Green Hill Solar Development

Application by Green Hill Solar Farm Ltd. for an Order granting Development Consent for a proposed solar development on land between Northampton and Wellingborough

PINS Ref: EN010170

Landscape and Related Matters Statement

for

Deadline 1 Written Representations

November 2025

by

Carly Tinkler BA CMLI FRSA MIALE

for

Stop Green Hill Solar

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Executive Summary

S1 I am a Chartered Landscape Architect instructed by a group of residents called Stop Green Hill Solar to advise on landscape and visual matters relating to the Application, and act for the group during the Examination.

S2 I specialise in landscape, environmental and colour assessment and planning in the UK and abroad, and have done so for over 40 years. Since 2021 I have been involved with numerous renewable energy and electricity generation / transmission / storage proposals (wind / solar / pylons / BESS), some of which are Nationally Significant Infrastructure Projects, working with local planning authorities, parish councils, and community groups at all stages of the planning / Development Consent Order process. I am therefore very familiar with the issues associated with the proposed Scheme.

S3 I reviewed the Application documents and other material, and carried out an in-depth desktop assessment of landscape, visual and associated effects. I then visited the sites and surrounding areas to undertake on-the-ground survey and assessment, analysed the findings, drew conclusions, and compared them to the Applicant's.

S4 I was also greatly assisted by local residents who are very familiar with these landscapes, and have incorporated the material which has been or will be submitted during the Examination into my studies. Some of the material provides important details and illustrations of the sites' contextual landscapes, and the features, resources and qualities which are most highly-valued.

S5 The full account of my assessment and review, and analysis of the findings, is set out in my report and the associated appendices.

S6 A summary of the findings, and my conclusions, are set out below.

S.7 The LVIA predicts that during construction and the first 15 years of operation, the proposed development would give rise to **significant adverse effects on landscape character and visual amenity**.

S.8 I **agree** with this conclusion, although my assessment found that levels of adverse landscape and visual effects would be **higher** than assumed in the LVIA.

S.9 However, I do **not** agree with the LVIA's conclusion that after 15 years of operation, apart from at three viewpoints, not only would adverse effects on character and views no longer be 'significant', but also, effects on character would be **significant beneficial**.

S.10 My review and assessment concluded that a) after 15 years of operation, effects on many landscape and visual receptors would **remain** significant adverse, and b) there would be **no landscape (nor visual) benefits**.

S.11 The reasons for the differences in judgements are partly due to different interpretations / applications of the published guidance, mainly GLVIA3. In my opinion, there are certain errors in the Applicant's LVIA's method and process, and flawed assumptions have been made.

S.12 For example in some cases, landscape and visual receptor sensitivity levels were underestimated, partly due to lack of granular baseline survey and analysis.

S.13 In particular, many of the notable localised variations in character which occur across the study area were not identified, and thus were not factored into judgements about landscape / visual value and susceptibility.

S.14 Such variations occur due to the distribution of the numerous highly-valued natural and cultural / heritage assets which are present throughout the study area. Whilst some were noted in the LVIA, their contributions to landscape and visual value were not properly considered. The assets display different characteristics and have varying degrees of influence and association, resulting

in each village and its contextual landscape having its own local distinctiveness and sense of place, often with subtle but important variations in levels of value, for reasons which, at first glance, may not be obvious.

S.15 Visual receptor sensitivity levels were underestimated mainly because the LVIA's criteria for visual susceptibility were incorrect.

S.16 Also, and very importantly, the LVIA did not consider the landscape as a **resource,** especially the complex natural, cultural, social and visual functions and services which the sites and their contextual landscapes perform / provide. Most if not all of the resources / functions / services contribute to landscape and visual value in some way.

S.17 This is a **major omission** (and a departure from the guidance), as many of the existing functions / services in the local and wider area are critical to both environmental and human health, including making important contributions to all aspects of 'landscape'. All could be adversely affected by the proposed development.

S.18 For example, the landscapes make highly important contributions to the settings of numerous significant heritage assets, and the assets contribute to the high levels of landscape and visual value. This was not considered in the LVIA, and of course affects judgements about overall effects.

S.19 The landscapes support a wide variety of wildlife habitats, many of which are designated. The section of the River Nene which bisects the Scheme is of international and national importance, being an SPA, Ramsar site, and SSSI. The LVIA did not consider the implications of changes to these habitats, which could result in adverse effects on character and views.

S.20 The landscapes are also a highly-valued recreational resource: in particular, the LVIA did not consider the adverse effects on the social / recreational amenity of people using the network of lightly-trafficked rural lanes and PRoWs enjoyed by residents and visitors alike – several popular long-distance trails run through the study area and through the sites, and many people visit the small, historic villages interspersed along the way. Walkers, cyclists, and equestrians are well-catered for.

S.21 In addition, the LVIA did not identify nor factor in the cause and nature of many of the impacts and effects arising from the Scheme which could adversely affect landscape and views, for example glint and glare (note that there are significant problems with the Applicant's GGA method).

S.22 Furthermore, the LVIA did not differentiate between direct and indirect landscape effects.

S.23 The LVIA predicts that by Year 15, the proposed screen planting would have established and matured. As a result, it concludes that levels of **all** adverse landscape effects, and the vast majority of adverse visual effects, would reduce to the point where they would no longer be 'significant', remaining at the same levels for the duration of the operation.

S.24 I do **not** agree with this conclusion, for reasons which include the following:

a) The LVIA places a great deal of reliance on both existing and proposed vegetation to screen views and thus reduce high levels of landscape and visual effects.

b) However, not all adverse effects on landscape character can be mitigated by screening (ie experiential effects, eg on tranquillity).

c) Also, not all of the identified views could or would be screened by the proposed planting (for example, at elevated locations, and along the PRoWs which cross some of the sites).

d) It is possible that by Year 15, the proposed hedge planting could have established successfully, although that cannot be guaranteed. However, even with the inclusion of (locally-uncharacteristic) fast-growing species, the new woodland planting is highly unlikely to have become an effective screen by then. In other similar cases, decision-makers have

concluded that the proposed planting would not become effective until at least Year 25 of operation (assuming successful establishment and good after-care).

e) Where visual screening would **not** be achieved as assumed, magnitudes of effect at Year 15 would be **higher** than predicted, resulting in **underestimations** of levels of overall adverse landscape and visual effects.

f) It **cannot** be assumed that views would remain screened for another 45 years, whether by proposed or existing vegetation. The Applicant may have control over the former, but none over the latter, which consists of planting which could be reduced / removed / lost at any point in time. Note that whilst ash trees are very common in the study area, and currently help screen views of the proposed development sites, there is now widespread ash dieback. Also, many hedges which the LVIA assumes would screen views for the duration of the operation (60+ years) contain / comprise elm, but Dutch elm disease is rife. The worst-case vegetation-free scenario should be adopted from the outset, and the Scheme sited and designed accordingly.

g) Note that the LVIA does **not** report the worst-case visual scenario of effects at winter Year 15, it reports effects in the summer of that year when trees would be in full leaf.

h) The LVIA states that to achieve effective screening, hedges within the Applicant's control would have to be grown up to and managed at c. 4.5m tall. However, in parts of the study area, tall hedges are uncharacteristic, so in themselves, **the proposed mitigation measures would give rise to adverse landscape effects**.

i) Also, **the proposed screen planting would give rise to adverse visual effects**. In many cases, the proposed 4.5m tall hedges would screen views across characteristically open landscapes. Where the views are across the developed sites, the LVIA assumes this would reduce levels of adverse visual effects, whereas the result is the total loss of view regardless of whether the view includes the sites or not, and thus a significant adverse visual effect.

S.25 The LVIA concludes that from Year 15 onwards, the scheme would deliver **significant landscape character benefits**, due to the proposed screen planting.

S.26 Notwithstanding the LVIA's questionable assumption that the proposed planting would a) establish successfully, and b) remain in place for the rest of the Scheme's life, the main reason why this judgement is flawed is because in LVIA, measures which are proposed to mitigate landscape and / or visual effects, such as screening vegetation, **cannot** be double-counted as landscape / visual enhancements (GLVIA3 para. 3.39).

S.27 At best, the effect would be Neutral, but at worst it would be **significant adverse**, due to the planting being uncharacteristic and / or resulting in the total loss of a view.

S.28 However, in my opinion, the most serious flaw in the LVIA's assessment of effects, which is a complete departure from GLVIA3, is that the significant landscape benefits which the LVIA has **erroneously** identified **only** relate to what it calls the sites' 'landscape **fabric**' – a term which is not used in GLVIA3 but which the LVIA defines as landscape elements, such as hedges and trees. As the LVIA **does not consider effects on the overall character of the sites**, it cannot draw conclusions about whether effects on overall character would be beneficial or adverse.

S.29 GLVIA3 clearly explains that LVIAs should firstly establish the site's overall character, derived from a combination of factors of which landscape elements are just a part. Then, it should consider effects on the elements, and go on to assess effects on the overall character which has been identified. The LVIA has **omitted** this second critical step.

S.30 Furthermore, the assessment must differentiate between **direct** and **indirect** effects on landscape character.

S.31 **Direct** effects on character mainly occur on-site. Direct adverse effects arise from physical impacts which normally cannot be mitigated (for example, the change from greenfield to brownfield land). Therefore, in this case, **direct effects on the overall landscape character of all the sites would be significant adverse**.

S.32 Evidently, the level of the direct adverse effect would be very high due to the **intense and extensive industrialisation of these very rural landscapes**, which display visible and buried time-depth, with numerous significant historic landscape features; contain and support many designated and highly sensitive wildlife habitats; possess a wide range of positive aesthetic and perceptual qualities, including tranquillity and remoteness; act as a highly-valued resource for residents and visitors (and hence contribute to health, wellbeing and quality of life, **and** the local rural economy); and perform / provide many other complex natural, cultural, social and visual functions and services.

S.33 Also note that there would be significant adverse effects on soils and water quality, again, with adverse implications for character and visual amenity. Both would be adversely affected by pollutants, and soils would suffer what could potentially be irreversible damage. The presence of BESS adjacent to the River Nene's highly sensitive aquatic and riparian habitats is a **major concern** given the catastrophic environmental effects likely to occur during a thermal runaway event, although evidently, elsewhere, soils and watercourses / water bodies would be adversely affected.

S.34 In addition, here, a very large proportion of the land within the Order Limits is **BMV land**, and the rest is highly productive.

S.35 Furthermore, it is highly unlikely that the land could or would be restored to its current condition and use, as the Applicant proposes (the LVIA states that '*agricultural fields would be returned to agriculture with **all** structural landscape mitigation retained*'). The soils' ALC grades would almost certainly be far lower than they are now.

S.36 Note that the proposed DNO substation complex, high-security fencing, gated access and cables would remain post-decommissioning.

S.37 Construction, interim, and decommissioning works can and do result in long-term / permanent adverse effects on soils (and adverse effects on water quality / drainage – the two are closely interrelated).

S.38 The Applicant has not considered how the proposed wildflower meadow / pasture would be successfully established on the sites, given that they require low-fertility soils and the receiving soils are highly fertile.

S.39 The Applicant appears to assume that 'resting' arable soils for long periods is beneficial for soil health and quality: this is true from an ecological perspective, but not from an agricultural one, where the intention is to revert to highly-productive arable use, as is the case here. The reality is that after just a few years of 'resting', soil fertility declines significantly, and after long periods, is extremely difficult to restore.

S.40 The Applicant also claims that continued agricultural use could continue by grazing sheep within the solar array areas; however, in reality, grazing sheep within solar arrays areas is neither feasible, practical nor viable, and is even unwise.

S.41 The above landscape related matters (ie effects on soils and water quality, BESS risks, loss of BMV land, restoration, sheep-grazing etc) are explained in more detail in the appendices to this report.

S.42 **Indirect** effects on character usually occur off-site, and indirect adverse effects can sometimes be mitigated. Importantly, levels of indirect effects on character tend to reduce gradually with distance, with the highest levels occurring closest to the site. The LVIA's judgements do not recognise this, predicting that levels of effects on the overall character of the landscapes lying

between the sites and up to 1km from their boundaries would be exactly the same, which of course, they would not (this is mainly due to the LVIA having categorised **all** the landscapes within 5km of the sites' boundaries as having the same levels of value and susceptibility to change, despite the notable localised variations).

S.43 **Indirect effects on the overall character of the landscapes closest to the sites would be significant adverse for the duration of the operation**.

S.44 Note that the **residential amenity** of a large number of people would be adversely affected.

S.45 Evidently, combined, the significant adverse landscape and visual effects that would occur / be experienced within each of the proposed sites' zone of interinfluence and / or intervisibility would **significantly adversely affect an extremely large area, and large numbers of people**.

S.46 The proposed development would heavily industrialise a swathe of good quality, rural, open countryside **c. 23km long and up to c. 7km wide**, and the industrialising influence would extend for many kilometres beyond the Order Limits.

S.47 Solar development homogenises and sterilises rural agricultural landscapes, resulting in the loss of natural seasonal changes and rhythms which are an integral part of how these landscapes have been experienced for hundreds of years. They are **not** homogenous, they display considerable **diversity and complexity**.

S.48 During ISH1, the Applicant's landscape expert explained that a landscape-led approach had been adopted throughout the early stages of the Scheme to ensure that adverse impacts, and effects on landscape and views in particular, were minimised. However, in my opinion it is unlikely that apart from the identification of features such as nationally-designated areas / sites / features, effects on landscape character and visual amenity featured in the site selection process at all.

S.49 The reason for the 'scattering / dispersal' of the sites across such a vast area appears not to be a conscious design intention, but the result of the most important criteria for site selection being i) a suitable point of connection to the Grid, and ii) large landholdings held by willing landowners. This does **not** constitute a landscape-led approach (nor, for that matter, a minimisation of BMV land-take approach) to site selection.

S.50 Another important, related point to bear in mind is that due to northern latitude and associated climate / variable weather, in the UK, solar is **extremely inefficient** – current estimates are just over 10%, so **disproportionately large amounts of land are required to achieve a profitable output**.

S.51 The question is, could the Scheme be constructed on a smaller area of land whilst still producing the same output, which could potentially reduce levels of landscape, visual and other harm? I note that the ExA has also queried the Applicant's overplanting ratio in ExQ1 Q5.0.1.

S.52 In summary, in my opinion, the levels of the majority of the significant adverse landscape and visual effects arising from the proposed development would be higher than the LVIA predicts, and the majority of the effects would remain **significant adverse from start to finish**.

1. Introduction

1.1 I am a Chartered Member of the Landscape Institute (CMLI), a Fellow of the Royal Society of Arts (FRSA), a Member of the International Association for Landscape Ecology (MIALE), a Design Council Expert, and a member of the Landscape Institute's Knowledge and Practice Committee, which *inter alia* is responsible for ensuring best practice in landscape assessment.

1.2 I specialise in landscape, environmental and colour assessment and planning in the UK and abroad, and have done so for over 40 years. Since 2021 I have been involved with numerous renewable energy and electricity generation / transmission / storage proposals (wind / solar / pylons / BESS), some of which are Nationally Significant Infrastructure Projects (NSIPs), working with local planning authorities, parish councils, and community groups at all stages of the planning / Development Consent Order (DCO) process. I am therefore very familiar with the issues associated with the proposed Scheme.

1.3 In May 2025, I was approached by a representative of a group of residents called Stop Green Hill Solar (SGHS), who asked whether I would be prepared to advise on landscape and visual matters relating to the Application and act for the group during the Examination. I concluded that I would be prepared and able to undertake the work, and was subsequently appointed.

1.4 I reviewed the Application documents and other material, and carried out an in-depth desktop assessment of landscape, visual and associated effects. I then visited the sites and surrounding areas to undertake on-the-ground survey and assessment, analysed the findings, drew conclusions, and compared the results to the Applicant's. The assessment and review were carried out in accordance with relevant published guidance including *Guidelines for Landscape and Visual Impact Assessment* Edition 3 ('GLVIA3') [1].

1.5 Note that this commission is different from a 'standard' Landscape and Visual Impact Assessment (LVIA) in that it is a 'hybrid' between an assessment, a review of the relevant Application documents, and a response to the Application (on behalf of SGHS); it also factors in matters raised during the Examination process to date, including Issue Specific Hearing (ISH) 1, which I attended.

1.6 I was also greatly assisted by local residents who are very familiar with these landscapes, and I have incorporated material which has been or will be submitted by them during the Examination into my studies. Some of the material provides important details and illustrations of the sites' contextual landscapes, and the features, resources and qualities which are most highly-valued, so should be referred to for more information as required.

[1] Guidance followed includes the Landscape Institute (LI)'s *Guidelines for Landscape and Visual Impact Assessment* 3rd edition ('GLVIA3'); LI Technical Guidance Note (TGN) 1/20 *Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs);* LI TGN 02/21 *Assessing landscape value outside national designations*; and LI TGN 2/19 *Residential Visual Amenity Assessment*. Also, various LI Technical Information Notes (TINs); *Landscape Character Assessment Guidance for England and Scotland* The Countryside Agency and Scottish Natural Heritage (2002); *Topic Paper 5: Understanding Historic Landscape Character* (ditto); *Topic Paper 6: Techniques and criteria for judging sensitivity and capacity* (ditto); and Natural England's publications *An Approach to Landscape Character Assessment* (October 2014) and *An approach to landscape sensitivity assessment – to inform spatial planning and land management* (June 2019).

2. LVIA Method & Process

2.1 Site Selection and Scheme Design

2.1.1 During ISH1, the Applicant's landscape expert explained that a landscape-led approach had been adopted throughout the early stages of the Scheme to ensure that adverse impacts, and effects on landscape and views in particular, were minimised.

2.1.2 Although the adoption of a landscape-led approach is not specifically mentioned in the Applicant's LVIA (APP-260), the report seems to infer that the 'scattering' of the multiple sites / the reason for their dispersal / disassociation across such a very large area (a swathe **c. 23km long and c. 7km wide**), linked by cables, was a deliberate design intention ('design' in terms of the site's / sites' location/s, perhaps the cable route, and possibly the construction route).

2.1.3 LVIA para. 8.9.31 states, '*These independent areas of land provide more scope for the Scheme to be offset from all key receptors such as settlement edges, individual residential properties, PRoW and transport routes which further assist with its integration and dispersion across the landscape than if the site were one composite whole*'. Para. 8.9.32 says that '*The provision of a solar scheme with discrete areas of land can therefore offer a more favourable approach compared to having a single large site*'.

2.1.4 Para. 8.9.33 states that '*The Scheme has been subject to a detailed and sensitive iterative design process. This has taken account of the context and features of the land **within** the Order limits…*' (my emphasis). This also implies that the design was only considered once the available land parcels had been identified.

2.1.5 In the context of EIA, GLVIA3 Table 3.1 describes site selection as an action which '*identifies opportunities and constraints relating to alternative options … in order to identify those with least adverse (or indeed most beneficial) effects and greatest potential for possible mitigation and enhancement*'. The Table explains that in an LVIA, this '*May not be required, but considering landscape to inform site selection is good practice*'.

2.1.6 See also GLVIA3 para. 3.4, under the heading *Site selection and consideration of alternatives*.

2.1.7 National Policy Statement (NPS) EN-3 para. 2.10.29 states that '*While land type should not be a predominating factor in determining the suitability of the site location applicants should, where possible, utilise suitable previously developed land, brownfield land, contaminated land and industrial land. Where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land avoiding the use of "Best and Most Versatile" agricultural land where possible*'.

2.1.8 This Scheme not only almost exclusively utilises green field land, it also uses very large amounts of Best and Most Versatile (BMV) agricultural land (see Appendix CT-G).

2.1.9 In my opinion, apart from the identification of nationally-designated areas / sites / features, it is unlikely that effects on landscape character and visual amenity featured in the site selection process at all.

2.1.10 APP-042 ES Chapter 5: Alternatives and Design Evolution sets out the factors which *were* considered. The search began with the identification of a suitable point of connection to the Grid, and the existing substation at Grendon was selected.

