/85/1 just off Kexby Road

Drawing Ref:	Figure 8.14.41
Viewpoint location:	53°22'23"N , 000°36'53"W
Weather:	Cloudy
Distance to nearest point of site:	574 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	20/03/2022 08:52 am
Direction of view:	Looking south east

Viewpoint V42 - Gltw/88/1

Drawing Ref:	Figure 8.14.42
Viewpoint location:	53°22'24"N , 000°34'39"W
Weather:	Cloudy
Distance to nearest point of site:	1.4 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 08:46 am
Direction of view:	Looking south west

Lanpro

Viewpoint V43 - Owmb/5/2 just off A15

Drawing Ref:	Figure 8.14.43
Viewpoint location:	53°22'09"N , 000°32'46"W
Weather:	Cloudy
Distance to nearest point of site:	3.3 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	20/03/2022 09:14 am
Direction of view:	Looking west

Lanpro

Viewpoint V44 -Junction off School Ln and Chapel Ln

Drawing Ref:	Figure 8.15.1
Viewpoint location:	53°23'52"N , 000°40'56"W
Weather:	Cloudy
Distance to nearest point of site:	1.7 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 13:10 pm
Direction of view:	Looking north

Lanpro

Viewpoint V45 - A361

Drawing Ref:	Figure 8.15.2
Viewpoint location:	53°24'23"N , 000°39'01"W
Weather:	Cloudy
Distance to nearest point of site:	1.1 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	23/03/2022 13:21 pm
Direction of view:	Looking north west

Lanpro

Viewpoint V46 - Corringham Windmill

Drawing Ref:	Figure 8.15.3
Viewpoint location:	53°24'28"N , 000°40'43"W
Weather:	Cloudy
Distance to nearest point of site:	679 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 12:53 pm
Direction of view:	Looking north

Lanpro

Viewpoint V47 - Junction of Mill Mere Rd & Pilham Ln

Drawing Ref:	Figure 8.15.4
Viewpoint location:	53°24'50"N , 000°42'02"W
Weather:	Cloudy
Distance to nearest point of site:	1.3 km

Photograph

Enlargement factor:	100% at 840 x 297mm	Camera Height:	1.5m
Camera & lens:	Canon 5D Mark III FFS, 50mm	Taken on:	23/03/2022 14:11 pm
Horizontal Field of View:	90° (cylindrical)	Direction of view:	Looking east
Principal distance:	522mm		

Lanpro

Viewpoint V48 - East Lane

Drawing Ref:	Figure 8.15.5
Viewpoint location:	53°24'50"N , 000°41'10"W
Weather:	Cloudy
Distance to nearest point of site:	352.6 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 12:22 pm
Direction of view:	Looking east

Lanpro

Viewpoint V49 - East Lane

Drawing Ref:	Figure 8.15.6
Viewpoint location:	53°24'49"N , 000°40'32"W
Weather:	Cloudy
Distance to nearest point of site:	25.7 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 12:42 pm
Direction of view:	Looking north

Lanpro

Viewpoint V50 - Yawthorpe

Drawing Ref:	Figure 8.15.7
Viewpoint location:	53°24'57"N , 000°39'10"W
Weather:	Cloudy
Distance to nearest point of site:	533.9 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 13:33 pm
Direction of view:	Looking west

Viewpoint V51 - wltn/13/1

Drawing Ref:	Figure 8.15.8
Viewpoint location:	53°25'34"N , 000°36'15"W
Weather:	Cloudy
Distance to nearest point of site:	3.9 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 13:49 pm
Direction of view:	Looking south west

Lanpro

Viewpoint V52 - Pilham Lane

Drawing Ref:	Figure 8.15.9
Viewpoint location:	53°25'36"N , 000°42'05"W
Weather:	Cloudy
Distance to nearest point of site:	1.6 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	23/03/2022 14:22 pm
Direction of view:	Looking north east

Viewpoint V53 - Corr/22/1

Drawing Ref:	Figure 8.15.10
Viewpoint location:	53°25'25"N , 000°41'20"W
Weather:	Cloudy
Distance to nearest point of site:	695 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 12:06 pm
Direction of view:	Looking east

Lanpro

Viewpoint V54 - Unnamed Rd just north of Corringham Beck

Drawing Ref:	Figure 8.15.10		
Viewpoint location:	53°25'31"N , 000°40'39"W		
Weather:	Cloudy		
Distance to nearest point of site:	222 m		

Photograph

Enlargement factor:	100% at 840 x 297mm	Camera Height:	1.5m
Camera & lens:	Canon 5D Mark III FFS, 50mm	Taken on:	23/03/2022 11:52 am
Horizontal Field of View:	90° (cylindrical)	Direction of view:	Looking south east
Principal distance:	522mm		

Lanpro

Viewpoint V55 - Corr/22/1

Drawing Ref:	Figure 8.16.1
Viewpoint location:	53°26'06"N , 000°42'06"W
Weather:	Cloudy
Distance to nearest point of site:	359.4 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 14:34 pm
Direction of view:	Looking north east

Viewpoint V56 - Pilh / 20 / 1

Drawing Ref:	Figure 8.16.2
Viewpoint location:	53°26'14"N , 000°41'55"W
Weather:	Cloudy
Distance to nearest point of site:	99.2 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 14:50 pm
Direction of view:	Looking east

Lanpro

Viewpoint V57 - Bonsdale Farm

Drawing Ref:	Figure 8.16.3
Viewpoint location:	53°26'07"N , 000°40'37"W
Weather:	Cloudy
Distance to nearest point of site:	368.2 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	23/03/2022 11:41 am
Direction of view:	Looking north west

Lanpro

Viewpoint V58 - Junction of Pilh / 20 / 1 & Unnamed Rd

Drawing Ref:	Figure 8.16.4
Viewpoint location:	53°26'19"N , 000°40'34"W
Weather:	Cloudy
Distance to nearest point of site:	0 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	23/03/2022 11:30 am
Direction of view:	Looking north east

Lanpro

Viewpoint V59 - Blyton Level Crossing

Drawing Ref:	Figure 8.16.5
Viewpoint location:	53°26'38"N , 000°40'34"W
Weather:	Cloudy
Distance to nearest point of site:	7.8 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 11:21 am
Direction of view:	Looking south west

Viewpoint V60 - Kirton Road

Drawing Ref:	Figure 8.16.6
Viewpoint location:	53°26'49"N , 000°40'50"W
Weather:	Cloudy
Distance to nearest point of site:	1.8 m

Photograph

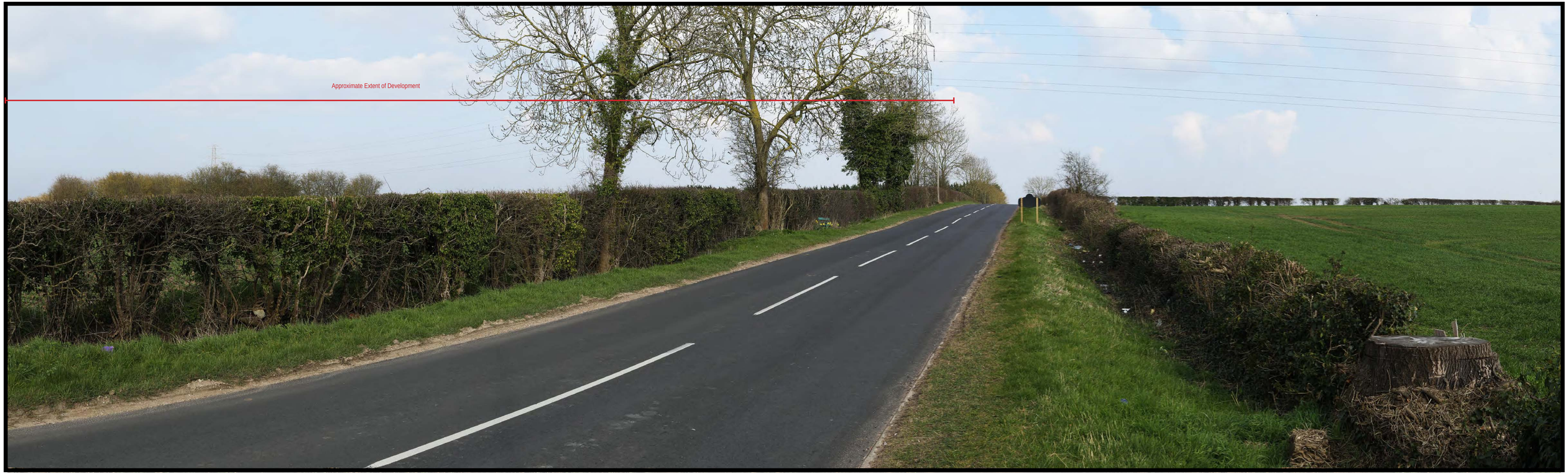
Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 15:19 pm
Direction of view:	Looking north