2.1.11 In theory, sites would be relatively close to the point of connection, with minimal requirement for cable connections. However, in this case, the northern end of the Scheme (at Site A) is c. **14.3km** from the substation, and the southern end (at Site G) is c. **8.2km** from it, with many kilometres of cable runs, not only between each site, but in some cases, also the different parts of each site.

2.1.12 The reason for the sites' scattering / dispersal appears to be because the next step in the Applicant's site selection process was a search for large landholdings held by willing landowners – firstly within 5km of the substation, then up to 20km from that point of connection.

2.1.13 This does **not** constitute a landscape-led approach to site selection (nor, for that matter, a minimisation of BMV land-take approach).

2.1.14 Nor can it be assumed that the adverse landscape, visual, and other effects of a scheme clustered around the point of connection would be greater than that of a scattered one – the effects, harms and benefits of both would have to be closely compared.

2.1.15 Another important, related point to bear in mind is that due to northern latitude and associated climate / variable weather, in the UK, solar is **extremely inefficient** – current estimates are just over 10%, so **disproportionately large amounts of land are required to achieve a profitable output**. The question is, could the Scheme be constructed on a smaller area of land whilst still producing the same output, which could potentially reduce levels of landscape, visual and other harm? I note that the ExA has also queried the Applicant's overplanting ratio in PD-007 ExQ1 Q5.0.1.

2.1.16 Regarding design generally, I note that in ExQ1 Q3.0.3, the ExA asks the Applicant, '*Do you consider that the draft Development Consent Order (dDCO) should make a provision for the final design of the proposed development to be subject to an independent design review?*'.

2.1.17 That is an interesting question which has been posed in other NSIP Examinations. I was involved (as an advisor) in discussions about the design of a consented NSIP (treated as two separate projects), the Boreas and Vanguard Onshore Project Substation (EN010079 and EN010087) where the SoS did require an independent design review. However, that was for a very large, tall and prominent building; whilst at that stage there were no options for alternative locations and limited options for siting, there was the potential for considerable flexibility in the design of the buildings, selection of materials and colours and so on.

2.1.18 It seems unlikely that the adverse landscape and visual effects arising from the Scheme in its current location could be avoided, or high levels reduced, through design measures other than those considered at a much wider landscape scale in terms of location, especially as the design of and materials used for the majority of the scheme elements are pre-determined.

2.1.19 However, in the following question (Q3.0.4) the ExA notes that '*The Scheme Description [APP-041] at paragraph 4.4.17 states "The external finish for the integrated containers will be in keeping with the prevailing surrounding environment."*', and asks the Applicant, '*Are there other factors than the paint colour of green/light grey, that could assist in achieving this? Would light grey in particular be in keeping with the rural surroundings in many locations?*'.

2.1.20 The best way of integrating built form into its landscape and visual context is by carrying out an Environmental Colour Assessment (ECA) – see the Landscape Institute's Technical Information Note 04/2018 (doc ref SGHS/L.8). If the ExA considers this to be a process worth exploring, further information can be provided if required.

2.2 Study Area

2.2.1 I **agree** with the LVIA that generally, levels of effects on landscape character and visual amenity decrease with distance, with the highest levels and thus most likely '**significant**' effects experienced on and closest to the sites. However, as explained in the effects sections below, this is not reflected in the LVIA's reporting of effects on landscape character.

2.2.2 On that basis, I **agree** with the outer boundary of the LVIA study area having been set at 5km from the sites.

2.2.3 However, note that direct and indirect adverse effects on landscape, visual, and other receptors are likely to occur along the proposed construction routes.

2.3 Landscape Receptors

LVIA Figure 8.6

2.3.1 It would be helpful if the Applicant could change the colours used for the listed building symbols on LVIA Figure 8.6 to those used on DEFRA's MAGIC website, as the plan may give the impression that listed buildings of a certain grade are not present when they are and *vice versa*. For example, on MAGIC, the Grade II* listed building symbol is blue, whereas on Figure 8.6 it is orange, and on MAGIC, Grade I listed buildings are yellow, but on Figure 8.6 they are red (which on MAGIC is Grade II).

Landscape receptors: 'fabric'

2.3.2 LVIA para. 8.4.20 explains that the '*Local 1km Study Area… is the 1km area extending as a radius* ***from the outer boundary of the Sites***' (my emphasis), ie it does **not** include the sites themselves.

2.3.3 LVIA para. 8.4.21 states that '*All Landscape Receptors within the Local 1km Study Area will be included in the LVIA*'.

2.3.4 However, confusingly, para. 8.4.21 also says that receptors within the Local 1km Study Area include '*the* ***landscape fabric of the site itself***' (my emphasis), and that '*The Landscape Fabric of the Sites themselves is considered a landscape receptor which will be assessed separately to the relevant Landscape Character Areas*'.

2.3.5 Firstly, note that apart from in a quotation from a 2012 Scottish Natural Heritage publication, **GLVIA3 does not use the term 'fabric' at all**. What the LVIA calls 'landscape fabric' is essentially 'landscape elements'. The GLVIA3 glossary defines elements as '*Individual parts which make up the landscape, such as, for example, trees, hedges and buildings*'. Landscape 'features' are defined in the GLVIA3 glossary as '*Particularly prominent or eye-catching elements in the landscape, such as tree clumps, church towers or wooded skyline*'.

2.3.6 Secondly, I **disagree** with the LVIA's approach, and its interpretation of GLVIA3. In essence, the LVIA appears to assume that 'landscape fabric' and 'landscape character' are one and the same, which as GLVIA3 makes abundantly clear, they are not, as explained below.

2.3.7 Thirdly, also confusingly, whilst the LVIA **does** assess effects on the sites' 'landscape fabric' (APP-081 Appendix 8.3: ES LVIA Assessment Sheets, Appendix 8.3.2.2.1 Visual Assessment Sheets Significant Landscape Receptor Assessment, from PDF p. 626 to p. 662), **and** on the character of the landscapes lying up to 1, 2 and 5km from the sites' boundaries (PDF pp. 664 - 804), for some reason, the LVIA does **not assess effects on the character of the sites themselves**. This is a **major** omission.

2.3.8 As an aside, whilst I understand that the Applicant will provide an index to LVIA Appendix 8.3, it is very confusing that Appendix 8.3.2.2.1 is called ***Visual*** *Assessment Sheets Significant* ***Landscape*** *Receptor Assessment* (my emphasis) – perhaps this could be changed.

2.3.9 Fourthly, and very importantly, effects on the landscapes within 1km of the sites' boundaries are **indirect** (and could potentially be mitigated), whereas the majority of the adverse effects on the character of the sites themselves, including landscape elements (or 'fabric'), are **direct** (and could **not** be mitigated) – explained further in the effects sections.

2.3.10 The correct approach to landscape effects assessment is actually identified in APP-078 Appendix 8.1 – LVIA Methodology (Part 1 of 2) para. 1.3.4 with a quote from GLVIA3 (para. 5.34)), which

advises that '*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,* [**and**] *individual elements or features,* ***and*** *specific aesthetic or perceptual aspects*' (my emphases).

2.3.11 GLVIA3 para. 5.3 confirms that the baseline studies (ie landscape character assessment) should **not only** identify and record landscape elements, features and aesthetic and perceptual factors, **but also** identify and record the **overall character** of the landscape, to which the landscape elements, features and aesthetic and perceptual factors **contribute**.

2.3.12 At para. 5.4, GLVIA3 emphasises that it is the **combination** of the landscape elements, features, factors and qualities which **determine** a landscape's character (the elements may also be key characteristics of the sites and / or their contextual landscapes, in themselves, and / or in the way they are arranged). This is the basis on which published character assessments are, and LVIAs should be, carried out.

2.3.13 GLVIA3 para. 5.35 reaffirms that LVIA should assess how the **combined** effects of changes to features / aspects would affect **overall** character.

2.3.14 It may be argued that here, the character of the sites is the same as the character of the landscapes which encircle them up to a distance of 1km from their boundaries, and that therefore, the levels of sensitivity of the sites should be the same as the 'local' landscapes' – and potentially, levels of effects.

2.3.15 However, that is not a safe assumption to make because within the study area for this project there are **notable variations** in natural and cultural character across relatively short distances which **the LVIA has not identified**. Indeed, this omission was mentioned by North and West Northamptonshire Councils' landscape expert Mr Mills during ISH1 – as far as I recall, using the landscapes around Mears Ashby as an example of the important differences in character which occur throughout the area.

2.3.16 This is explained below, and some of the variations in character across the study area are described in Section 3, but in summary, not all the landscapes in the study area conform to / are typical of their host landscape areas / types, the latter having been categorised in published character assessments.

2.3.17 The differences / anomalies may be due to localised variations in nature and culture, for example remnant historic parkland, forestry plantations or gravel extraction (all of which exist in the study area). The variations result in landscapes and settlements with their own **distinctiveness and sense of place**: many even have 'special' qualities.

2.3.18 This of relevance not only to each 'anomalous' area identified, but also to the study area as a whole. **These landscapes are not homogenous**, they display **diversity and complexity**, and that contributes to each area's levels of landscape (and visual) value, as explained in Section 3 below.

2.3.19 Unfortunately, on projects of such vast scale and complexity, the amount of work involved in surveying and analysing the baseline situation alone is considerable, so LVIAs are relatively high-level. Often it is simply not feasible to carry out the granular studies that would be usual on smaller-scale developments – as would be required if development on **any** of the proposed sites was the subject of a planning application.

2.3.20 However, ideally, the LVIA should be revised to reflect the GLVIA3 approach.

Landscape receptors: character

2.3.21 There is an associated problem in the LVIA's adopted approach which is also a departure from GLVIA3.

2.3.22 The LVIA has identified and summarily described the national, regional and local character areas and types within the study area and shown their locations on plans (see for example APP-259 Figure 8.5, although the host landscape character type (LCT) numbers are not provided), but **it does not identify them as landscape receptors**.

2.3.23 LVIA para. 8.4.52 states that '*Effects to Landscape Character have been assessed within each Study Area (1km, 2km and 5km). Due to the interconnected relationship landform has, the assessment for each Study Area considers the effect of the Scheme on the landscape* ***as a single receptor****,* ***made up of all landscape receptors within the Study Area****, for example all National Character Areas and all Regional Landscape Character Types and Areas within the individual Study Areas. This approach ensures that the assessment looks at the effects of the Scheme on the unique holistic patchwork of landscape character within each Study Area and avoids focusing the assessment on the effects to individual local or national LCAs where it would be difficult to then ascertain the effect of the Scheme on landscape character as a whole. For assessment of Landscape Effects please refer to Appendix 8.3 ES LVIA Assessment Sheets [EN010170/APP/GH6.3.8.3]*' (my emphasis).

2.3.24 There could be an argument for adopting this approach for the landscapes furthest from the sites eg 3km+, where the boundaries between the contextual landscapes' various areas and types are less visually distinct and several areas / types may be seen in the same view; but for the Scheme sites and their immediately-surrounding landscapes, it is essential to know, analyse, and factor in the characteristics and qualities of the host areas / types as they are an integral component of judgements about sensitivity and overall effects on character – direct, and indirect.

2.3.25 Note that most character areas / types cover relatively large geographical areas, and the baseline studies are usually carried out at a high-level landscape scale (see also national character below). Thus, as explained above, the important differences in character can (and here, do) occur across the area / type but not be noted as they are anomalous and not characteristic of the area / type as a whole. See analysis of local landscape value in Section 3.1.

2.3.26 Ideally, the LVIA should be revised to include the relevant character areas and types as landscape receptors, and through survey and analysis, establish new areas / types where the landscapes are not characteristic of the hosts.

National Character Areas

2.3.27 Another problem relates to the LVIA having scoped out effects on the host National Landscape Areas (NCAs).

2.3.28 LVIA para. 8.6.20 states that '*The NCAs are a national scale assessment and though they provide a useful broad scale overview of landscape character, the detail of more local scale landscape character assessment studies is more relevant to LVIA for development proposals of this scale*'.

2.3.29 In fact, the introduction to the NCA profiles explains that NCAs are '*… areas that share similar landscape characteristics, and which follow natural lines in the landscape rather than administrative boundaries,* ***making them a good decision-making framework for the natural environment****…* [they are] ***guidance documents which can help communities to inform their decision-making about the places that they live in and care for*** [and] *also help to* ***inform choices about how land is managed and can change***' (my emphases).

2.3.30 Also, it is important to factor in the NCAs' Statements of Environmental Opportunity (SEOs), which the LVIA did not do either. The profiles explain that SEOs '*offer guidance on the critical issues, which could help to achieve sustainable growth and a more secure environmental future*'.

2.3.31 Ideally, the LVIA should be revised to include the NCAs in the effects assessments.

2.4 Technical Matters

'Significance' in LVIA

2.4.1 This is not a material matter, but the LVIA uses the term 'significance' incorrectly. For example, APP-078 Appendix 8.1: LVIA Methodology (Part 1 of 2) para. 1.1.3 states, '*The significance of landscape and visual effects is determined through consideration of the sensitivity of the receptor and the magnitude of change*'.

2.4.2 This is a fairly common error amongst practitioners, and the Landscape Institute has produced statements of clarification (SoCs) on the subject[2].

2.4.3 The correct process is firstly to identify the level of overall effect (eg Moderate), then determine and report whether that level of effect is 'significant'. This judgement is based on a significance threshold which is set at the start of the project.

2.4.4 In this case, I **agree** with the significance threshold for the LVIA being set at Moderate (LVIA para. 8.4.79), but note issue with point scales below.

LVIA method: criteria

2.4.5 The criteria which the LVIA uses for making judgements about levels of landscape and visual value, susceptibility to change, and sensitivity, as set out in APP-078 ES Appendix 8.1, are problematic.

2.4.6 GLVIA3 advises that '*the individual criteria contributing to sensitivity and magnitude should be clear*' (*Summary advice on good practice* p. 46), and that assessors should '*Draw up a list of criteria and factors specific to the individual project and landscape contex*t'.

2.4.7 In my opinion the criteria are not clear, nor are they specific to the individual project and landscape context.

2.4.8 The implications of this are discussed in comments about receptor sensitivity judgements and elsewhere below.

LVIA method: point scales

2.4.9 In most LVIAs, the criteria are set out on point scales ranging from highest to lowest.

2.4.10 The Applicant's LVIA uses four-point scales for levels of landscape and visual value, susceptibility, and sensitivity: High, Medium, Low, and Very Low (APP-078 LVIA Appendix 8.1). No table is provided for levels of magnitude of effect, but LVIA para. 8.4.73 confirms that a four-point scale has been used.

2.4.11 A four-point scale is also used for the overall level of effect: Major, Moderate, Minor, and Negligible.

[2] *GLVIA3 SoC 1/13 10-06-13, GLVIA3 SoC 1/14 28-01-14*, and LITGN-2024-01 *Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment (GLVIA3)*

2.4.12 There is no hard-and-fast rule about the number of points on the scale, and split categories may be used (eg High - Medium). However, in this case, there is a Very Low category but no Very High category, which logically is required for balance, with Medium in the middle.

2.4.13 This approach may skew the results, and levels of effects could have been under- and / or over-estimated. The criteria I use in LVIA are attached at Appendix CT-A. All are set out on a five-point scale ranging from Very High to Very Low. The matrix for evaluating overall levels of landscape effects at my Table 6 illustrates the use of the five-point scale, which can be compared to the LVIA's four-point scale matrix at Table 8.1.1.14.

2.4.14 An example of the LVIA's inconsistency in this regard relates to landscape and visual value. In my criteria, the Very High value category is for designated landscapes and features of international / national importance, and views from within / towards such landscapes / features.

2.4.15 In the LVIA, designated landscapes and features of international / national importance are the highest level ie High; however, a) Grade II listed buildings are not included in the High category, having been assigned only Moderate / Regional value, along with Registered Parks and Gardens (RPGs) – relevant here as there is an RPG adjacent to the proposed BESS site; and b) as well as designated landscapes and features of national importance, the LVIA's criteria for High visual value include Regional value factors.

2.4.16 Also, the LVIA incorrectly includes value criteria in the susceptibility criteria – explained further below, along with other technical matters.

2.4.17 It may be considered helpful for the LVIA to be revised to factor in the above.

3. Landscape and Visual Sensitivity

3.1 Landscape Sensitivity

Method

3.1.1 LVIA para. 1.2.5 states that judgements about levels of both landscape and visual sensitivity are '*established by considering the concept of value of the receptor combined with the susceptibility of the receptor to specific change. The combination of these two criteria then informs the sensitivity of landscape and visual receptors as set out in Sections 1.6.9 to 1.6.12 and 1.7.17 to 1.7.21*'.

3.1.2 However, *Notes and Clarifications on Aspects of GLVIA3* LITGN-2024-01 Section 2 Issue E3 explains that '*The susceptibility of visual receptors is not dependent on the specific change being proposed*'. It is not clear whether the LVIA assessed visual receptor susceptibility to the scheme, and clarification would be helpful.

3.1.3 As mentioned previously, the LVIA has not identified the host national and local character areas / types as landscape receptors, nor established what contributions they make to landscape value and susceptibility to change, thus they have not been factored into judgements about landscape sensitivity, nor have effects upon them been assessed.

3.1.4 As a result of this and other factors – including the lack of granular baseline survey and analysis, and the use of different point scales – the LVIA's judgements about levels of sensitivity are almost certainly incorrect.

3.1.5 The landscapes and their qualities can be appreciated during site visits, although as always it is important to understand what one is looking at in terms of nature, culture, and other factors which may mean that a landscape which appears 'ordinary' or 'everyday' is anything but.

Landscape value

3.1.6 I have used Site A as an example of some of the issues noted in this section of the report. Site A lies north of Walgrave and east of Old. Site A2 lies nearby, east of Walgrave.

3.1.7 My baseline research for my landscape and visual assessments of the Scheme, and judgements about the site and surrounding areas' landscape and visual value, were assisted by residents who have in-depth knowledge of the local and wider areas' natural and cultural assets.

3.1.8 Some residents had carried out their own LVIAs of the Scheme, and written up and illustrated the findings in reports to be submitted as Written Representations. They are included with SGHS's submission – see document refs SGHS/L.2 - 7.

3.1.9 For Area A, the residents' studies included an assessment of landscape value informed by notes (illustrated with photos) written by nine individuals from the village explaining exactly why the landscapes are important to them and so highly-valued. With their agreement, for ease of reference I have included both as appendices to this report – see Appendix CT-B *LVIA Walgrave*, and Appendix CT-C *LVIA Walgrave - 9 Narratives*.

3.1.10 In APP-081 Appendix 8.3: ES LVIA Assessment Sheets, at p. 627 of 986 of the PDF (p. 24 of the *Individual Site Assessments / Landscape Fabric* section), the LVIA concludes that Site A's level of landscape 'fabric' value is **High** (see previous comments about the definition of 'fabric').

3.1.11 I **agree** with this judgement, but with the aforementioned caveats, ie a) the LVIA's use of a four-point scale, and b) the LVIA's value judgements only relate to landscape 'fabric' ie landscape elements, not the sites' overall character.

3.1.12 Also, note that the LVIA categorises **all** the sites' fabric as High value, whereas my own assessment found **distinct localised variations**.

3.1.13 In addition, and very importantly, **the LVIA does not assess the landscape value of the individual sites as a whole, only that of the elements**.

3.1.14 The LVIA does consider and state the value of the landscapes up to 5km from the sites' boundaries (in terms of character, not 'fabric'); however, very surprisingly, ***all*** **the landscapes within 5km of the sites are categorised as being of Medium value**.

3.1.15 Clearly this judgement cannot possibly account for the natural and cultural variations in character which occur throughout the study area, some of which are described in the following sections. These variations – some of which are visually notable, others more subtle – give the landscapes and settlements their own **local distinctiveness and sense of place**.