Viewpoint V61 - B1025

Drawing Ref:	Figure 8.16.7
Viewpoint location:	53°26'59"N , 000°40'30"W
Weather:	Cloudy
Distance to nearest point of site:	13 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 11:03 am
Direction of view:	Looking west



Lanpro

Viewpoint V62 - Kirton Road

Drawing Ref:	Figure 8.16.8
Viewpoint location:	53°26'44"N , 000°42'19"W
Weather:	Cloudy
Distance to nearest point of site:	120 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	23/03/2022 15:11 pm
Direction of view:	Looking south east

Lanpro

Viewpoint V63 - Laughton Road

Drawing Ref:	Figure 8.16.9
Viewpoint location:	53°27'09"N , 000°42'37"W
Weather:	Cloudy
Distance to nearest point of site:	48.5 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 15:33 pm
Direction of view:	Looking east

Lanpro

Viewpoint V64 - A159

Drawing Ref:	Figure 8.16.10
Viewpoint location:	53°28'10"N , 000°42'23"W
Weather:	Cloudy
Distance to nearest point of site:	1.6 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm

Camera Height:	1.5m
Taken on:	23/03/2022 15:50 pm
Direction of view:	Looking south east

Lanpro

Viewpoint V65 - Scotton Common Nature Reserve

Drawing Ref:	Figure 8.16.11
Viewpoint location:	53°28'32"N , 000°41'08"W
Weather:	Cloudy
Distance to nearest point of site:	1.5 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 10:20 am
Direction of view:	Looking south

Lanpro

Viewpoint V66 - Nthp/504/1

Drawing Ref:	Figure 8.16.12
Viewpoint location:	53°27'56"N , 000°40'22"W
Weather:	Cloudy
Distance to nearest point of site:	724 m

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	03/04/2022 08:09 am
Direction of view:	Looking south west