3.1.16 My own assessment concluded that broadly, within the study area, levels of landscape value are **higher** than the LVIA assumes (on average, **High - Medium**, but note the LVIA's lack of a Very High receptor category). The underestimation is due to factors set out above, including lack of granular baseline study and analysis.

3.1.17 Regarding the **sites'** landscape value, as an example, my judgement of Site A's level of value (**between High and High Medium**) is due to factors such as historic landscape character, and the importance of the landscape as a resource for people's social / recreational amenity, health and well-being, and quality of life.

3.1.18 Both Walgrave and Old are small, quiet, quintessentially rural villages in one of the more remote parts of the study area. They lie over 7km from the outskirts of the nearest urban settlements – Kettering to the north east, Wellingborough to the south east, and Northampton to the south. West of the villages there are no large settlements at all, just open countryside stretching as far as the M1 which is over 20km away.

3.1.19 **Time-depth here is significant, and much of it is visible**. Walgrave is probably older than Old, first documented in Domesday Book (1086) but almost certainly with much earlier origins. Over time, the settlement has shifted slightly from its original location, which was mainly along the lower southern and eastern edges of the village in its present form. These parts of the medieval settlement were abandoned but are still clearly visible on the ground: they are now scheduled monuments, along with an associated medieval moated site to the north.

3.1.20 Both villages boast Grade I listed churches (C13 St Andrew in Old, and C13 St Peter in Walgrave), and many Grade II listed buildings and structures.

3.1.21 It is evident that the associated landscapes make a **highly important contribution to the settings of many of the heritage assets**, **and the assets make highly important contributions to landscape value**.

3.1.22 Like most of the medieval villages in the study area, Walgrave and Old have a centuries-old association with the surrounding landscapes, which clearly display traces of medieval land uses and practices: old trackways / holloways (which may be ancient saltways); hedgelines, banks, and ditches; and extensive ridge-and-furrow. LIDAR reveals numerous other features in the fields around the villages: the listing for Walgrave's abandoned medieval village notes that although not scheduled, there are known to be associated earthworks further east, along the Kettering Road.

3.1.23 In fact, the Applicant identifies **significant archaeological features in Site A**, which suggest that Walgrave has been a focus of human activity for millennia: APP-129 ES Appendix 12.4 Archaeological Geophysical Survey Reports Part 1 of 10 reports that in Site A Field AF1, '*The geophysical survey has detected a number of magnetic anomalies associated mainly with an agricultural landscape including former field boundaries, medieval/post-medieval ridge and furrow cultivation, modern ploughing and land drains. Archaeological and possible archaeological responses have been recorded within the Site over two well defined areas and then further sporadic*

*areas. These comprise ring ditches, linear ditches and trends and rectilinear enclosures, possibly indicative of prehistoric or Roman activity… the archaeological potential of this Site is deemed to be **high** where there are areas of activity and low elsewhere*' (my emphasis).

3.1.24 These historic landscape features exert a **strong influence** on the character of today's landscapes: indeed, Walgrave and Old are typical and good representations of their host LCT 5 Clay Plateau, as described in North Northamptonshire's *Current Landscape Character Assessment* (2010); for example '*Churches, older stone properties, and field patterns within and immediately surrounding villages are indicative of former periods of occupation and activity stretching back to the medieval period*'. Conversely, they also good examples of landscapes being *atypical / anomalous* of their host local landscape character area (LCA) 5b Sywell Plateau, in that whilst characteristically '*there are a **limited** number of heritage features on the Sywell Plateau*', in and around Walgrave and Old / Site A, they are plentiful.

3.1.25 However, **the LVIA does not include this important and very relevant information in judgements about the level of landscape value**.

3.1.26 In APP-081 Appendix 8.3 LVIA Assessment Sheets, at pp. 664 – 666 of the PDF in the section *Green Hill Site A: Landscape Character - The 1km Study Area (The Local Study Area)*, despite the descriptions and analysis being based on the published character assessment for LCA 5b, there is **no mention of relevant heritage or historic landscape features / character at all** (the only historic features noted are '*Monuments and landscape features associated with the Battle of Naseby*', which lies c. 12km north west of Site A and has little or no association with the study area landscapes). Thus, levels of landscape value are higher than the LVIA assumes.

3.1.27 Due to their relative isolation, the villages' contextual landscapes have retained a strong agrarian character, and have high levels of positive aesthetic and perceptual qualities including a combination of expansive open arable fields and pastures, and more enclosed, intimate areas such as along narrow wooded stream valleys and holloways; local distinctiveness and sense of place; tranquillity; and a sense of remoteness / wildness – again, these qualities are noted as being a key characteristic of Site A's host LCT 5 Clay Plateau in the *Current Landscape Character Assessment* (2010), which states, '*Despite being a productive agricultural landscape, the absence of buildings and indeed people in wide panoramic views, imparts a distinct but subtly remote character to some areas*'.

3.1.28 Again, this information is not included in the LVIA's judgements about this area's levels of landscape value. On the same pages of the PDF referenced above, the only quality mentioned is tranquillity, and all that is said about that is, '*Tranquillity is impacted by the incongruous elements identified above*'.

3.1.29 Firstly, the LVIA does not note that around Old / Walgrave / Site A, levels of tranquillity are higher than in other parts of the study area.

3.1.30 Secondly, the 'incongruous elements' are '*the wind turbine adjacent to White lodge, the A43 and high voltage transmission lines*'; however, from Old and Walgrave respectively, the turbine, which appears to be smaller than others in the study area, is c. 2.9km / 2.2km; the A43 c. 3.5km / 2km, and the high-voltage lines just over c. 3.5 / 3km. Due to their distances from the villages, these elements have **very limited visibility in the landscape**, and **very little influence on the villages' / local landscapes' character**.

3.1.31 This is also an area with dark night skies, which is a significant value factor. The LVIA does not consider this at all, despite it being **recommended in NPS EN-1** (para. 5.10.21).

3.1.32 Many residents, people from the surrounding communities, and from further afield, visit the area with the main purpose of enjoying informal recreational opportunities and access to nature in high quality landscapes.

3.1.33 Pitsford Water is a large reservoir lying c. 1 – 1.5km south west of the villages which is an important local informal recreational resource. According to Pitsford Water's website, '*Nestled in rolling rural Northamptonshire, Pitsford Water offers something for everyone. A lovely blend of woodland, meadow and grassland, there are stunning views over the water, making it a great setting for walking, cycling, fishing, sailing, watersports and birdwatching*'.

3.1.34 The Reservoir is divided in two by a causeway: the separate areas have separate purposes and consequently display different qualities. The north-eastern part, nearest to Walgrave, is a tranquil nature reserve, on long-term lease from Anglian Water to the Wildlife Trust for Beds, Cambs and Northants, the only public access being near Walgrave, leading to a path which forms a loop-route around the water. The south-western end is for more intensive recreational use, with water-based activities such as fishing, sailing, and windsurfing; recreational routes; a country park; playground; and café.

3.1.35 Some visitors travel though one or both of the villages on their way to Pitsford Water / elsewhere, and stop at the pubs for refreshments (the Royal Oak in Walgrave, the White Horse in Old), driving, walking, cycling, and horse-riding along the network of quiet lanes and public rights of way (PRoWs).

3.1.36 Regarding the LVIA's criteria for value, APP-078 Appendix 8.1 Table 8.1.1.3: *Landscape Receptor Value* provides a limited summary of value factors, and crucially, **erroneously** assumes that Grade II listed buildings and RPGs are only of Regional value, when they are of course of National value. This is likely to have contributed to levels of landscape value being **underestimated**.

3.1.37 Also, LVIA Table 8.1.1.2 '*illustrates the selection of criterion* [sic] *used for assessing the value of undesignated landscapes within TGN 02/21* [*Assessing landscape value outside national designations*]'. However, whilst the LVIA reproduces part of the TGN Table (*Table 1: Range of factors that can be considered when identifying landscape value*), it does not include the column in TGN Table 1 which lists '*examples of indicators of landscape value*'.

3.1.38 The examples, which are '*not exhaustive*', highlight many of the features and factors which were **not** identified or included in the LVIA's baseline studies, as noted previously. Thus, there is **no analysis** of the contribution that natural and cultural landscape features and aspects make to the study area.

3.1.39 Most importantly, the LVIA does not consider the complex natural, cultural, social and visual **functions and services** which the Scheme sites and their contextual landscapes perform / provide (as noted in the TGN), most if not all of which a) contribute to landscape (and visual) value, and b) could be adversely affected by the proposed development.

3.1.40 Most importantly, the LVIA does not consider the landscape as a **resource**. This is emphasised in the first paragraph (para. 1.1) of GLVIA3, which states that LVIA '*is a tool used to identify and assess the significance of and 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*' (my emphasis, but the entire extract is emboldened in GLVIA3).

3.1.41 Landscape resources include the natural, cultural, social and visual functions and services which landscapes perform (as noted in the TGN).

3.1.42 In this case, many of the resources / functions / services in the local and wider area are complex and often interconnected, making important contributions to all aspects of 'landscape'. Some are critical to both environmental and human health. Most if not all could be adversely affected by the proposed development.

They include (in no particular order, all are important):

- Ecosystem services
- Natural capital
- Ecological
- Hydrological
- Landscape character / characteristics / qualities / sense of place
- BMV / highly productive agricultural land
- Contributions to settings of designated landscapes
- Contributions to settings of heritage assets / features, and to historic landscape character
- Archaeology
- Cultural associations
- Social and recreational amenity
- Maintaining / enhancing people's mental and physical health and well-being, and quality of life
- Green / Blue Infrastructure functions and assets
- Residential amenity
- Visual amenity
- Local economy.

3.1.43 Examples of the above resources / functions / services and associated features / qualities can be found throughout the study area, but not all are common to all the sites and their contextual landscapes.

3.1.44 For example, in addition to Walgrave and Old (Site A), many historic villages in the study area would be affected. Listed by location from north to south are: Holcot (Site B), Hardwick (Sites C and D), Sywell (Sites C, D and E), Mears Ashby (Sites C, D and E), Earls Barton (Site E), Wilby (Site E); Grendon and Castle Ashby (BESS site); Easton Maudit (Site F); Bozeat (Site F); and Lavendon (Site G).

3.1.45 The majority of the most significant assets within the villages are of medieval origin, and **many are Grade I / II* listed and / or scheduled**. As well as those in Walgrave and Old, the following are of note (also listed by location from north to south):

~ Hannington's Grade 1 Church of St Peter and St Paul (C13);

~ Hardwick's Grade II* Church of St Leonard (C13), and Grade II* Manor Farmhouse (C14);

~ Holcot's Grade I Church of St Mary and All Saints (C13);

~ Sywell's Grade II* Church of St Peter and St Paul (C12), and Grade II* Sywell Hall (c. 1600);

~ Mears Ashby's Grade II* Church of All Saints (C12);

~ Wilby's Grade II* Church of St Mary the Virgin (C13), and Grade II* Wilby House (C17);

~ Earls Barton's Grade I Church of All Saints and scheduled motte castle (both probably C10);

~ Grendon's Grade II* Church of St Mary (C12);

~ Castle Ashby's Grade I, II* and II buildings including Grade I Church of St Mary Magdalen (C14 with older origins) – see also historic parks and gardens below;

- Easton Maudit's Grade 1 Church of St Peter and St Paul (C13), and Grade II* Listed 22 High Street (c. 1500);
- Bozeat's Grade I Church of St Mary (C12); and
- Lavendon's Grade I Church of St Michael (C12).

Grade 1 listed 14th century church of St Peter and St Paul, Easton Maudit

3.1.46 Apart from the scheduled monuments at Walgrave, within the study area there are only a few which would have been closely associated with the surrounding landscapes. Those of relevance (again, from north to south) are:

- Romano-British settlement and pottery kilns W of Ecton North Lodge;
- Earls Barton motte castle;
- Site revealed by aerial photography N of Easton Lodge;
- Iron Age Banjo enclosure, 330m south west of Manor Farm;
- Lavendon Castle: a motte and bailey and associated enclosures at Castle Farm;
- The Bury: a ringwork and associated earthworks 100m north of Lavendon Church;
- Moated site and associated enclosure at Uphoe Manor Farm 700m east of Lavendon Church; and
- Lavendon Abbey: the site of a Premonstratensian abbey, fishponds and field system at Lavendon Grange.

3.1.47 Also note that at Castle Ashby, there is an **extensive Grade I Registered Park and Garden** (RPG), summarised in the listing as '*Formal gardens, probably by W B Thomas, with lavish use of terracotta work of 1862 adjoining a country house, set within* ***a landscape park improved by Lancelot Brown in the 1760s***' (my emphases).

3.1.48 The RPG is **adjacent to the proposed BESS site**. Although not part of the registered area, there is a lime avenue along Station Road, just west of the BESS site, which leads to Grade II listed Station Lodge at the northern end of the RPG.

3.1.49 In addition, many of the villages in the study area are **Conservation Areas** (from north to south: Hardwick, Sywell, Mears Ashby, Ecton, Earls Barton, Grendon, and Easton Maudit), all within very close proximity to or in the vicinity of the sites which are proposed for solar arrays and BESS.

3.1.50 Throughout the study area, the landscapes make **highly important contributions to the settings of numerous significant heritage assets**, and the assets make **highly important contributions to landscape and visual value**.

3.1.51 The above wide range of heritage assets also illustrates that whilst a key characteristic and special quality of **all** the landscapes / villages within the study area is that they are associated with / feature medieval Grade I and II* buildings – mainly churches, a) very few are associated with / feature scheduled monuments (note the clusters at Walgrave and Lavendon), and b) the monuments range from Iron Age to medieval, each having its own relationship with the landscapes of the time, and each leaving its own mark.

3.1.52 Also, there is only one RPG in the study area, the influence of which is limited to north west / west of Grendon and Easton Maudit.

3.1.53 Another very important landscape (and visual) function which is not common throughout the study area is where the land forms open green buffers / gaps.

3.1.54 The landscapes around Mears Ashby and Earls Barton act as an **important green rural buffer separating Northampton and Wellingborough**. A very large proportion of this area would be occupied by Site E.

3.1.55 Similarly, the landscapes between Easton Maudit and Bozeat form an **important green rural buffer between the villages**, much of which would be occupied by parts of Site F.

3.1.56 The BESS site lies adjacent to the River Nene, the floodplain of which is characterised by extensive gravel pits. The river and floodplain perform **multiple critical functions** including **ecological**, this section of the river (Upper Nene Valley Gravel Pits) being designated as a Special Protection Area (SPA), Ramsar site, and Site of Special Scientific Interest (SSSI).

3.1.57 Many other parts of the study area also make highly important contributions to ecosystem and ecological functions, as confirmed by Beds, Cambs & Northants Wildlife Trust in their consultation response, as reported in APP-046 ES Chapter 9: Ecology and Biodiversity Table 9.2: Statutory Consultation Comments: page 19 of the PDF states, '*Alongside the SPA, the area has a series of places that are important to wildlife and form vital parts of the wider ecological network across the landscape. These include LWS, PWV and PWS. PWS are sites which may be of importance to wildlife or are of some value but do not yet meet LWS criteria*'.

3.1.58 The River Nene is also a **highly important recreational corridor**, with numerous opportunities for formal and formal recreation, some of which attract visitors from around the world, and make highly important contributions to the local economy.

3.1.59 Other parts of the study area also provide a range of opportunities for formal and formal recreation, which also contribute to the local rural economy. This is explained in the sections which follow, but to illustrate reasons why the recreation resources are so highly-valued, below is a note written by a person who is concerned about adverse effects on the qualities of the footpaths that cross Site F, especially footpaths NN/TD/5 and TD/7 (Applicant's LVIA receptors TP206 and TP205 respectively):

"*To the south of Easton Maudit, towards and around the ancient woodland of Horn Wood, there are a number of attractive public rights of way which will be severely impacted, despite proposed mitigations. Notable examples are paths TP206 and TP205 (TD5 and TD7 on NNC Interactive Mapping).*

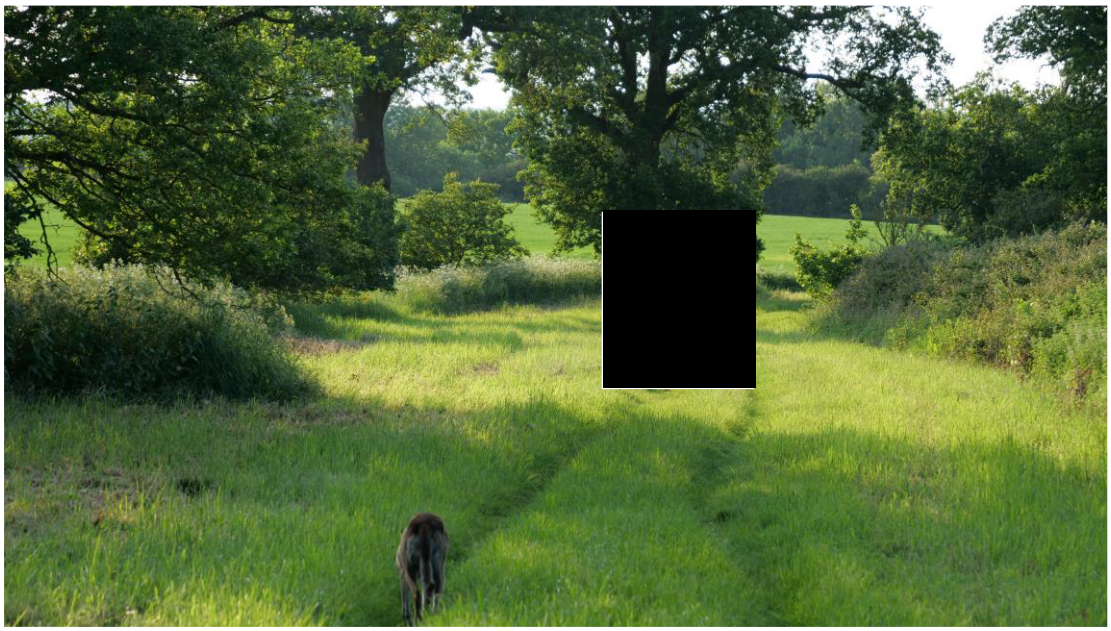
"*TP06 is an exceptionally beautiful, gently winding footpath, at all times of year; it is unusually wide with numerous mature oak trees and other species on ether side, a dry stone wall and hedgerow along its eastern flank, and an open field to the west.*

"*According to the PIER there will be PV arrays in the fields on both sides of these paths. These will block or degrade views north and west across open country including those westwards to Castle Ashby House and the church*".

3.1.60 See references to Castle Ashby house and church above.

3.1.61 Also see another resident's report and photographs in SGHS/L.2.

3.1.62 The photograph below was taken along TD5/TP206 between Horn Wood and Easton Maudit.



3.1.63 Also note that Horn Wood is one of the few semi-natural ancient woodlands (ASNWs) in the study area. Interestingly, it is part of a distinctive, wide swathe of scattered ASNWs running between Brackley and Huntington – a distance of c. 50km. The nearest ASNW to the north is not part of this swathe, lying c. 12km away (Sywell Wood, north of Mears Ashby and Sywell, adjacent to Site C); the cluster of ASNWs around Lavendon, the nearest of which is just c. 1.5km south east of Horn Wood, are part of the swathe.

3.1.64 Additionally, note that combined with the scheduled monuments, the ASNWs contribute to Lavendon's significant time depth, and are further examples of **notable localised variations in character not factored into the LVIA's value judgements**.

Landscape susceptibility to change

3.1.65 Regarding the criteria which the LVIA uses to judge levels of susceptibility to change, APP-078 Appendix 8.1 Table 8.1.1.4 only provides very short notes which are simply based on GLVIA3's definition of landscape susceptibility (at para. 5.40), and are insufficient for the purpose. GLVIA3 para. 5.43 emphasises that '*the basis for* [susceptibility judgements] *must be clear, and linked back to evidence from the baseline study*', which **the LVIA has failed to do**.

3.1.66 As well as '*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 baseline situation and/or the*

achievement of landscape planning policies and strategies' (GLVIA3 para. 5.40), the LVIA's assessment should also have judged susceptibility to change against criteria which include:

- Landscape scale, level of containment, degree of interaction between landform, topography, vegetation cover, field pattern and built form.
- Presence / absence of existence of similar forms of the proposed change / development within zones of interinfluence.
- Presence / absence of detracting features within zones of interinfluence.
- Potential for mitigation and enhancement.
- Ability to replace, repair, substitute, and / or compensate for existing landscape characteristics / elements / features that would be damaged / lost.

3.1.67 Importantly, as with landscape value, **the LVIA does not assess the susceptibility of the individual sites, only that of the 'fabric' / elements**.

3.1.68 The LVIA concludes that Site A's landscape 'fabric''s level of susceptibility to change is **Low**. According to my own criteria (Appendix CT-A), it is **at least High - Medium** (based on the LVIA's four-point scale).

3.1.69 In fact, the LVIA judges **all** the sites' landscape 'fabric''s level of susceptibility to change to be Low. However, **the justification for this judgement is not clear**, especially given the problems with the LVIA's susceptibility to change criteria, and the failure to identify localised variations, as noted above. In my opinion, the LVIA **underestimated** the level of 'fabric' susceptibility to change.

3.1.70 The LVIA does assess the susceptibility of the landscapes up to 5km from the sites' boundaries. However, as with value, and just as surprisingly, **the LVIA categorises *all* the landscapes within 5km of the sites as being of Medium susceptibility to change**.

3.1.71 My own assessment concluded that broadly, levels of landscape susceptibility are **higher** than the LVIA assumes (ranging from **between High and High - Medium** to **High - Medium**) based on the LVIA's four-point scale – note the lack of a Very High receptor category. The underestimation is due to factors set out above, mainly lack of granular baseline study and analysis, but also the criteria.

3.1.72 Also, again, this judgement does not account for the notable localised variations which occur throughout the study area, and which are factors in judgements about susceptibility. Further examples are provided in the following sections.

3.1.73 Taking Site A as an example, my assessment concluded that the level of landscape susceptibility to change is **between High and High - Medium** due to a combination of the above criteria, in particular tranquillity, and there being very few detractors present, including energy infrastructure.

Landscape sensitivity

3.1.74 In LVIA, levels of landscape sensitivity are based on the combination of the receptor's level of value, and level of susceptibility to change of the type proposed (and professional judgement must be applied).

3.1.75 Firstly, the Applicant's LVIA provides criteria for sensitivity but this is not normal in LVIA since they are not necessary for the judgement, which is based on value and susceptibility levels established *through* the use of criteria. Furthermore, here, **the sensitivity criteria include factors which are not included in the value and susceptibility criteria**.

3.1.76 Secondly, the LVIA reports levels of sensitivity of a) the sites' landscape 'fabric', and b) the overall character of the landscapes up to 1km from the sites.

3.1.77 Taking Site A as an example, the LVIA confers a High level of value to the site's 'fabric', and a Low level of susceptibility, resulting in a **Medium** level of 'fabric' sensitivity (see APP-078 Appendix 8.1 Table 8.1.1.6: *Matrix for Determining Landscape Sensitivity*). See previous comments about levels of value and susceptibility.

3.1.78 In my assessment, using the same matrix, the combination of High value and Medium - High susceptibility results in a 'fabric' sensitivity level of **between High and High - Medium**.

3.1.79 Thirdly, **the LVIA does not assess the sensitivity of the overall character of the sites**.

3.1.80 I concluded that broadly, using the LVIA's matrix, the combination of an average High - Medium value, and average High to Medium susceptibility, results in **High - Medium** landscape sensitivity levels across all the sites.

3.1.81 Site A's landscape sensitivity is **between High and High - Medium**, the slightly higher level due to the reasons set out above.

3.1.82 Regarding the sensitivity to change of the landscapes beyond and up to 5km from the sites' boundaries, because it has ascribed Medium levels of value and susceptibility to change, the LVIA categorises ***all* the landscapes within 5km of the sites as being of Medium sensitivity**.

3.1.83 However, for the above reasons, in my opinion it would vary considerably from place to place, but very broadly, the average would be **High - Medium**.

3.2 Visual Sensitivity

3.2.1 APP-078 LVIA Appendix 8.1 Tables 8.1.1.9 and 8.1.1.10 set out the criteria used for judging visual receptors' levels of visual value and susceptibility (unlike character, **not** susceptibility to the type of change proposed).

3.2.2 I do **not** agree with the LVIA's visual susceptibility criteria. They do not reflect GLVIA3, as they include factors which relate to landscape / visual **value**. As explained above, levels of receptor sensitivity are a combination of value **and** susceptibility. The error means that the LVIA's results are likely to be flawed.

3.2.3 GLVIA3 explains (at paras. 6.32 and 33) that:

The susceptibility of different visual receptors to changes in views and visual amenity is mainly a function of:

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

The visual receptors most susceptible to change are generally likely to include:

…

- *people, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape and on particular views;*

… [and]

- *communities where views contribute to the landscape setting enjoyed by residents in the area.*

3.2.4 In other words, someone who takes a walk with the main purpose of enjoying the experience of being out in the landscape is of High susceptibility, even if the landscape is of Low value. Not everyone has access to High value landscapes but they still enjoy being out and about, especially people living in large settlements with limited access to open countryside.

3.2.5 I could not find an explanation for the levels of visual receptor sensitivity attributed at each viewpoint, as set out in APP-081 Appendix 8.3: LVIA Assessment Sheets – see value and susceptibility above.

3.2.6 Again taking Site A as an example, LVIA VP RS03 is representative of views from Walgrave, receptors being c. 270m from the Site.

3.2.7 Here, the LVIA judges the level of visual receptor sensitivity to be **Medium** (this judgement is based on a combination of levels of visual value and visual receptor susceptibility).

3.2.8 I **agree** that the level of visual receptor susceptibility is **High**, as views are from residential properties.

3.2.9 However, I do not understand why the level of the receptors' visual value is reported as being **Low** when the LVIA categorises the value of the sites' landscape 'fabric' as **High**, and that of the 'local' landscapes within 1km of the sites as **Medium**. In theory, value attributed to views reflects the value attributed to the character of the landscapes which may be viewed, so in this case it should be higher (in my assessment, **between High and High - Medium**).

3.2.10 Other examples are provided in the effects sections.

4. Mitigation and Enhancement

4.1 Introduction

4.1.1 LVIA Section 8.8 deals with the proposed 'embedded' landscape and visual mitigation (usually called 'primary' mitigation in LVIA). The proposed landscape (and ecological) mitigating measures are illustrated and summarised on APP-207 Environmental Statement Figure 4.10 *Landscape and Ecology Mitigation Plan A*.

4.1.2 APP-078 Appendix 8.1 – LVIA Methodology para. 1.5.15 correctly identifies the important difference between landscape / visual mitigation and enhancement, in line with GLVIA3 eg para. 4.35. However, in the assessment process, the Applicant's LVIA does not always distinguish between them, which has led to levels of adverse landscape and visual effects having been **underestimated**.

4.2 Double-counting Mitigation As Enhancement

4.2.1 Mitigation measures are intended to avoid / reduce levels of adverse effects. They cannot then be **double-counted** as benefits / enhancements (or compensation). Thus, here, the planting that is required to screen views of the Scheme and / or visually-integrate it into its surroundings is landscape / visual mitigation, **not** landscape / visual enhancement.

4.2.2 GLVIA3 para. 3.39 explains that enhancement '*is often referred to **incorrectly** as an outcome of proposed mitigation measures*' (my emphasis) – as is the case here. Landscape / visual enhancements are proposals that are **not** required to mitigate adverse landscape / visual effects, so they can be counted as landscape / visual scheme benefits, which might potentially outweigh landscape / visual / other harms. (My understanding is that planting proposed as landscape / visual mitigation may be counted as ecological enhancement / benefit / gain, so long as it is not required for ecological mitigation.)

4.2.3 Examples of the double-counting error can be found in LVIA Table 8.7: *Embedded Mitigation: Landscape Design Parameters*, which summarises the proposed **mitigation** measures and the anticipated 'outcomes', but the outcomes include landscape / visual **enhancements**, such as the *Overall **enhancement** and strengthening of the Local Character Area*, and *new planting providing long term screening, structural **benefits** to the landscape*.

4.3 Mitigation vs Enhancement

4.3.1 Often **it is not clear which measures are proposed as mitigation, and which are enhancement**, so it some cases it is not possible to establish whether / where double-counting has occurred.

4.3.2 For example, LVIA para. 8.9.14 states that '*Moderate Beneficial effects have been identified across all Sites for the Operation Year 15 and Decommissioning stages of the Scheme on Landscape Fabric*' (ie elements such as woodland, hedges, tree cover, vegetation – see comments about 'fabric' as a receptor above). Decommissioning is dealt with in the landscape and visual effects sections below. The question is, has the LVIA assumed that **all** the proposed planting would result in landscape / visual benefits, or only that which is required to screen views (and visually integrate the development into the landscape)?

4.3.3 It makes a difference because if the former, then benefits will have been overstated / adverse effects underestimated.

4.3.4 LVIA Tables 11 and 12 list and quantify the proposed 'landscape **enhancements**', but clarification is required, for example:

i) Do the quantities of *Green Corridor and Woodland Planting, Hedgerow Reinforcement and Reinforced Roadside Vegetation, and Proposed Hedgerows* **include or exclude** the elements of this planting which are mitigation measures?

ii) Is the *Enhanced Riparian Native Planting* proposed as a) landscape integration, b) visual screening, c) landscape / visual enhancement, d) ecological mitigation, e) ecological enhancement, or f) a combination of all these?

iii) Have any of the proposed ecological mitigation and / or enhancement measures been included as landscape / visual enhancements, and *vice versa*? For example, the *Proposed Ponds and Wader Scrapes* – are these landscape or ecology requirements / proposals?

iv) There is no definition of *Groundcover* – what does this consist of? (It would cover 1,079.6ha, of land which is c. 70% of the 1,441.4ha Order Limits ie all land falling within the DCO application.) If it is what the LVIA refers to as 'grassland reversion', is this landscape / visual and / or ecological mitigation and / or enhancement? Has the LVIA assumed that the change would be from arable to meadow / pasture? If so, that may not enhance character and appearance if arable landuse is characteristic in the area. See also the problems associated with the proposed change from arable to meadow / pasture in Appendix CT-F.

4.3.5 It would be very helpful if the Applicant could produce an annotated plan clearly showing which measures are mitigation and which are enhancement, and which are landscape and ecological.

4.3.6 If the double-counting error has been made, then the LVIA's results should be revised accordingly.

4.4 Over-reliance On Vegetation To Screen Views

4.4.1 As explained above, the LVIA's baseline studies and subsequent predictions about levels of landscape and visual effects factor in screening which a) is currently provided by existing vegetation, and b) would be provided by reinforcement of existing, and planting, of new vegetation.

4.4.2 Indeed, the LVIA relies heavily on, and emphasises the importance of, existing and proposed vegetation to reduce high levels of adverse landscape and visual effects, including inter- and intra-project cumulative landscape / visual effects, and sequential visual effects, by screening / filtering views of the Scheme.

4.4.3 But these days, it is not considered safe (nor best-practice in LVIA) to rely on vegetation to screen views even in the shorter term, because **it is not possible to predict with any certainty that existing / proposed screening vegetation would remain in place for the lifetime of a development** (or in the case of new planting, establish in the first place). However, in the assessments of effects, that is what the LVIA has assumed (as has the Applicant's assessment of glint and glare – see Appendix CT-I), even though realistically, this is **highly unlikely**.

4.4.4 There are many reasons why vegetation should be considered impermanent, many of which are set out in detail in the Woodland Trust's *Woodland Creation Guide*[3].

4.4.5 Factors include inappropriate species selection for situation; wrong planting specification; adverse ground conditions; soil type; nutrient availability; soil preparation; maintenance and management regimes / quality of care; competition; deliberate removal (authorised / planned, for example forestry plantations / orchards, or unauthorised / unplanned); accident; erosion,

[3] www.woodlandtrust.org.uk/media/50673/woodland-trust-woodland-creation-guide.pdf

decline and death from intensive landuse / pollution, and / or pests / pathogens[4] / diseases (eg Ash dieback and Acute Oak Decline); climate / weather-pattern changes, especially increasing alternating prolonged periods of heat, drought, and rainfall / flooding; or a combination of these and other factors.

4.4.6 In some parts of the study area, the Applicant's LVIA relies on vegetation to screen views which comprises existing short-lived coniferous forestry and broadleaved plantations / shelterbelts. These features are often noted in the LVIA's descriptions of local landscape character, and also in North Northamptonshire's *Current Landscape Character Assessment* (2010); for example the description of LCA 5b Sywell Plateau notes that '*significant areas of coniferous planting can be found around Sywell Airport, including Hardwick Wood, Hardwick Short Wood and Sywell Wood*'. These currently screen views towards sites from viewpoints within the LCA, and within neighbouring LCAs.

4.4.7 Also, I saw significant Ash dieback during my surveys (the LVIA confirms that there is '*a large proportion of Ash prevalent*' in parts of the study area), and widespread Dutch elm disease.

4.4.8 I emailed North Northamptonshire Council's Arb Development Officer asking whether the Council had information about / was aware of such diseases in the area, and he confirmed that '*Ash dieback is certainly a problem and D.E.D is prevalent everywhere*'.

4.4.9 This is important because the screening currently afforded by diseased trees and hedges will be lost very soon.

4.4.10 Many dead ash trees can be seen in roadside and field boundary hedges, and many of the hedges contain elm. Some are **only** elm. Most of the elm hedges are healthy. That is because they are managed at a height of around 1.5 – 2m, the reason being that the elm bark beetles which carry and spread the Dutch elm disease fungus attack elm suckers / shoots once the plant has grown to c. 4 - 5m tall, so keeping them low reduces the risk of dieback (that is why elm survives in hedges but not as mature remnant hedgerow trees in open fields).

4.4.11 In some parts of the study area, the elm hedges have grown up to 4 -5m and currently screen views, and the LVIA assumes they would continue to do so for over 40 years. Evidently, that is not the case: dieback at the top of the plants can be seen everywhere; dead hedgerow trees can also be seen but often the dead parts are removed quickly and the plant is allowed to grow back from the base.

4.4.12 Notwithstanding this, it is still necessary to factor existing vegetation in to visual assessments, but it is important to note the nature of the vegetation – for example, is it a large block of healthy ancient woodland with an assumed high degree of permanence (subject of course to the above factors), a mature coniferous forestry plantation which is due to be felled, or a thin, overgrown hedge which may be cut back at any time?

4.4.13 In addition, the assessment should note whether screening of views by vegetation is likely to be year-round or seasonal, and the degree of screening – some views may only be partially-screened, or filtered by vegetation.

4.4.14 For example, some LVIAs assume that trees in areas marked as 'orchard' on OS maps would be dense enough to screen views, whereas there may only be a few old trees standing (or it may be a low-growing commercial bush orchard). **The LVIA does not provide this information**. It mentions forestry plantations, but there is no indication of their age. In parts of the study area the existing vegetation is thin, gappy, and in poor condition, with many of the tree and hedgerow species being short-lived (eg poplar and willow), and in decline due to the diseases mentioned above and others, plus pests and pathogens (North Northamptonshire Council's Arb

[4] In 2021, the pathogen *Phytophthora pluvialis* was found in a woodland in Cornwall: it was the first report of this pathogen in Europe.

Development Officer said that '*Sesia apiformis is a growing problem for NNC`s Poplar and Meripilus and Kretzschmaria are making us make some difficult decisions regarding some affected mature amenity Beech*'.

4.4.15 In summary, in my opinion, LVIAs should report the **worst-case scenario** effect of there being no screening of views by vegetation. However, if / where reliance **is** placed on vegetation to screen – existing and / or proposed – then the assessment should explain and justify the reasons for the reliance, and for the assumption that the vegetation would certainly remain in place and screen successfully for the duration of the operation.

4.4.16 Finally, it is clear that **the requirement for such extensive and substantial screening acknowledges that this large-scale industrial development is inappropriate in this highly rural location**.

4.5 Plant Growth Rates

4.5.1 The 4th bullet-point at LVIA para. 8.4.36 states that '*15 years after commissioning… is the typical period for the maturation of landscape planting*'.

4.5.2 I take this to mean that most LVIAs adopt 15 years after commissioning as the point in time when, for the purposes of the assessment, it is assumed that the proposed screen planting would have become fully effective. However, I do not agree that all new planting would be 'mature' after 15 years, as it depends on the species. A newly-planted broadleaved native woodland would not be fully mature for decades.

4.5.3 During the examination of the proposed on-shore substations for the Norfolk Boreas and Vanguard offshore windfarms (EN010079 and EN010087 respectively), the Examiners concluded that the proposed planting was not likely to have reached 'maturation' / become effective until **Year 25** of operation.

4.5.4 LVIA para. 8.5.2 2nd bullet states that '*A uniform rate of growth is allowed for trees, shelterbelts, and woodland mitigation planting of 0.4m every 1 year. At Year 15 this will result in new trees, shelterbelts, and woodland plantings having reached a minimum height of 7.5m. A uniform growth rate is allowed for new hedgerows of 0.4m every 1 year. This would result in hedgerows being able to be maintained at a height of 4.5m by Year 15*'.

4.5.5 I **agree** that in principle, this growth rate could potentially be achieved; however, it is dependent on numerous factors – see reasons why vegetation should be considered impermanent above.

4.5.6 GLVIA3 para. 4.43 advises that '*Assumptions about plant growth or other changes over time should be realistic and not over optimistic. The design concept for the mitigation has to have a good chance of being achieved in practice to be taken seriously by the competent authority. This requires not only a good understanding of the design of the mitigation but also the conditions and pressures in which that mitigation will have to survive*'.

4.5.7 Also, on some solar sites, the proposed planting has been carried out prior to works being commenced, or at an early stage of the construction process; however, large amounts of planting were damaged, and was not replaced until the works were complete.

4.5.8 In fact, according to residents living near the Cleve Hill solar NSIP [EN010085], although the project became operational in July this year, following a two-year construction period '*there is still no sign of the landscape planting the developer was required to fund and deliver as part of its Development Consent Order*'[5].

[5] https://stopeastparkenergy.com/a-nightmare-the-grim-reality-of-living-next-to-a-mega-solar-building-site/

4.5.9 This year, due to the intense heat and prolonged drought, many new plantations failed despite having been watered regularly – young plants were scorched to death. Even mature native stalwarts such as elder and birch appear to have died off in large numbers. Conversely, at some sites, extreme rainfall has washed away new planting, and where the ground has been compacted, the soils remain waterlogged for prolonged periods, killing plants not tolerant of such conditions.

4.5.10 In my opinion, in future it is highly likely that such events will occur more frequently. Indeed, this has been recognised for some time: the Woodland Trust's *Woodland Creation Guide* states that '*Today's new woodlands will, therefore, have to be ready to adapt and evolve over time*'.

4.5.11 Thus, maintenance and management prescriptions will have to be tailored accordingly. All existing and newly-planted proposed vegetation would need to be monitored closely for the first few years, and perhaps more than once a month in hot weather. On a project of this scale, that would be a significant commitment, and even then, there is no guarantee of success.

5. Cause and Nature of Effects

5.1 Introduction

5.1.1 Section 3 explains how levels of landscape and visual receptor sensitivity were underestimated in the Applicant's LVIA, which has implications for subsequent judgements made about levels of landscape and visual effects.

5.1.2 In the LVIA process, judgements about levels of landscape and visual effects are arrived at by combining the level of receptor sensitivity with the level of magnitude of effect (eg High sensitivity + Low level of magnitude = Medium level of overall effect).