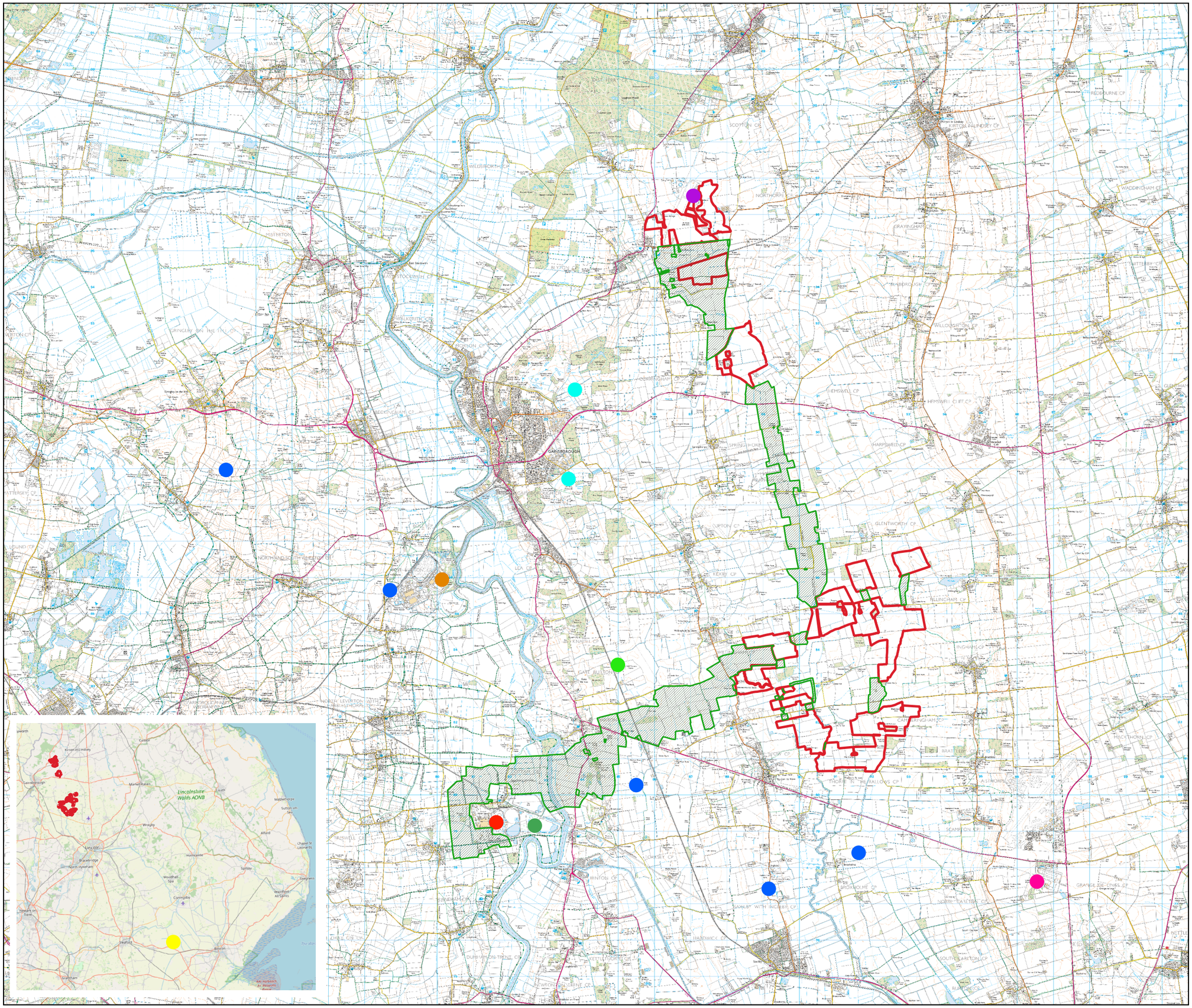
Lanpro

Viewpoint V67 - Monson Road

Drawing Ref:	Figure 8.16.13
Viewpoint location:	53°27'43"N , 000°39'12"W
Weather:	Cloudy
Distance to nearest point of site:	1.7 km

Photograph

Enlargement factor:	100% at 840 x 297mm
Camera & lens:	Canon 5D Mark III FFS, 50mm
Horizontal Field of View:	90° (cylindrical)
Principal distance:	522mm
Camera Height:	1.5m
Taken on:	23/03/2022 10:48 am
Direction of view:	Looking south west



Island GREEN POWER

Lanpro

Key

- Site Boundary
- Cottam Cable Corridor

Cumulative Sites

- West Burton Solar Development
- Gate Burton Solar Development
- Decommissioning of Cottam Power Station
- Decommissioning of West Burton Power Station
- Automotive Research and Development Centre
- Hecklington Fen Solar Development

Current and Emerging Policy

- Emerging Policy ST6: Cottam Priority Regeneration Area
- Policy 48 Gainsborough Northern Neighbourhood SUE Allocation
- Policy LP8 Employment Site Land at Lincolnshire Showground