5.1.3 This section deals with the cause and nature of the impacts and effects which are likely to occur throughout the lifetime of the proposed development.

5.2 Cause and Nature of Effects

5.2.1 Effects may be direct, indirect, secondary, cumulative (inter- and intra-project), short-, medium-, and long-term, permanent, temporary, positive and negative (or beneficial / adverse – the terms are interchangeable, although 'beneficial / adverse' tends to be used for magnitudes of effect, and 'positive / negative' for overall levels of effect). All these aspects should be considered in LVIA.

5.2.2 The Applicant's LVIA and other submitted documents provide limited information about, and / or do not factor in, the cause, nature, and likely extent of many of the effects which are likely to arise throughout the project's lifetime, resulting in magnitudes of effect having been underestimated.

5.2.3 It is very important to understand the cause and nature of the effects, because if the proposed development was granted consent, some of the problems may need to be resolved through future detailed scheme design adjustments / mitigation / planning conditions. It is also possible that some of the adverse effects could not be mitigated, and could result in permanent damage to / loss of valuable features.

Construction / Decommissioning Impacts / Nature of Effects

5.2.4 Where relevant, more detail is provided in the effects sections below, and the appendices. In summary, the construction and decommissioning landscape / visual / amenity / other effects likely to arise / their causes include:

i. Temporary features during construction / decommissioning phases including compound/s.

ii. Modern, highly industrialising scheme elements, features and activities inserted into / occurring within rural, tranquil landscapes displaying positive aesthetic and perceptual qualities, time depth, and biodiversity, and which despite the presence of some existing energy infrastructure detractors, currently contain very few developments similar to the type proposed.

iii. Adverse changes in the positive aesthetic / perceptual qualities of the landscape: disturbance / activity / movement / noise (vehicular, mechanical and human); odour; clutter and paraphernalia associated with activities on site; bright colours; glint / glare from reflective surfaces; and artificial light at night (ALAN).

iv. Adverse changes to / loss of critical landscape and visual functions.

v. Extensive engineering works including cut-and-fill, potentially causing permanent damage.

vi. Construction / decommissioning routes along local roads and lanes with several constraints, including high levels of informal recreational use by residents and visitors.

vii. Some of the direct effects arising from construction and other traffic using the proposed construction route (for example loss of / damage to verges, hedges and trees, and damage to structures such as bridges and walls) could be permanent.

viii. During decommissioning and / or interim works, if / where vegetation along the construction route had recovered, and / or features / structures had been repaired, similar damage / loss would occur again.

ix. Direct / indirect loss of / damage to existing landscape elements, features and landcover: many found on and around the site are good representations of both the national and local landscapes' areas / types key characteristics. Some features are of significant heritage and ecological value.

x. Pollution of soil, air and / or water - residues and emissions, odour and dust (also nuisances).

xi. Long-term adverse effects on soil structure and microbiology.

xii. Loss of wildlife.

xiii. Changes to / loss of views resulting from the above.

xiv. Adverse effects of noise, light, pollution, traffic etc. on people's social / recreational and residential amenity, mental / physical health and well-being, and quality of life.

xv. Potential adverse effects on local business / economy many of which depend on trade from visitors who come to enjoy the landscape's positive qualities and rich natural / cultural resources.

Operational Impacts / Nature of Effects

5.2.5 The operational landscape / visual / amenity / other effects likely to arise / their causes are explained in more detail in the effects sections and appendices where relevant, but in summary, they include:

i. Modern, highly industrialising features and activities inserted into / occurring within rural, tranquil landscapes displaying positive aesthetic and perceptual qualities, time depth, and biodiversity, and which, despite the presence of some existing energy infrastructure detractors, currently contain very few developments similar to the type proposed.

ii. Associated negative changes in the landscapes' positive aesthetic / perceptual qualities, especially tranquillity (see below) arising from the industrialising nature of the proposals. For example, the landscape pattern would be disrupted; there would be bright / contrasting colours, and glint / glare from the solar panels' and other reflective surfaces. Although levels of some effects would normally be lower during operation than construction / decommissioning, there would still be regular activities on site, with disturbance / activity / movement / noise (human and mechanical), clutter and paraphernalia, lighting and so on, especially during interim works.

iii. Adverse changes to / loss of critical landscape and visual functions.

iv. Some of the proposed features / activities have a high degree of permanence, others could be 'truly' permanent, or at least, treated as such: for example here, the proposed DNO substations and associated infrastructure, access, cabling etc are likely to remain after decommissioning.

v. Loss of BMV land.

vi. Loss of characteristic vegetation / landuse.

vii. It is likely that interim works would involve high levels of activity and disturbance: panels / other equipment would need to be replaced from time to time, meaning that construction effects would be experienced again during the operational phase.

viii. Substantial adverse changes to / loss of views and visual amenity resulting from the above.

ix. Glint and glare effects.

x. Substantial adverse changes to the highly-valued and valuable historical, recreational, and ecological resources.

xi. Potential adverse effects on local business / economy many of which depend on trade from visitors who come to enjoy the landscape's positive qualities and rich natural / cultural resources.

xii. Tranquillity is a relevant consideration here, because parts of the study area benefit from this landscape quality.

a) Tranquillity is defined in the glossary of GLVIA3 as '*a state of calm and quietude associated with peace, considered to be a significant asset of landscape*'.

b) Tranquillity is often assumed to be synonymous with 'lack of sound'; however, in landscape and visual assessment, that is not the case. 'Tranquil areas' should not be confused with 'quiet areas', which are defined by the European Environmental Noise Directive (END; 2002/49/EC) as '*those areas delimited by national authorities that are undisturbed by noise from traffic, industry or recreational activities'*.

c) In Wales, the definition of tranquillity that has been adopted by both Welsh Government (Welsh Government 2012) and Natural Resources Wales (NRW 2016a) is '*An untroubled state, which is peaceful, calm and free from unwanted disturbances. This can refer to a state of mind or a particular environment. Tranquillity can be measured in terms of* ***the absence of unwanted intrusions****, or by a balancing of positive and negative factors. These include* ***the presence of nature, feeling safe, visually pleasing surroundings and a relaxing atmosphere***' (my emphases).

d) The LI's technical information note (TIN) 01/2017 on the subject[6] (revised March 2017) was '*prepared for the purposes of providing an overview of what is understood by the term 'tranquillity' within the landscape profession and to inform any future discussions and actions on the topic*'. The TIN – which was not referenced in the Applicant's LVIA – explains that '*There are clear links between landscape and tranquillity… the interpretation of tranquillity is often linked to* ***an association or engagement with the natural environment*** *and it is this interpretation that places the term within the realms of landscape related study and research*' (my emphasis).

e) The TIN goes on to say that '*tranquillity cannot readily be defined as an environmental characteristic or quality as it is a state of mind that is being described and thus human perceptions as well as factual evidence must be considered in any studies relating to the term. Tranquillity is, in effect, an umbrella term used to refer to the effect of a range of environmental factors on our senses and our perception of a place*'.

f) Natural England lists 'relative tranquillity' as one of six factors that contribute to natural beauty.

[6] https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2017/02/Tranquillity-An-Overview-1-DH.pdf

g) Tranquillity is an important factor in why people visit certain places, and why they choose to live and / or work in them. A 2001 survey commissioned by Defra cited tranquillity as the most commonly-mentioned reason why people visit the countryside.

h) One of the most commonly-reported benefits of tranquillity is its ability to achieve a positive peaceful, state of mind: generally considered to contribute to enhancing people's quality of life.

i) Thus, even during the operational phase, when the site would not be as active / noisy as it would be during construction / interim works / decommissioning, there is no doubt that the proposed development would give rise to high levels of adverse effects on tranquillity.

6. Landscape Effects

6.1 Effects On Character During Operation

6.1.1 In the LVIA, effects on landscape character during construction, operation, and decommissioning are dealt with in Section 8.9.

6.1.2 LVIA Table 8.13 is a summary of the landscape receptors which the LVIA concludes would experience **significant** operational effects. The receptors are 1) 'Landscape Fabric', and 2) 'Local Study Area (1km)'.

6.1.3 Firstly, note the comments in Section 3.2 above about 'landscape fabric', and the difference between direct and indirect effects.

6.1.4 Also note that the LVIA assesses both landscape and visual effects '*during the construction period (winter), operation at year 1 (winter) and operation at year 15 (summer) and at decommissioning stage (winter)*'. This matter is explained further in the visual effects section below, but in summary, this approach does not reflect the worst-case scenario, as levels of adverse visual effects would be **lower** during the summer months.

6.1.5 Secondly, according to the LVIA, at Year 1, effects on 'landscape fabric' would be '*Moderate / Minor Neutral*'. However, it is not clear whether this is a range of levels or a split category, and whether the effects are adverse or beneficial: it would be helpful if the Applicant could explain.

6.1.6 At Year 15, the LVIA concludes that effects on 'fabric' would be **Moderate Beneficial (Significant)**. However, as noted previously, it appears that the LVIA may have double-counted some or all of the mitigation planting as enhancement, and this also requires clarification. If all the planting is mitigation then the overall effect is likely to be **Neutral** at best, and if only some is enhancement, the beneficial effects would be **lower** than assumed.

6.1.7 Thirdly, also as explained in Section 3.2, the LVIA has neither established nor assessed effects upon the **overall character** of the sites, which is a departure from GLVIA3: the LVIA should be revised accordingly.

6.1.8 I have taken Site A as an illustration.

6.1.9 The LVIA concluded that Site A's level of sensitivity is **Medium**, whereas my assessment concluded it is **between High and High - Medium** (see Section 3).

6.1.10 Within Site A, in the areas occupied by infrastructure (solar panels and other ancillary scheme elements), I concluded that the **direct** effects of development on the overall character of the site from Year 1 would be **between Major and Major – Moderate Adverse (significant)**. That is based on my assessment of Site A's level of sensitivity (between High and High - Medium), and a High Adverse level of magnitude (based on the LVIA's criteria in APP-078 Appendix 8.1 – LVIA Methodology Table 8.1.1.8 - *Overall Magnitude of Landscape Change*), and professional judgement.

6.1.11 The direct affects could not be mitigated, so would **remain between Major and Major – Moderate Adverse (significant) for the duration of the operation**.

6.1.12 As far as I am aware, the proposed DNO substation proposed on Site A should be treated as a **permanent** fixture (as it would not be removed by the Applicant during decommissioning), along with the associated elements such as security measures, means of access, and cabling.

6.1.13 Note that direct landscape effects may also occur along the proposed construction routes – see for example doc ref SGHS/ Hi.1 – 3.

6.1.14 Also see Appendix CT-J regarding the proposed security fencing.

6.1.15 **Indirect** effects on character would occur i) on the parts of the sites where no infrastructure / industrialising works are proposed and ii) beyond the Order Limits.

6.1.16 Regarding i), as it is not clear which measures are proposed as mitigation and enhancement, it is not possible to make accurate predictions about levels of indirect landscape effects in accordance with the LVIA's method. However, in principle, they should be lower than direct effects, so at **Year 1**, I would expect the level for Site A to be at least **Major – Moderate Adverse (significant)**.

6.1.17 That is mainly due to the large-scale industrialisation of rural, historic, tranquil landscapes and the associated adverse effects on critical functions and services.

6.1.18 By **Year 15**, the level may have decreased somewhat, but it is difficult to judge, not just because of the LVIA's lack of distinction between mitigation and enhancement, but also the uncertainty over whether the proposed planting would establish successfully and become effective.

6.1.19 Regarding ii), ie indirect effects on character beyond the Order Limits, the LVIA concludes that within the 'Local Study Area' ie up to 1km from the Order limits, at Year 1, the effect would be **Moderate Adverse (Significant)**, and at Year 15, it would reduce to **Moderate / Minor Adverse**.

6.1.20 However, a) note the omission of effects on character areas / types; b) the level of receptor sensitivity is higher than reported in the LVIA; and c) generally, levels of indirect landscape effects tend to be highest closest to the site and reduce gradually with distance.

6.1.21 On that basis, at Year 1, for Site A the indirect effects on the landscapes closest to the site would be **Major - Moderate Adverse (Significant),** and where interinfluence / association cease (which depends on factors such as topography but is likely to be several kilometres away), the effects would be **Neutral**.

6.1.22 By Year 15, effects on the landscapes closest to the Order Limits could potentially have reduced, but this depends on numerous factors, including which measures are mitigation and which are enhancement, and whether the proposed planting would establish successfully and become effective.

6.1.23 Most importantly, many LVIAs, including the Applicant's, assume that all indirect adverse effects on landscape character can be mitigated by screening views, but **that is not the case**.

6.1.24 Firstly, some indirect adverse effects may be unforeseen and / or are not considered properly in the assessments, so mitigation measures are not put in place; for example, a pollution incident or other event occurs which results in damage to / loss of vegetation beyond the site boundaries with subsequent adverse effects on character and views.

6.1.25 Secondly, and most importantly, adverse effects on a landscape's positive experiential qualities (often referred to as perceptual and aesthetic qualities; also, cultural and ecosystem services), and its critical functions can only partially be mitigated by screening views.

6.1.26 Of course views are an important aspect of how a landscape is experienced and perceived, and contribute to the *aesthetic* appreciation / enjoyment of what is experienced / perceived (predominantly related to a subjective visual sense-response such as 'scenic beauty' or a 'sublime' painting). However, **non-visual** sensory elements (sound, smell, touch) also contribute to how individuals experience and perceive a landscape (for example in terms of sensing space, wildness, tranquillity), along with personal experiences and memories, and cultural associations.

6.1.27 It is unfortunate that **very few LVIAs consider effects on people who are blind / partially-sighted**: note that often, other senses, especially hearing and awareness, are heightened. Development can affect how people travel around / navigate through an area as well as what they experience along the way. **It is not necessary to see a development to know it is there, and to be aware of the implications, and / or to experience the adverse effects**.

6.1.28 Indirect effects on a landscape's non-visual experiential qualities are not only more difficult to quantify, but also **much more difficult and sometimes impossible to mitigate**. Whilst screen planting (along with other measures such as location, siting, layout, design, and choice of materials and colours) may eventually help to **visually** integrate development into the receiving landscape (either as a mitigation measure or an enhancement – see above), **it would not reduce the other adverse experiential effects that would arise**, including along construction routes.

6.1.29 In this case, the LVIA **erroneously** assumes that over time, as the proposed planting matures, it would not only successfully screen views, but also **enhance** landscape character, and therefore **reduce** levels of indirect adverse effects on character.

6.1.30 As explained in previous sections, a) it is not safe to rely on vegetation to screen views in the longer term, and b) planting which is required for landscape / visual mitigation cannot be double-counted as landscape / visual enhancement.

6.1.31 Regarding this Application, by Year 15, it is possible but not certain that closest to the sites, the level of the visual aspects of aesthetic and perceptual (indirect) effects could have reduced to **Moderate Adverse**, which is still **significant**; however, effects on other aspects of aesthetic and perceptual effects, and landscape / visual services and functions, would **remain Major - Moderate Adverse (significant)** from Years 1 - 15.

6.1.32 From Years 15 to 60, it is possible but not certain that closest to the sites, the level of the visual aspects of aesthetic and perceptual (indirect) effects would **remain Moderate Adverse (significant)**, as much depends on whether the existing and proposed planting remains in place for the duration of the operation – it could be higher.

6.1.33 Effects on other aspects of aesthetic and perceptual effects, and landscape / visual services and functions, would **remain Major - Moderate Adverse** for the duration of the operation.

6.1.34 It is important to note that the proposed development would give rise to adverse effects on **all** aspects of landscape character: as well as functions, aesthetic and perceptual qualities and local distinctiveness / sense of place, there would be adverse effects on the settings of villages and heritage assets, landscapes, biodiversity, green infrastructure, soil and water quality, visual, social, recreational and residential amenity, human health and well-being, and quality of life.

6.1.35 Regarding effects on **natural, cultural and social services and functions**, as explained in previous sections (see for example Section 3.1), many of the sites form an integral part of landscapes which perform multiple critical functions – the River Nene corridor is a very good example of this. Some of the key landscape (and associated visual) functions which would be adversely affected to varying degrees, but some potentially **significantly**, are summarised below.

Rural buffer

6.1.36 The landscapes around Mears Ashby and Earls Barton act as a green rural buffer separating Northampton and Wellingborough: Site E occupies a large proportion of this land and if developed, would result in **a significant reduction in the size of the green rural gap**, replacing farmland with large-scale industrial development.

6.1.37 Similarly, the landscapes between Easton Maudit and Bozeat form a highly important green rural buffer between them: **much of this land would be occupied and industrialised by parts of Site F**.

Heritage

6.1.38 As explained in Section 3.1, parts of the study area display **significant time depth** – predominantly traces of medieval land uses and features, although it is known that some of the

settlements and landscapes had much earlier (prehistoric) origins. In some cases the prehistoric features are also visible, for example as holloways and earth banks / burial mounds, but there is **significant buried archaeology, including within the Order Limits**.

6.1.39 The landscapes around and between all the villages make **highly important contributions to the settings of numerous significant heritage assets**, many of which are Grade I listed / scheduled. These and other villages in the study area are **Conservation Areas**, all within very close proximity to or in the vicinity of the sites which are proposed for solar arrays and BESS.

6.1.40 Furthermore, **the heritage assets make highly important contributions to the value of their associated landscapes**.

6.1.41 The proposed development would result in significant adverse effects on the assets' contextual landscapes, so where the landscape forms an integral part of an asset's setting, it is likely that due to the **large-scale industrialisation of the highly rural context**, the proposed development would result in **high levels of harm to the setting of the heritage asset**.

6.1.42 Very importantly, **solar panels 'sterilise' and homogenise rural landscapes**, where otherwise, seasonal changes would be seen and experienced.

6.1.43 Best practice guidance (Historic England's publication *The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition)*) [doc ref SGHS/Her.3] highlights the need to consider diurnal and seasonal changes. Often, seasonal changes manifest with views being more or less prominent in winter and summer (respectively), as trees and hedges in the landscape come into and go out of leaf.

6.1.44 There is an obvious expectation for agricultural land to change with the seasons as fields are ploughed, sown, tended, and harvested throughout the course of the year. Indeed, in rural areas, such changes are often celebrated with seasonal festivals and events, as has been the tradition for many hundreds if not thousands of years.

6.1.45 Solar development of this type and at this scale not only obscures views of the land itself, and introduces alien, industrial elements across a wide area, but also establishes a static, sterile year-round appearance which is very different from the character of a seasonally-dynamic agricultural landscape.

6.1.46 This in turn will have notable adverse effects on the settings of heritage assets which have their significance contributed to by an agricultural context in which they can be experienced and understood. This would extend as much to the brief periods of intense activity and noise associated with harvest as to the non-visual aspects – some perhaps much-changed from traditional practice, but still an unmistakable part of the farming year.

6.1.47 As someone said to me recently, at an isolated farmhouse now surrounded by solar panels, "*You knew exactly where you were with the seasons, now there's no rhythm or flow*".

6.1.48 In addition, and also very importantly, currently many views of the heritage assets are from rural lanes, footpaths and properties, looking across the assets' contextual / associated landscapes. Given the proposal to let hedges grow up to 4.5m, it is inevitable that **many such views would be lost**. In LVIA, the total loss of a view results in a **very high level of adverse visual effect**.

6.1.49 Furthermore, throughout, APP-049 ES Chapter 12 Cultural Heritage assumes that harm to heritage assets' settings can be avoided where existing vegetation currently screens views between the development and the asset, and / or where proposed vegetation would mature and by Year 15, screen views between the development and the asset.

6.1.50 The matter of over-reliance on vegetation to screen views – existing and / or proposed – is explained above, but here it is very important to note that **the setting of a heritage asset is neither necessarily determined by its present-day visibility, nor even by visibility *per se***.

6.1.51 'Setting' is defined in the NPPF as '*the surroundings in which a heritage asset is* ***experienced***' (my emphasis).