N

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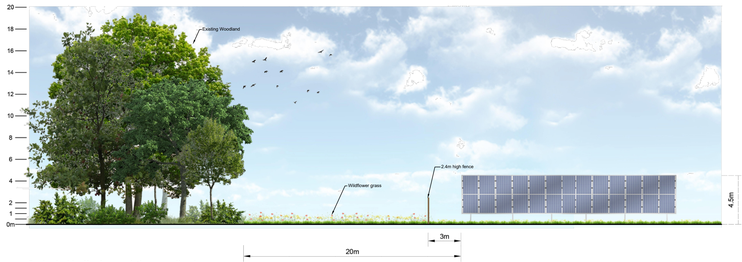
0 1 2 3 4 5 km

Drawn by: LH	REF:2981-REP-LA-CO-8.15
Checked By: WW	Date:29/04/2022

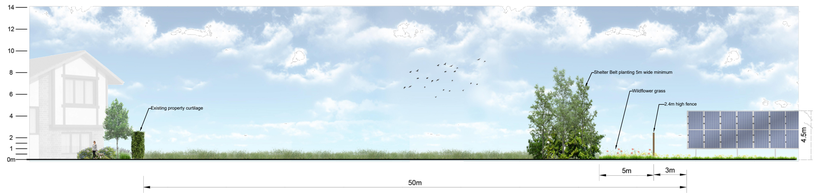
Figure 8.15
Cottam
Cumulative Sites

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
PEIR

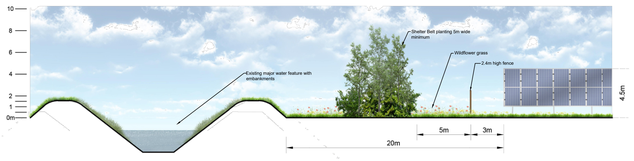
Indicative Cross Sections of Maximum 4.5 m high panel (1:200)



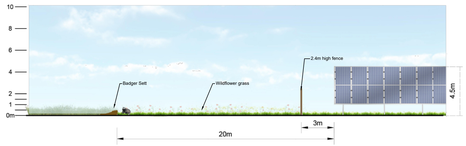
Ecological buffer from existing woodland



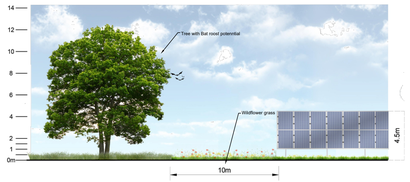
Minimum offset from residential property



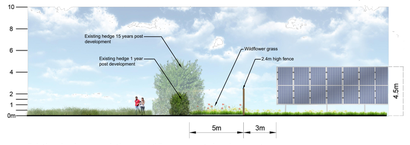
Ecological buffer from major watercourse



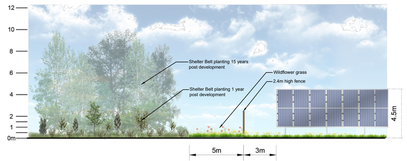
Ecological buffer from Badger setts



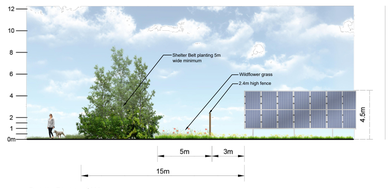
Ecological buffer from Trees with moderate Bat roost potential
(Up to 12m for high Bat roost potential)