6.1.52 Historic England's *The Setting of Heritage Assets* provides more detailed information about this. See especially *Part 1: Settings and Views*, which explains:

'*The extent and importance of setting is often expressed by reference to visual considerations. Although views of or from an asset will play an important part, the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust and vibration from other land uses in the vicinity, and by our understanding of the historic relationship between places. For example, buildings that are in close proximity but are not visible from each other may have a historic or aesthetic connection that amplifies the experience of the significance of each*'.

6.1.53 There is also the potential for the proposed development to give rise to **direct adverse effects on archaeology**.

Ecology / Biodiversity

6.1.54 As mentioned previously, adverse effects on certain wildlife habitats can also result in adverse effects on landscape character and visual amenity.

6.1.55 The cause and nature of effects arising from the development which could adversely affect ecological receptors / their habitats are summarised in Section 5 above, with further information and comment provided in Appendices CT-D, CT-E, CT-F, CT-H, CT-I, and CT-J.

6.1.56 Of **great concern** is the BESS site proposed adjacent to the River Nene, the floodplain of which is characterised by extensive gravel pits. The river and floodplain perform **multiple critical functions** including **ecologica**l, this section of the river (Upper Nene Valley Gravel Pits) being designated as a Ramsar site, SPA, and SSSI. These complex aquatic and riparian habitats are **extremely vulnerable** to the adverse effects that can and do arise from such installations. The adverse environmental implications of a thermal runaway event at the BESS site are explained in Appendix CT-D.

6.1.57 However, many other parts of the study area's landscapes also make highly important contributions to ecosystem and ecological functions, as confirmed by Beds, Cambs & Northants Wildlife Trust in their consultation response.

Recreation / Amenity

6.1.58 Section 3.1 above summarises the important and highly-valued resources, qualities and experiences which the study area's landscapes provide – a combination of informal and formal opportunities; good quality, very rural landscapes which display a variety of characteristics depending on local natural and cultural influences; high levels of tranquillity and even remoteness in some parts; and an excellent network of lightly-trafficked lanes and PRoWs including popular long-distance trails between the villages and towns, enjoyed by residents and visitors alike.

6.1.59 The section includes a note from someone who is concerned about adverse effects on the qualities of the footpaths that cross Site F, especially footpaths NN/TD/5 and TD/7 (Applicant's LVIA receptors TP206 and TP205 respectively).

6.1.60 Importantly, the footpath's qualities described in the resident's note are not identified in the LVIA – the description in APP-081 Appendix 8.3: LVIA Assessment Sheets, on p. 921 of the PDF, is perfunctory. Notwithstanding this, the LVIA judges the level of receptor visual value to be **High**.

6.1.61 However, the level of visual susceptibility is only **Medium**, whereas, as explained in Section 3.2 above, I do not agree with the LVIA's visual susceptibility criteria: someone who takes a walk with the main purpose of enjoying the experience of being out in the landscape is of **High** susceptibility. Thus, whilst LVIA predicts that people using NN/TD/5 (receptor TP206) would experience **Major - Moderate (significant) adverse** visual effects for the first 15 years of operation, for this reason alone the level of effect would be higher, ie **Major Adverse**.

6.1.62 Although this is the highest level of visual effect possible in the LVIA (but see previous comments about point scales), bear in mind that a) the LVIA has not factored glint and glare effects into the judgements (and as explained in Appendix CT-I, the Applicant's glint and glare assessment (GGA) (APP-052) assumes these receptors are Low sensitivity because the GGA's criteria for users of PRoWs are based on safety, not amenity); and b) the adverse non-visual aesthetic and perceptual effects would **compound** the high levels of adverse visual effects.

6.1.63 The LVIA concludes that from Year 15 onwards, effects would reduce to **Moderate - Minor Adverse (not significant)**. In my opinion, the level would be at least Moderate (significant), probably Moderate – Major Adverse, for the duration of the operation. That is not only due to the reasons explained previously, but also because the LVIA does not report the worst-case Year 15 visual scenario, ie winter, and even in summer, the LVIA states that there would be '*filtered views of the panels*', so they would **always be present in these views**.

6.1.64 Effects on social / recreational amenity generally are set out in Section 8 below, but in summary, my assessment concluded that some of the levels of adverse effects on social / recreational **and** residential amenity would be very high, **potentially 'significant'**.

6.1.65 There are also likely to be adverse effects adverse effects on the local economy, as many small businesses in the area depend on trade from visitors who come to enjoy the landscape's positive qualities and rich natural / cultural resources.

6.2 Effects On Character During Construction And Decommissioning

Effects on character during construction

6.2.1 The nature of the construction effects likely to arise and their causes are summarised in Section 5, and described in more detail below where relevant.

6.2.2 The LVIA concludes that during construction, as a whole, the Scheme would give rise to **indirect Moderate Adverse (significant) cumulative** effects on the character of the Local Study Area ie within 1km of the sites' boundaries.

6.2.3 My assessment concluded that the level would be **at least Major – Moderate Adverse**.

6.2.4 The LVIA concludes that **direct** construction effects on **all** of the sites' landscape 'fabric' would be **Moderate / Minor Neutral**, although as mentioned previously, it is not clear whether this is a range of levels or a split category, and whether the effects are adverse or beneficial; also, this judgement does not appear to factor in notable localised variations in 'fabric'.

6.2.5 As with operation, the LVIA does not assess the direct effects of construction on the **overall** character of the site.

6.2.6 My assessment concluded that at Year 1 of *operation*, the direct effects on the sites' overall character are likely to be at least Major – Moderate Adverse (significant); thus, due to their nature (see previous section), construction effects are likely to cause greater levels of landscape harm than during operation. Therefore, during construction, effects on the overall character of **all** the sites would be **Major Adverse (significant)**.

6.2.7 The LVIA concludes that **indirect** construction effects on the character of the landscapes within 1km of the sites' boundaries would be **Moderate Adverse (significant)**.

6.2.8 However, a) note the LVIA's omission of effects on character areas / types; b) the level of receptor sensitivity is higher than reported in the LVIA; and c) generally, levels of indirect landscape effects tend to be highest closest to the site and reduce gradually with distance.

6.2.9 On that basis, during construction, the indirect effects on the landscapes closest to the sites would be at the higher end of **Major - Moderate Adverse (significant),** and where interinfluence / association cease (which depends on factors such as topography but is likely to be several kilometres away), the effects would be **Neutral**.

6.2.10 There would also be direct and indirect adverse effects along the construction routes.

Effects on character during decommissioning

6.2.11 The LVIA concludes that during decommissioning, as a whole, the Scheme would give rise to **indirect Minor Adverse cumulative** effects on landscape character within the Local Study Area, ie within 1km of the sites' boundaries.

6.2.12 I am surprised by this conclusion, as generally, the cause and nature of decommissioning effects are similar to those which apply to construction effects, and the duration is likely to be similar. It is also likely that if vegetation and / or other landscape features had been lost / damaged during construction (and / or operation) and had since been replanted / grown back / restored, they would be damaged again during the decommissioning works, especially vegetation along construction routes.

6.2.13 However, the judgement may in part be due to the proposed mitigating measures having been erroneously double-counted as enhancement / benefit, and having assumed that all effects on character can be mitigated through screen planting, which as explained above, they cannot.

6.2.14 It may also be due to assumptions that the proposed mitigating (and where proposed, enhancement) measures in the form of hedges and trees would a) have established successfully and matured; and b) remain in place for the duration of the operation and throughout decommissioning, which cannot be guaranteed.

6.2.15 My assessment concluded that overall, and taking the above factors into account, the level of cumulative effect would be **at least Major – Moderate Adverse (significant)**.

6.2.16 Also, the LVIA concludes that cumulative effects on the landscapes within the Outer Study Area (ie up to 5km from the site boundary) would **also** be Minor Adverse, whereas the level would decrease gradually with distance.

6.2.17 The LVIA concludes that **indirect** decommissioning effects on the character of the landscapes within 1km of each of the sites' boundaries would be **Minor Adverse**.

6.2.18 However, a) note the LVIA's omission of effects on character areas / types; b) the level of receptor sensitivity is higher than reported in the LVIA; and c) generally, levels of indirect landscape effects tend to be highest closest to the site and reduce gradually with distance.

6.2.19 On that basis, during decommissioning, the indirect effects on the landscapes closest to the sites would be at the higher end of **Major - Moderate Adverse (significant)**, and where interinfluence / association cease (which depends on factors such as topography but is likely to be several kilometres away), the effects would be **Neutral**.

6.2.20 The LVIA does not assess the direct effects of decommissioning on the overall character of the sites.

6.2.21 My assessment concluded that at Year 1 of *operation*, the **direct** effects on the sties' overall character are likely to be at least Major – Moderate Adverse (significant); thus, due to their

nature (ie similar to construction effects – see Section 5), decommissioning effects are likely to cause greater levels of landscape harm than during operation. Therefore, during decommissioning, effects on the overall character of **all** the sites would be **Major Adverse (significant)**.

6.2.22 The LVIA concludes that direct decommissioning effects on the landscape 'fabric' (elements) of the sites would be **Moderate Beneficial (Significant)**. However, as explained in Section 4.3 above, the question is, has the LVIA assumed that **all** the proposed planting would result in landscape / visual benefits, or only that which is required to screen views and visually integrate the development into the landscape?

6.2.23 It makes a difference because if the former, then benefits will have been overstated and adverse effects underestimated.

6.2.24 Also, the LVIA has double-counted the proposed mitigation measures as *future* enhancements. In APP-081 Appendix 8.3: LVIA Assessment Sheets, in the Landscape Fabric section (PDF pp. 626 - 662), the following statement applies to **all** the sites: '*At decommissioning, agricultural fields would be returned to agriculture with all structural landscape mitigation retained providing long term benefit towards legacy landscape…*' (at the BESS site, it is specifically noted that this includes proposed shelterbelts). In addition, throughout, the LVIA Assessment Sheets state that during operation, the '*significantly enhanced tree and hedgerow planting*' would have matured, '*retaining, and enhancing the overall character*'.

6.2.25 Furthermore, the LVIA's results are based on the assumption that post-decommissioning, *agricultural fields would be returned to agriculture with **all** structural landscape mitigation retained* (my emphasis). However, this is contradicted in APP-041 ES Chapter 4: Scheme Description, which states that '*Post-decommissioning, the landowners would choose how the land is to be used and managed, the landowner **may** return the land to arable use, although it is **likely** that established habitats such as hedgerows and woodland would be retained*' (my emphases).

6.2.26 Therefore, notwithstanding the above comments about the claimed benefits, due to the uncertainty, the LVIA's predictions cannot be relied upon.

6.2.27 In my opinion and experience, it is highly unlikely that the arable land *could* be returned to its former condition. Note that the proposed DNO substation complex, high-security fencing, gated access and cables would remain post-decommissioning.

6.2.28 Construction, interim, and decommissioning works can result in long-term / permanent adverse effects on soils (and adverse effects on water quality / drainage – the two are closely interrelated). The Applicant appears to assume that 'resting' arable soils for long periods is beneficial for soil health and quality: this is true from an ecological perspective, but not from an agricultural one, where the intention is to revert to arable use, as is the case here.

6.2.29 The above matters are explained further in Appendix CT-F.

6.2.30 Extensive and intrusive engineering works would be required to construct extensive platforms and attenuation basins / swales (see Appendix CT-E). During decommissioning, the removal of these and other scheme elements / structures / materials would involve another round of significant works and associated soil damage (and adverse effects on water quality / drainage), exacerbated by the earth-moving necessary to restore the land to its previous natural profile.

6.2.31 Large amounts of redundant material would need to be exported and new subsoil / topsoil imported for infilling and creating a new surface to receive arable crops (where previously grown). It is likely that the subsoils beneath the platforms would be permanently compacted.

6.2.32 It is also important to note that normally, the underground cables would remain *in situ*, and it would be up to the landowner to decide whether to remove them (the cables would have residual value, but removal can be difficult, damaging, and costly).

6.2.33 In addition, throughout, the LVIA Assessment Sheets state that the proposed development would result in '*considerable biodiversity benefits over the years*'; however, whilst the stated intention is to retain the proposed mitigation measures such as hedges and woodlands, it must be noted that where existing arable landuse has been replaced by species-rich wildflower meadow / pasture as proposed, when the meadow / pasture is removed to revert to arable use, any biodiversity benefits would cease. In fact, currently, this would have to be screened under the EIA (Agriculture) Regulations.

6.2.34 Also see effects on soil fertility, and problems with establishing meadow / pasture on fertile arable soils in Appendix CT-F.

7. Visual Effects

7.1 Technical Matters

7.1.1 Many of the matters set out in the previous sections are relevant to the assessment of visual effects, and should be referred to for more detail where mentioned in this section – see summary in visual effects below.

Study area boundary

7.1.2 I **agree** with the LVIA's visual study area boundary, as it is unlikely that **significant** adverse visual effects would be experienced at viewpoints further than 5km from the sites boundaries, and that normally, levels of visual effects decrease with distance.

Zone of Theoretical Visibility

7.1.3 I **agree** with the use of a bare-earth scenario for the LVIA's Zone of Theoretical Visibility (ZTV) plan (APP-272 LVIA Figure 8.8), as that is what GLVIA3 recommends: it shows how visible the development would be in future without the benefit of existing and / or proposed screening vegetation.

7.1.4 However, it would be helpful if the Applicant could provide the ZTV plans on coloured OS map bases as opposed to black and white, to make it easier to find landscape and visual features and receptors (eg woodland, water, PRoWs, Open Access land etc).

Worst-case scenario

7.1.5 This matter is also relevant to effects on landscape character in terms of assumptions made in the LVIA about effects at Year 15, where screen planting is proposed in order to reduce levels of adverse effects through visual integration.

7.1.6 GLVIA3 para. 4.3 states that LVIAs should consider '*a reasonable scenario of maximum effects, sometimes referred to as the* '*worst case*' *situation*', which is in line with the EIA approach, and NPS EN-3. However, the LVIA has **not** assessed the worst-case visual scenario at Year 15.

7.1.7 LVIA para. 8.4.3 4th bullet states that visual effects were assessed '*during the construction period (winter), operation at year 1 (winter) and operation at year 15 (summer) and at decommissioning stage (winter)*'.

7.1.8 LVIA para. 8.7.8 explains that photographs were taken '*during both summer and winter months to ensure a* ***worst-case*** *scenario is assessed and illustrated*' (my emphasis).

7.1.9 LVIA para. 8.5.2 2nd bullet states that visual effects at Year 15 of operation are '*assessed in summer with vegetation in leaf offering* ***maximum screening potential***' (my emphasis).

7.1.10 LVIA para. 8.7.16 explains that the Year 15 summer photomontage visualisations were produced in order to '*demonstrate the screening effects of the Embedded Mitigation*'.

7.1.11 I agree it is reasonable to illustrate the proposed screen planting when the LVIA assumes it would have become effective; however, this represents the 'best-case' scenario, **not** the worst-case, as levels of adverse visual effects would be **lower** during the summer months (and note that in this region, deciduous trees are leafless for up to six months). The LVIA should be revised with effects reported at **winter** Year 15.

Residential Visual Amenity Assessment

7.1.12 LVIA para. 8.4.45 states that '*In a small number of cases, at the request of near neighbours, visits were undertaken to local residential properties to understand the nature of views from within the private dwelling*'.

7.1.13 It is good that these visits were undertaken, but no Residential Visual Amenity Assessment (RVAA) has been carried out.

7.1.14 LVIA para. 8.4.101 explains that '*Steps 1-3* [of RVAA as per LI TGN 02/19] *have been undertaken as part of the LVIA for the Scheme. Following assessment of affects upon residential properties at year 15, there do not remain any significant effects at the highest magnitude of significance (major (Adverse). Therefore, a full RVAA has not been required*'.

7.1.15 Firstly, in the light of the technical issues highlighted above, which include certain errors and flawed assumptions in the LVIA, it is highly likely that at Year 15, some residential receptors **could**, and probably **would** experience '*significant effects at the highest magnitude of significance*'.

7.1.16 Secondly, I **agree** that the TGN advises that RVAA should assess effects on receptors likely to experience '*the greatest magnitude of change*' (which is not the same as 'significance' – see Section 2.4). The footnote to TGN para. 4.18 states that it '*is important for assessors to keep in mind that RVAA is only concerned with those properties in the highest magnitude category*'.

7.1.17 However, many practitioners **disagree** about the interpretation of the 'highest magnitude category': Does it mean that the RVAA threshold should be set at any effect which is identified as 'significant'? The Applicant's LVIA does not identify any Major Adverse effects on residential receptors, but there are Moderate Adverse effects, which the LVIA categorises as 'significant'. It could be argued therefore that the LVIA should have carried out an RVAA on properties where receptors would experience effects of **Moderate Adverse and higher**.

7.1.18 If that is not the correct interpretation, does the TGN mean that the threshold should be set at the highest level of magnitude of effect, or the highest level of overall effect (there may be differences due to varying levels of receptor sensitivity)? Or, does the TGN mean setting the threshold at the highest level of magnitude of effect (or overall effect) that has been identified in the LVIA criteria, or the highest magnitude of effect (or overall effect) identified for receptors affected by the project in question?

7.1.19 Thirdly, it is important to note that the TGN **does not state that the RVAA threshold only applies to residual effects**, ie once proposed screening measures are assumed to have become effective (in this case, Year 15, but note matters such as growth rates and reliance on vegetation to screen views above). However, **the LVIA has adopted this approach**. Again, some practitioners disagree about this, but many carry out RVAAs when the threshold is met in **Year 1, not Year 15**.

7.1.20 Notwithstanding the above, my own assessment concluded it is likely that some residential receptors could experience **Major Adverse effects for the duration of the operation**.

7.1.21 The LI is aware of certain issues with the RVAA method and is discussing revisions, although it is unlikely that will be soon. However, here, the ExA may conclude that an RVAA **is** required, especially if needed to inform assessments of effects on residential amenity – see following section. Also, see glint and glare effects in Appendix CT-I.

7.2 Viewpoints

7.2.1 A total of 64 viewpoints were selected for assessment in the LVIA, covering the sites and the cable route corridor (LVIA VPs 1 – 51 plus NN 1 – 13). Others may be added during the course of the Examination, if requested by the ExA.

7.2.2 The viewpoints are a combination of a) specific locations, and b) representative locations, for example within a settlement, and along roads and PRoWs.

7.2.3 It is important to note that the scatter of viewpoints does not illustrate the full extent of the Scheme's visibility (the Zone of Visual Influence (ZVI)), as evidently there are many other viewpoints and view routes from which the development would be visible; however, they do provide an indication of the locations where receptors are likely to experience the highest levels of visual effects.

7.2.4 The LVIA **excludes** many of the visual receptors which were identified in the early stages of the study due to the assumption that the developed site/s would not be visible because **currently**, views are screened by vegetation. However, as explained above, the LVIA's results are based on a snapshot in time; it is likely that even since the surveys were carried out, some vegetation will have grown taller and some will have been removed. It is simply not possible, and in my opinion unreasonable, to assume that in the coming decades, the same views would be screened by the same vegetation.

7.2.5 LVIA para. 8.7.5 explains that the positions of viewpoint photography were agreed in consultation with Landscape Officers from North Northamptonshire and Milton Keynes. I understand that at that stage it was unclear which fields would be covered with panels. In fact, now, some of the VPs are some distance from proposed panels, so alternative locations may need to be identified and assessed to provide a better representation of the extent of visibility.

7.3 Visual Effects During Operation

7.3.1 In summary, the LVIA concludes, and I **agree**, that for the first 15 years of operation, receptors at **all** of the 64 assessed viewpoints would experience **significant adverse visual effects**.

7.3.2 However, the LVIA predicts that levels would only be either **Moderate**, or **Major – Moderate**, whereas my own assessment concluded that some visual receptors would experience **Major Adverse** effects.

7.3.3 From Year 15 onwards, the LVIA predicts that only **three** of the 64 visual receptors would still experience significant adverse visual effects (two Moderate, one Major – Moderate).