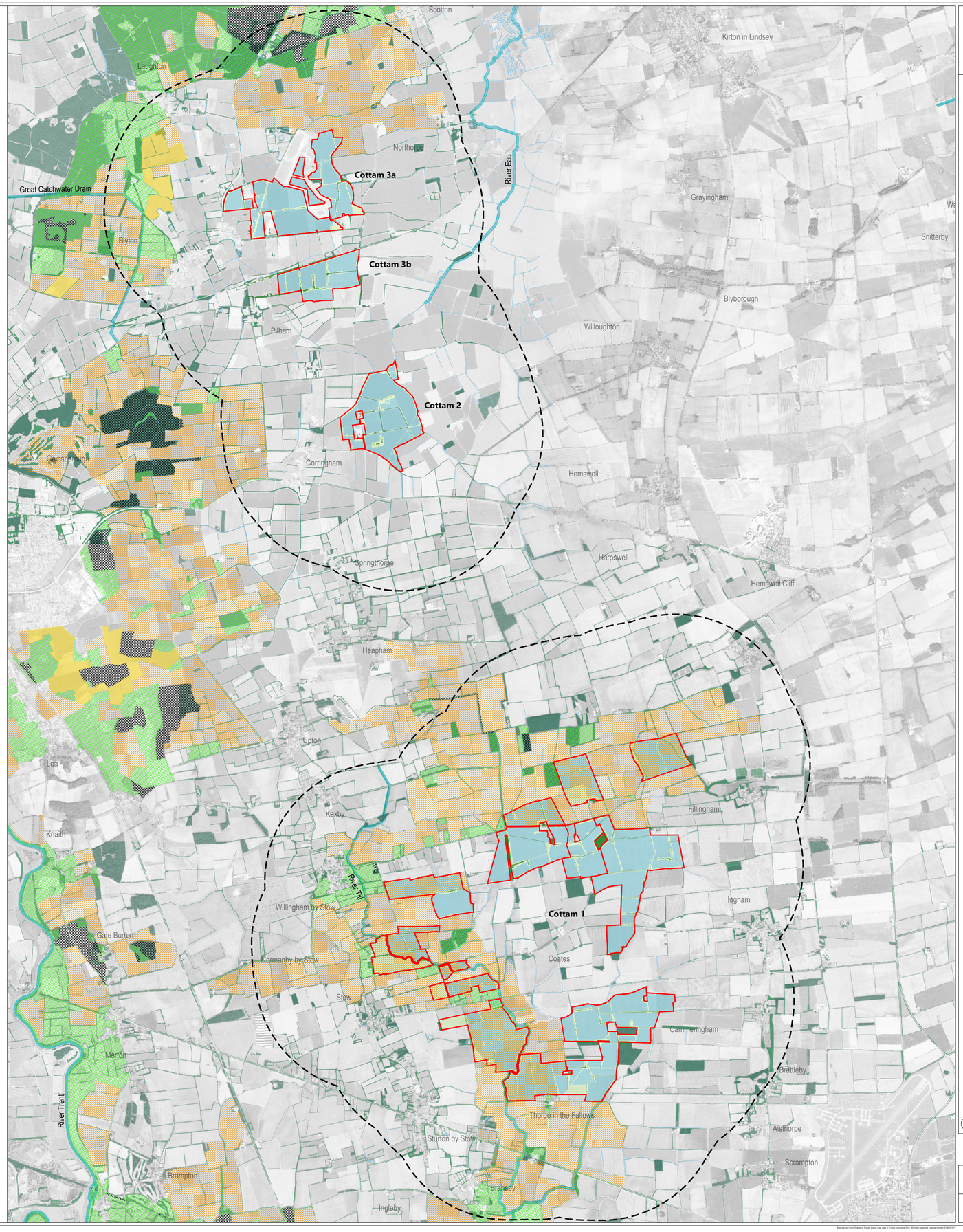
Existing hedge as existing and 15 years post development



Shelterbelt vegetation in years 1 & 15



Public Right of Way



Island GREEN POWER

Lanpro

Key

- Site Boundary
- 2km Study Area
- Land within the Site Boundary including ecological buffers
- Proposed location of solar development and associated infrastructure
- Existing Woodland
- Existing tree cover within 2km Study Area
- Existing hedgerows and vegetation within 2km Study Area
- Existing Ecological network - Opportunity for managment (in accordance with Central Lincolnshire Local Plan)
- Existing Ecological Network - Identified as high quality (in accordance with Central Lincolnshire Local Plan)
- Opportunity for Ecological Creation (in accordance with Central Lincolnshire Local Plan)
- Opportunity for Ecological Creation and Connectivity - (in accordance with Central Lincolnshire Local Plan)
- Existing Major Water Course
- Minor Water Body/Course

Note:
- Existing vegetation based on 2km Study Area.
- All trees to be protected in line with Trees in Relation to Design, Demolition and Construction - Recommendations BS 5837: 2012.

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Figure 8.16
Strategic Mitigation Plan

COTTAM SOLAR FARM
Landscape and Visual Impact Assessment
PEIR