7.3.4 My own assessment concluded that **significant adverse visual effects would be experienced by multiple visual receptors for the duration of the operation**. The highest level would be **Major**.

7.3.5 As with landscape character effects, I have taken specific viewpoints to illustrate examples of where and why the LVIA and my own assessment differ in judgements about levels of visual effects. The findings are summarised in a schedule (see Table CT-1 below) to assist with comparison between the LVIA's and my own assessment's conclusions.

7.3.6 My original intention was to compare several viewpoints scattered across the study area, from Site A in the north to Site G in the south, covering the full range of receptors ie people in settlements and private properties, and using roads and PRoWs. However, I have only compared effects at two viewpoints because the exercise proved very time-consuming due to the difficulty in finding the relevant information for each viewpoint and / or visual receptor, which requires navigating through multiple documents.

7.3.7 In fact this point has already been raised in responses, and at ISH1, when the Applicant said that indexes would be provided and documents reissued with embedded links; however, now, these will not be issued before Deadline 1. It may be helpful for detailed schedules of comparison to be produced and refined during the course of the Examination, but this may not be necessary, since the majority of issues which apply to the viewpoints below apply to most if not all of the others.

7.3.8 It may also be helpful to refer to responses from residents and others where they have submitted detailed information and photographs describing and illustrating effects at many viewpoints, including some which are not included in the LVIA.

7.3.9 The table overleaf sets out a summary of comparisons between judgements made by i) the Applicant, and ii) myself, about levels of visual effects at selected viewpoints. It shows where and how, in my opinion, the LVIA underestimated levels of adverse visual effects.

7.3.10 My results are reported using the same criteria and point scales as used in the LVIA, but note the problems with both as explained above (see for example Section 2.4).

7.3.11 Where relevant, other technical matters mentioned previously are noted in the table, and / or below.

Table CT-1: Comparison of visual effects

Visual value		Visual susceptibility		Visual sensitivity		Year 1 Magnitude		Year 15 Magnitude		Year 1 Effect		Year 15 Effect		Comments
LVIA	**SGHS**	**LVIA**	**SGHS**	**LVIA**	**SGHS**	**LVIA**	**SGHS**	**LVIA**	**SGHS**	**LVIA**	**SGHS**	**LVIA**	**SGHS**	
VP TR17 / TR155. Receptor: Transport (Roads) (TR). SITE E. Wilby Road E of Mears Ashby. Distance: 0m. See APP-350 for photos / montages.														
Med	High - Med [1]	Med	High [2]	Med	High / High - Med	High Adv	High Adv	Very Low Adv	High Adv [3]	**Maj - Mod (Sig)**	**Maj Adv (Sig)**	Min	**Maj Adv (Sig)**	[1] SGHS **High – Medium** value due to same level attributed to landscape value. [2] SGHS **High** visual susceptibility in accordance with GLVIA3 paras. 6.32 and 33. Note LVIA susceptibility criteria erroneously include value factors. [3] SGHS **High** magnitude of effect Y15 due to total loss of view (see below).
VP36 / TP206. Receptor: Transport (PRoWs) (TP). SITE G. NN/TD/5 Milton Keynes Boundary Walk long-distance trail, NW of Lavendon. Joins Three Shires Way long-distance trail in Site G. Distance 0m. See APP-369 for photos / montages.														
High	High	Med	High [4]	High - Med	High	High Adv	High Adv	Low Adv	High Adv [5]	**Maj - Mod (Sig)**	**Maj Adv (Sig)**	Mod - Min Adv	**Maj Adv (Sig)**	[4] Using LVIA criteria for visual susceptibility, level should be **High** ie *Views from well used public rights of way including strategic footpaths / long distance trails*. However, LVIA susceptibility criteria erroneously include value factors. SGHS **High** susceptibility in accordance with GLVIA3 paras. 6.32 and 33. [5] SGHS **High** magnitude of effect Y15 due to total loss of view (see below).

7.3.12 Regarding VP36 / TP206 along the Milton Keynes Boundary Walk long-distance trail through Site G above, during ISH1, a representative of Lower Farm Livery Stables (north of Lavendon, near Lavendon Castle) read out a statement regarding 1) there being less existing screening than assumed in LVIA, and 2) adverse effects a) on users of both long-distance trails which run through Site G (the other is the Three Shires Way); b) on the resident's business; and c) arising from glint and glare. This statement should be referred to for more detailed information about these matters.

7.3.13 Many of the technical matters set out in the previous sections are relevant to the assessment of visual effects, especially in terms of understanding why, in my opinion, the LVIA has **underestimated** levels of visual effects.

7.3.14 In summary, they include:

i) Problems with LVIA criteria and point scales (Section 2.4).

ii) Levels of certain visual receptors' sensitivity set too low (Section 3.2).

iii) Double-counting mitigation as enhancement (Section 4.2)

iv) Uncertainty about difference between proposed mitigation and enhancement measures (Section 4.3).

v) Over-reliance on vegetation to screen views (Section 4.4).

vi) Future plant growth and 'maturation' (Section 4.5).

vii) Cause and nature of many effects not identified / factored in to assessments (Section 5).

viii) Not assessing the worst-case visual scenario at winter Year 15 (Section 7.1).

7.3.15 Another important factor in the LVIA having underestimated levels of visual effects, which is illustrated in the above table, is that the LVIA has not considered the adverse effects of the proposed mitigating measures.

7.3.16 As explained in previous sections, in many cases, at Year 15 of operation the proposed screen planting could potentially fully screen the proposed development from view; however, it would also result in the **total loss of the view**. Note that in many parts of the study area, the landscapes are characteristically open (example shown in the photo overleaf). According to the LVIA's criteria, the magnitude of that effect would be **High Adverse**.

View of Easton Maudit church and Grendon church beyond, arrays proposed in field in foreground

7.3.17 Also, see glint and glare effects in Appendix CT-I. In fact, in relation to glint and glare, PINS' comment in GGA Table 15.1 Relevant Scoping Opinion Comments PINS ID 3.10.4 is: '*As per 3.10.4 of the Scoping Opinion, the Planning Inspectorate states that the assessment should also consider the implications of these users being at varying heights from ground level, as for example, a horse rider would experience glint and glare at a difference angle than a pedestrian*'.

7.3.18 This matter is considered in the GGA and responded to in Appendix CT-I, but it is not clear whether equestrians' higher eye-level was factored into the LVIA's judgements about visual effects – clarification of this point would be helpful.

Sequential visual effects

7.3.19 At para. 8.7.7, the LVIA states that consideration has been given to '*Any important sequential views, for example, along key recreational or transport routes*'. This matter was discussed at ISH1, with reference made to GLVIA3 Table 7.1.

7.3.20 GLVIA3 para. 6.20 explains that '*The selection of the final viewpoints used for the assessment should take account of a range of factors, including… views from sequential points along routes*'. At this stage in the LVIA process, receptors are not (or should not) excluded on the basis of visual value or susceptibility.

7.3.21 GLVIA3 para. 6.22 **confirms** that '*the viewpoints should also, as far as possible, cover important sequential views along key routes and transport corridors*'; however, para. 7.34 goes on to say that '*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. Both types of experience need to be considered where they are relevant*': this applies to **all** susceptible visual receptors, regardless of the level of value ascribed to the views of the landscape / the routes themselves.

7.3.22 GLVIA3 para. 7.35 mentions '*sequential views experienced on important linear routes*'. Table 7.1 states that '*Sequential effects may be assessed for travel along regularly used routes such as major roads or popular paths*'.

7.3.23 However, firstly, that does not **exclude** consideration of a) sequential visual effects on other receptors, as is clear from the preceding paragraphs, and b) people travelling along minor roads, especially where they run through highly-valued landscapes.

7.3.24 Secondly, GLVIA3 does not define 'popular paths'. LVIA para. 8.9.38 states that '*Popular paths are those typically considered those to be promoted or recognised in some way such as National Trails, Recreational Routes, long distance trails or locally promoted walks*'.

7.3.25 However, in my opinion, many other factors have to be taken into account when defining 'popular paths', 'important linear routes', and 'key recreational or transport routes', as so much depends on the landscapes in question, the resources they offer, and the **purpose** of the visual receptors' visit to / journey through the landscape. It is therefore necessary to look at the whole of the existing recreational network in the wider study area (and perhaps, beyond) and through analysis, establish **which routes are important to whom and why**.

7.3.26 Having spoken to people I met whilst carrying out the baseline surveys, I concluded that many of the rural PRoWs are very popular, well-used by residents who walk them on a daily basis, for example to maintain / enhance health and well-being. The most popular routes appear to be 'loops' of varying lengths along lanes, footpaths, and bridleways: some are short loops around settlements, others are several miles long, running from the settlements into open countryside and back again.

7.3.27 The rural PRoWs are also well-used by visitors, many from nearby towns and cities who want to escape to the rural landscapes on their doorsteps. Some walks are the subject of local guide books, and are used regularly by walking groups.

7.3.28 There are also several low-key visitor attractions (formal and informal) in proximity to some of the sites. Many come to see the medieval villages and their churches, visit the old inns, and enjoy the historic properties, parks and castles beyond. Others visit nature-based attractions such as Pitsford Water (south west of Old and Walgrave, Site A); Sywell Country Park (south west of Mears Ashby Site E); and Grendon Lakes (River Nene, north of BESS Site, Grendon).

7.3.29 Equestrians are well-catered for in the parts of the study area which are crossed by bridlepaths and quiet lanes, for example there are riding establishments / liveries at Easton Maudit (Site F), and Lavendon (Site G).

7.3.30 In these cases, even if the landscape is not of High visual value, the level of visual receptor susceptibility is High. Also, the High sensitivity receptors travelling along the higher value routes identified in the LVIA use other PRoWs to connect between the routes, and to visit local facilities.

7.3.31 LVIA para. 8.9.43 explains that '*Sequential Effects for users of these Recreational Routes are not considered to be any greater than those effects identified for the individual sections as set out within Appendix 8.3 ES LVIA Assessment Sheets*'.

7.3.32 The LVIA concludes that at Year 1 of operation, the highest level of adverse effect that would be experienced along the routes identified for the assessment of sequential visual effects in the LVIA (see LVIA Table 8.18: Sequential Visual Effects) is **Major – Moderate Adverse (significant)**, which would be experienced at **all but three** of the identified locations.

7.3.33 For the reasons set out previously, in my opinion the LVIA has underestimated the levels, and effects would be **Major Adverse (significant)**.

7.3.34 At Year 15, the LVIA concludes that the level would have reduced to a worst case of **Moderate - Minor Adverse**. Again, for the reasons set out previously, in my opinion the LVIA has underestimated the levels, and effects would **remain Major Adverse (significant)** for the duration of the operation. In many cases that is mainly due to the **total loss of the view**.

7.3.35 It is also important to note that numerous potential sequential visual receptors were excluded on the basis of there being no views of the scheme at the time of the surveys due to existing intervening screening vegetation, whereas there is no guarantee that this vegetation will remain in future.

7.3.36 In terms of sequential visual effects, at para. 8.9.41, the LVIA concludes that '*Although the Scheme comprises a series of independent areas of land or Sites, they are set within an extensive agricultural landscape. With large areas of land between each of the Sites, each is set apart by their associated features such as robust hedgerows, woodland and tree cover, intervening settlements and road infrastructure. These independent areas of land provide more scope for the Scheme to be offset from all key receptors such as settlement edges, individual residential properties, PRoW and transport routes which further assist with its integration and dispersion across the landscape than if the Site were one composite whole*' (see comments about site selection and design in Section 2.1 above).

7.3.37 Para. 8.9.42 goes on to say that '*Whilst there would be an appreciation of an overall increase in solar infrastructure as users of these routes move through the landscape, the discrete areas of land in the Scheme are placed so far apart that the Scheme would not be perceived in its entirety and the solar panels are distributed 'in and amongst' the landscape features helping to assimilate them into the landscape*'.

7.3.38 Broadly, I **agree** with the above analysis; however, the LVIA's focus is on how many of the sites would be viewed from a certain viewpoint. This is relevant to cumulative visual effects, but for sequential visual effects it is necessary to look at the existing recreational network within, and if necessary, beyond the study area, and through analysis, establish which routes are used by whom and for what purpose. This information helps determine the scope of the sequential visual effects assessment. Viewpoints **along** the routes are identified and assessed, and conclusions about sequential effects are drawn on that basis.

7.3.39 Also, the LVIA considers sequential effects where sites are close to each other (for example receptors at VP TR071 are predicted to experience sequential visual effects arising from Sites C and D), but does not consider receptors on longer journeys along which multiple sites may be experienced at multiple locations along the way.

7.3.40 Notwithstanding the gaps, **the proposed development would industrialise a swathe of open countryside c. 23km long and up to c. 7km wide, and the industrialising influence would extend for many kilometres beyond the Order Limits**.

7.3.41 In addition, note that the LVIA does not consider the effects of sequentially encountering both the proposed development and other forms of industrialising development (including those considered in the Applicant's assessment of cumulative effects). For example, people travelling between Olney / Bedford and Wellingborough would see the Milton Keynes wind turbines, Site G, three separate blocks of Site F, and two solar plants on the approach to Wellingborough.

7.3.42 Furthermore, note that residential receptors would experience the effects at home **and** whilst out and about.

7.3.43 In my opinion, the LVIA should be revised to include a full analysis of sequential visual effects, to include glint and glare effects (but subject to the comments about the GGA's method in Appendix CT-I).

7.4 Visual Effects During Construction and Decommissioning

Visual effects during construction

7.4.2 The LVIA predicts that during the construction phase, **all** the receptors identified would experience **significant adverse** visual effects. The highest level of adverse visual effect would be **Major - Moderate Adverse (significant)**. Almost inevitably, this would be experienced by receptors on and closest to the sites.

7.4.3 For reasons set out in previous sections, my assessment concluded that the highest level would be **Major Adverse (significant)**.

Visual effects during decommissioning

7.4.4 Generally, the cause and nature of decommissioning effects are likely to be similar to those which apply to construction effects, and the duration is also likely to be similar – but it must be borne in mind that few if any solar plants in the UK have been fully decommissioned, so very little is known about what the effects would actually be.

7.4.5 If vegetation and / or other landscape features had been lost / damaged during construction (and / or operation) and had since been replanted / grown back / restored, they would probably be damaged again during the decommissioning works, especially vegetation along construction routes.

7.4.6 However, the LVIA concludes that during the decommissioning process, levels of adverse visual effects would either be the same as at Year 15, or lower. For example, it predicts that during construction and at Year 1, the level of visual effect experienced by residential receptor RI38 would be **Moderate Adverse (significant)**; at Year 15 the level would be **Minor Adverse**; and during decommissioning, it would be **No Effect.**

7.4.7 This and similar judgements may in part be due to the proposed mitigating measures having erroneously been double-counted as enhancement / benefit, and assumptions that the proposed mitigating (and where proposed, enhancement) measures in the form of hedges and trees would a) have established successfully and matured; and b) remain in place for the duration of the operation, and throughout decommissioning, thus screening views of the decommissioning activities.

7.4.8 However, effectively, at this point in time, it is impossible to predict with any certainty what the levels of effects on visual receptors would be during the decommissioning phase.

7.4.9 Note that during decommissioning works, a) many people would experience adverse sequential visual effects while travelling around the area, and b) some residents would see / experience the construction works from their homes as well as every time they went out.

8. Amenity Effects

8.1 Effects on views and visual amenity during construction, operation, and decommissioning are set out in the previous section. However, there are other forms of amenity, such as residential, social and recreational, which require consideration in the planning process and assessments of landscape, visual, and other effects. Effects on amenity is an important matter in this case, where all forms are likely to be adversely affected to varying degrees during all stages of the Scheme.

8.2 '*When planning permission is rejected on the grounds of loss of amenity, it means the proposed development will harm the amenity of another property, through the noise, overlooking, overshadowing, smells, light pollution, loss of daylight, loss of privacy, dust, vibration or late night activities*. *The planning authorities* ***must*** *support sustainable development. For this reason,* ***when a proposed development poses a risk of loss of amenity of any type****,* ***the application is likely to be rejected***' (my emphases)[7].

8.3 A dictionary definition of 'amenity' generally, which is helpful in the context of planning / assessment, is '*The quality or character of an area and elements that contribute to the overall enjoyment of an area*'.

8.4 Visual amenity is defined in GLVIA3 as '*the overall pleasantness of the views* [people] *enjoy of their surroundings*'.

8.5 Incidentally, although the phrase that no one has 'a right to a view' is commonly used (it is a principle in English law that was first recorded in 1610), **planning policy can and does protect certain views**. Also, importantly, a component of residential amenity is Residential Visual Amenity – see below.

8.6 Residential amenity is not defined in law, but can be defined as '*Elements that are particularly relevant to the living conditions of a dwelling*'.

8.7 '*Residential amenity has a significant and valuable impact on the way in which people use their homes. The health and well-being of residents is often directly related to the level of residential amenity occupants can enjoy. It is a duty of the planning system to support sustainable development. Sustainable development incorporates a social role which seeks to secure well-designed, strong, vibrant and healthy communities*'[8].

8.8 Indeed, '*There comes a point when,* ***by virtue of the proximity, size and scale of a given development****,* ***a residential property would be rendered so unattractive a place to live that planning permission should be refused****. The test of what would be unacceptably unattractive should be an objective test*'.[9]

8.9 Residential Visual Amenity means: '*the overall quality, experience and nature of views and outlook available to occupants of residential properties, including views from gardens and domestic curtilage*'[10]. RVAAs (see previous section) are 'objective tests', often carried out alongside LVIAs.

8.10 Glint and glare effects are covered in Appendix CT-I, but of relevance here is para. 6.1 of the informal glint and glare guidance used by the Applicant's glint and glare consultants, which states, '*Local residents are a key stakeholder within the local environment when proposing a solar PV development. This is because residents will be living in close proximity to the solar PV*

[7] www.nortontaylornunn.co.uk/faq-items/what-is-amenity-in-planning-terms

[8] Technical Advice Note: Assessing Residential Amenity June 2016 South Gloucestershire Council

[9] Burnthouse Farm Windfarm, SoS Decision (APP/D0515/A/10/2123739) 6th July 2011

[10] Landscape Institute Residential Visual Amenity Assessment (RVAA) TGN 2/19 15 March 2019

development whilst also potentially having views of the solar panels for its lifetime. ***Where a view of the solar panel exists, a solar reflection*** *may be possible which* ***may impact upon residential amenity***' (my emphases).

8.11 Of course, in RVAAs / LVIAs, the visual assessment is technically restricted to effects on views, and many character assessments only deal with effects on the landscape's physical features. Thus, the effects on human beings which arise from loss of privacy, loss of daylight, overlooking, overshadowing, lighting, late-night / early-morning activities, movement, disturbance, disruption, noise, vibration, odours, dust, flooding, pollution, and a general awareness of what is going on, are almost always overlooked.

8.12 However, as GLVIA3 explains, LVIAs should include an assessment of effects on the **experiential** qualities of the landscape, and their perceptual and aesthetic aspects / qualities. In other words, how landscapes are perceived, and experienced.

8.13 As mentioned previously, LVIAs rarely consider that some human receptors may be blind / partially-sighted. Also, importantly, GLVIA3 Box 5.1 explains that '**scenic** quality' '*is a term used to describe landscapes that appeal primarily to the senses (primarily, but* ***not wholly the visual senses****)*' (my emphasis).

8.14 During operation, apart from during maintenance / interim works, solar developments are relatively quiet at longer distances; however, at closer quarters, the loud buzzing noise emanating from inverters (in particular) and substations is clearly audible, and can be very disturbing (to humans and wildlife) – recordings of noise emanating from solar plants and BESS complexes during construction and operation can be made available if required.

8.15 Effects on the health, well-being and quality of life of residents in their homes / gardens is an important consideration in planning and assessment, but so is the health, well-being and quality of life of residents and other people who use the landscapes beyond their homes as a valuable resource for recreational and social amenity. Health, well-being and quality of life are integral to 'landscape', as well as to assessments of landscape and visual effects.

8.16 GLVIA3 Figure 1 shows examples of LVIA 'discussion areas', which under the heading 'human beings', includes **social impacts**. Furthermore, the importance of the above issues is made abundantly clear in the LI's policy on public health[11], and associated position statement *Public Health and Landscape: creating healthy places* [doc ref SGHS/L.1]. The policy states, '***We want public health professionals, planners and landscape architects to promote and act upon the idea that high quality landscape increases wellbeing***'.

8.17 Both the policy and the position statement are derived from the European Landscape Convention (ELC), which states (my emphases):

'*Signatories acknowledge that '****the landscape is an important part of the quality of life for people everywhere****: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas' and that '****the landscape is a key element of individual and social well-being***.'

'*The landscape also bears within it a system of* ***social values****, which sometimes have to be highlighted through awareness-raising activities.* ***The landscape's social values are tied to its importance for quality of life, health, and to its contribution to the creation of local cultures. Landscape identification, characterisation and assessment underlie landscape quality objectives****.* ***This is why such assessment should be done with the interested parties and population concerned, and not just with specialists in landscape appraisal and operations***'.

[11] https://www.landscapeinstitute.org/policy/health/

8.18 NPS EN-1 para. 5.10.22 states that '*The assessment should also address the landscape and visual effects of noise and light pollution, and other emissions… from construction and operational activities on residential amenity and on sensitive locations, receptors and views, how these will be minimised*'. The LVIA does not provide this analysis.

8.19 I also understand that in some cases, residents affected by solar / BESS developments have served blight notices[12].

8.20 **The LVIA does not specifically consider effects on recreational / social amenity**.

8.21 As described and illustrated in residents' Written Representations (see for example doc refs SGHS/L.2 – 7), the study area's landscapes contain many excellent recreational resources, and perform numerous strategically-important recreational / social functions. They are highly-valued by residents, who regularly use the lanes and PRoWs for walking, running, cycling, and horse-riding.

8.22 They are also highly-valued by communities within the wider area, and by visitors, many of whom come specifically to enjoy the landscapes' positive aesthetic and perceptual qualities, and resources.

8.23 Evidently, these landscapes make a great contribution to people's mental and physical health and well-being, and to their quality of life, which the proposed development would adversely affect to varying but potentially significant degrees, during construction, operation, and decommissioning.

8.24 The landscapes also contribute to the local economy. As mentioned above, several establishments cater for visiting walkers / cyclists / equestrians and those with an interest in the area's natural and cultural assets – there are historical and nature-based visitor attractions in proximity to all the sites.

8.25 It is known that the presence of solar / BESS development in good quality rural landscapes can discourage visitors, and thus adversely affect businesses which benefit from the landscapes' quality / qualities. Here, many people travel along roads and PRoWs where in future, the view of the landscape would either be replaced by views of panels and other industrialising elements / infrastructure, or the view would be screened by planting and thus lost.

8.26 The proposed development would adversely affect the above receptors and resources in some way, whether due to the disruption and very high levels of adverse visual and other effects that would arise during construction and decommissioning, or the long-term adverse visual and other operational effects, including interim works. In particular, there are health and safety concerns due to the high potential for conflict between people using lanes and private roads / tracks along the construction route.

[12] Blight is the reduction in value to a property by virtue of the threat of Compulsory Purchase

Looking east along Easton Lane towards Bozeat: fields in middle distance proposed for arrays

8.27 In terms of visual functions and resources, to a certain degree, all the sites would be visible from adjacent / nearby PRoWs and lanes used for informal recreation, but not all are crossed by PRoWs.

8.28 The sites where PRoWs would probably be most severely affected are Site A (see below), Site F, between Easton Maudit and Bozeat, and Site G, north west of Lavendon. In all cases, popular rights of way would be adversely affected including long-distance trails, and **the landscapes occupied by the sites form an important and integral part of the recreational experience**.

8.29 The high level of adverse effect would be the result of factors set out in the previous section, mainly the large-scale industrialisation of these rural, historic, tranquil landscapes.

8.30 Finally, there is another concern relating to the dangers associated with creating what would effectively become **inescapable corridors**.

8.31 As mentioned previously, some of the sites are crossed by PRoWs, and / or PRoWs run along their boundaries within the site. Where they pass through / alongside fields containing solar arrays, the PRoWs would be fenced.

8.32 People walking along the PRoWs may be accompanied by small children, and / or may be elderly / infirm. Some may have dogs. Given the large deer populations in this area, it is inevitable that deer would also use these routes. The bridleways are also used by people riding horses and bicycles.

8.33 It is also inevitable that at some point, there would be conflict between one or more of the above, for example: horses bolting; dogs running out of control / chasing people or animals; equestrians / cyclists travelling fast towards other equestrians / cyclists, or walkers, who may not hear them approaching. This could potentially result in serious injury to both humans and animals, especially where there is no room to stand out of the way.

8.34 In terms of the safety of horses and riders using the bridleways:

a) Horses are extremely unpredictable.

b) They may be reluctant to go along enclosed corridors, or get part way along and refuse to go further.

c) Even during operation when there is limited activity on the site, they may be spooked by the noise of inverters / substations, and glint / glare, and alarmed by sudden movement (vehicular / animal / human).

d) If the horse is spooked, or bolts, there is little room for other path users to move out of the way.

8.35 Furthermore, it is important to consider the risks to **personal safety and security** where PRoWs are proposed to be enclosed, as they would become '**inescapable corridors**'.

8.36 One resident said to me, "*I think the Green Lane route through Site A will be a really good example of this, as all the fields on both sides, and the planned additional part of the path to make a loop, will be surrounded on all sides by fields with PV panels. There is not a single mitigation field adjacent. I would be very concerned to walk along there by myself (I usually walk the footpaths around the village on my own) once the scheme was constructed, and in fact I can't imagine that many people would wish to either*".

8.37 In response to another proposed solar development[13], the Parish Clerk wrote to the LPA on behalf of '*three parishioners who have asked for anonymous representation in responding to this planning application*'. The letter went on to say that *'As Parish Clerk I have brought these residents together in this response so that they can share their experiences and material concerns with District Councillors*'.

8.38 The letter explained that the three parishioners used the local footpaths on a daily basis, and all had specific and very sound reasons for not wishing to find themselves trapped within a fenced corridor along the footpaths, for example, due to the threat of pursuit / violence from known parties.

8.39 The Clerk said the parishioners' opinion is that there was a '*lack of any consideration of public safety and well being in the sense that this application creates an **inescapable corridor** along an existing right of way that was previously open to the wider countryside. The route as it currently exists provides users under threat with numerous options for escape and means of drawing attention in the event of an emergency. This is not the case if the current solar farm layout and design is carried out*' (my emphasis). It is not clear how such risks could be designed out.

8.40 In summary, some of the levels of adverse effects on social / recreational and residential amenity would be very high, **potentially 'significant'**.

[13] LPA ref 21/01846/FUL (refused), PINS ref APP/J1860/W/23/3325112 (appeal dismissed)

9. Conclusions

9.1 The LVIA predicts that during construction and the first 15 years of operation, the proposed development would give rise to **significant adverse effects on landscape character and visual amenity**.

9.2 I **agree** with this conclusion, although my assessment found that levels of adverse landscape and visual effects would be **higher** than assumed in the LVIA.

9.3 However, I do **not** agree with the LVIA's conclusion that after 15 years of operation, apart from at three viewpoints, not only would adverse effects on character and views no longer be 'significant', but also, effects on character would be **significant beneficial**.

9.4 My review and assessment concluded that a) after 15 years of operation, effects on many landscape and visual receptors would **remain** significant adverse, and b) there would be **no landscape (nor visual) benefits**.

9.5 The reasons for the differences in judgements are partly due to different interpretations / applications of the published guidance, mainly GLVIA3. In my opinion, there are certain errors in the Applicant's LVIA's method and process, and flawed assumptions have been made.

9.6 For example in some cases, landscape and visual receptor sensitivity levels were underestimated, partly due to lack of granular baseline survey and analysis.

9.7 In particular, many of the notable localised variations in character which occur across the study area were not identified, and thus were not factored into judgements about landscape / visual value and susceptibility.

9.8 Such variations occur due to the distribution of the numerous highly-valued natural and cultural / heritage assets which are present throughout the study area. Whilst some were noted in the LVIA, their contributions to landscape and visual value were not properly considered. The assets display different characteristics and have varying degrees of influence and association, resulting in each village and its contextual landscape having its own local distinctiveness and sense of place, often with subtle but important variations in levels of value, for reasons which, at first glance, may not be obvious.

9.9 Visual receptor sensitivity levels were underestimated mainly because the LVIA's criteria for visual susceptibility were incorrect.

9.10 Also, and very importantly, the LVIA did not consider the landscape as a **resource,** especially the complex natural, cultural, social and visual functions and services which the sites and their contextual landscapes perform / provide. Most if not all of the resources / functions / services contribute to landscape and visual value in some way.

9.11 This is a **major omission** (and a departure from the guidance), as many of the existing functions / services in the local and wider area are critical to both environmental and human health, including making important contributions to all aspects of 'landscape'. All could be adversely affected by the proposed development.

9.12 For example, the landscapes make highly important contributions to the settings of numerous significant heritage assets, and the assets contribute to the high levels of landscape and visual value. This was not considered in the LVIA, and of course affects judgements about overall effects.

9.13 The landscapes support a wide variety of wildlife habitats, many of which are designated. The section of the River Nene which bisects the Scheme is of international and national importance, being an SPA, Ramsar site, and SSSI. The LVIA did not consider the implications of changes to these habitats, which could result in adverse effects on character and views.

9.14 The landscapes are also a highly-valued recreational resource: in particular, the LVIA did not consider the adverse effects on the social / recreational amenity of people using the network of lightly-trafficked rural lanes and PRoWs enjoyed by residents and visitors alike – several popular long-distance trails run through the study area and through the sites, and many people visit the small, historic villages interspersed along the way. Walkers, cyclists, and equestrians are well-catered for.

9.15 In addition, the LVIA did not identify nor factor in the cause and nature of many of the impacts and effects arising from the Scheme which could adversely affect landscape and views, for example glint and glare (note that there are significant problems with the Applicant's GGA method).

9.16 Furthermore, the LVIA did not differentiate between direct and indirect landscape effects.

9.17 The LVIA predicts that by Year 15, the proposed screen planting would have established and matured. As a result, it concludes that levels of **all** adverse landscape effects, and the vast majority of adverse visual effects, would reduce to the point where they would no longer be 'significant', remaining at the same levels for the duration of the operation.

9.18 I do **not** agree with this conclusion, for reasons which include the following:

a) The LVIA places a great deal of reliance on both existing and proposed vegetation to screen views and thus reduce high levels of landscape and visual effects.

b) However, not all adverse effects on landscape character can be mitigated by screening (ie experiential effects, eg on tranquillity).

c) Also, not all of the identified views could or would be screened by the proposed planting (for example, at elevated locations, and along the PRoWs which cross some of the sites).

d) It is possible that by Year 15, the proposed hedge planting could have established successfully, although that cannot be guaranteed. However, even with the inclusion of (locally-uncharacteristic) fast-growing species, the new woodland planting is highly unlikely to have become an effective screen by then. In other similar cases, decision-makers have concluded that the proposed planting would not become effective until at least Year 25 of operation (assuming successful establishment and good after-care).

e) Where visual screening would **not** be achieved as assumed, magnitudes of effect at Year 15 would be **higher** than predicted, resulting in **underestimations** of levels of overall adverse landscape and visual effects.

f) It **cannot** be assumed that views would remain screened for another 45 years, whether by proposed or existing vegetation. The Applicant may have control over the former, but none over the latter, which consists of planting which could be reduced / removed / lost at any point in time. Note that whilst ash trees are very common in the study area, and currently help screen views of the proposed development sites, there is now widespread ash dieback. Also, many hedges which the LVIA assumes would screen views for the duration of the operation (60+ years) contain / comprise elm, but Dutch elm disease is rife. The worst-case vegetation-free scenario should be adopted from the outset, and the Scheme sited and designed accordingly.

g) Note that the LVIA does **not** report the worst-case visual scenario of effects at winter Year 15, it reports effects in the summer of that year when trees would be in full leaf.

h) The LVIA states that to achieve effective screening, hedges within the Applicant's control would have to be grown up to and managed at c. 4.5m tall. However, in parts of the study area, tall hedges are uncharacteristic, so in themselves, **the proposed mitigation measures would give rise to adverse landscape effects**.

i) Also, **the proposed screen planting would give rise to adverse visual effects**. In many cases, the proposed 4.5m tall hedges would screen views across characteristically open landscapes. Where the views are across the developed sites, the LVIA assumes this would reduce levels of adverse visual effects, whereas the result is the total loss of view regardless of whether the view includes the sites or not, and thus a significant adverse visual effect.

9.19 The LVIA concludes that from Year 15 onwards, the scheme would deliver **significant landscape character benefits**, due to the proposed screen planting.

9.20 Notwithstanding the LVIA's questionable assumption that the proposed planting would a) establish successfully, and b) remain in place for the rest of the Scheme's life, the main reason why this judgement is flawed is because in LVIA, measures which are proposed to mitigate landscape and / or visual effects, such as screening vegetation, **cannot** be double-counted as landscape / visual enhancements (GLVIA3 para. 3.39).

9.21 At best, the effect would be Neutral, but at worst it would be **significant adverse**, due to the planting being uncharacteristic and / or resulting in the total loss of a view.

9.22 However, in my opinion, the most serious flaw in the LVIA's assessment of effects, which is a complete departure from GLVIA3, is that the significant landscape benefits which the LVIA has **erroneously** identified **only** relate to what it calls the sites' 'landscape **fabric**' – a term which is not used in GLVIA3 but which the LVIA defines as landscape elements, such as hedges and trees. As the LVIA **does not consider effects on the overall character of the sites**, it cannot draw conclusions about whether effects on overall character would be beneficial or adverse.

9.23 GLVIA3 clearly explains that LVIAs should firstly establish the site's overall character, derived from a combination of factors of which landscape elements are just a part. Then, it should consider effects on the elements, and go on to assess effects on the overall character which has been identified. The LVIA has **omitted** this second critical step.

9.24 Furthermore, the assessment must differentiate between **direct** and **indirect** effects on landscape character.

9.25 **Direct** effects on character mainly occur on-site. Direct adverse effects arise from physical impacts which normally cannot be mitigated (for example, the change from greenfield to brownfield land). Therefore, in this case, **direct effects on the overall landscape character of all the sites would be significant adverse**.

9.26 Evidently, the level of the direct adverse effect would be very high due to the **intense and extensive industrialisation of these very rural landscapes**, which display visible and buried time-depth, with numerous significant historic landscape features; contain and support many designated and highly sensitive wildlife habitats; possess a wide range of positive aesthetic and perceptual qualities, including tranquillity and remoteness; act as a highly-valued resource for residents and visitors (and hence contribute to health, wellbeing and quality of life, **and** the local rural economy); and perform / provide many other complex natural, cultural, social and visual functions and services.

9.27 Also note that there would be significant adverse effects on soils and water quality, again, with adverse implications for character and visual amenity. Both would be adversely affected by pollutants, and soils would suffer what could potentially be irreversible damage. The presence of BESS adjacent to the River Nene's highly sensitive aquatic and riparian habitats is a **major concern** given the catastrophic environmental effects likely to occur during a thermal runaway event, although evidently, elsewhere, soils and watercourses / water bodies would be adversely affected.

9.28 In addition, here, a very large proportion of the land within the Order Limits is **BMV land**, and the rest is highly productive.

9.29 Furthermore, it is highly unlikely that the land could or would be restored to its current condition and use, as the Applicant proposes (the LVIA states that '*agricultural fields would be returned to agriculture with **all** structural landscape mitigation retained*'). The soils' ALC grades would almost certainly be far lower than they are now.

9.30 Note that the proposed DNO substation complex, high-security fencing, gated access and cables would remain post-decommissioning.

9.31 Construction, interim, and decommissioning works can and do result in long-term / permanent adverse effects on soils (and adverse effects on water quality / drainage – the two are closely interrelated).

9.32 The Applicant has not considered how the proposed wildflower meadow / pasture would be successfully established on the sites, given that they require low-fertility soils and the receiving soils are highly fertile.

9.33 The Applicant appears to assume that 'resting' arable soils for long periods is beneficial for soil health and quality: this is true from an ecological perspective, but not from an agricultural one, where the intention is to revert to highly-productive arable use, as is the case here. The reality is that after just a few years of 'resting', soil fertility declines significantly, and after long periods, is extremely difficult to restore.

9.34 The Applicant also claims that continued agricultural use could continue by grazing sheep within the solar array areas; however, in reality, grazing sheep within solar arrays areas is neither feasible, practical nor viable, and is even unwise.

9.35 The above landscape related matters (ie effects on soils and water quality, BESS risks, loss of BMV land, restoration, sheep-grazing etc) are explained in more detail in the appendices to this report.

9.36 **Indirect** effects on character usually occur off-site, and indirect adverse effects can sometimes be mitigated. Importantly, levels of indirect effects on character tend to reduce gradually with distance, with the highest levels occurring closest to the site. The LVIA's judgements do not recognise this, predicting that levels of effects on the overall character of the landscapes lying between the sites and up to 1km from their boundaries would be exactly the same, which of course, they would not (this is mainly due to the LVIA having categorised **all** the landscapes within 5km of the sites' boundaries as having the same levels of value and susceptibility to change, despite the notable localised variations).

9.37 **Indirect effects on the overall character of the landscapes closest to the sites would be significant adverse for the duration of the operation**.

9.38 Note that the **residential amenity** of a large number of people would be adversely affected.

9.39 Evidently, combined, the significant adverse landscape and visual effects that would occur / be experienced within each of the proposed sites' zone of interinfluence and / or intervisibility would **significantly adversely affect an extremely large area, and large numbers of people**.

9.40 The proposed development would heavily industrialise a swathe of good quality, rural, open countryside **c. 23km long and up to c. 7km wide**, and the industrialising influence would extend for many kilometres beyond the Order Limits.

9.41 Solar development homogenises and sterilises rural agricultural landscapes, resulting in the loss of natural seasonal changes and rhythms which are an integral part of how these landscapes have been experienced for hundreds of years. They are **not** homogenous, they display considerable **diversity and complexity**.

9.42 During ISH1, the Applicant's landscape expert explained that a landscape-led approach had been adopted throughout the early stages of the Scheme to ensure that adverse impacts, and

effects on landscape and views in particular, were minimised. However, in my opinion it is unlikely that apart from the identification of features such as nationally-designated areas / sites / features, effects on landscape character and visual amenity featured in the site selection process at all.

9.43 The reason for the 'scattering / dispersal' of the sites across such a vast area appears not to be a conscious design intention, but the result of the most important criteria for site selection being i) a suitable point of connection to the Grid, and ii) large landholdings held by willing landowners. This does **not** constitute a landscape-led approach (nor, for that matter, a minimisation of BMV land-take approach) to site selection.

9.44 Another important, related point to bear in mind is that due to northern latitude and associated climate / variable weather, in the UK, solar is **extremely inefficient** – current estimates are just over 10%, so **disproportionately large amounts of land are required to achieve a profitable output**.

9.45 The question is, could the Scheme be constructed on a smaller area of land whilst still producing the same output, which could potentially reduce levels of landscape, visual and other harm? I note that the ExA has also queried the Applicant's overplanting ratio in ExQ1 Q5.0.1.

9.46 In summary, in my opinion, the levels of the majority of the significant adverse landscape and visual effects arising from the proposed development would be higher than the LVIA predicts, and the majority of the effects would remain **significant adverse from start to finish**.

Carly Tinkler CMLI November 2025

Note that the appendices to this report are separate documents.