Application for DCO by FOSSE GREEN
Representation by Interested Party reference F88728215
Deadline 6

Summary of Submissions

The submission is divided into sections as follows:-

A Comments on REP5A-038- Applicant's Response to Deadline 5 submissions:-
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B Applicant's response to ExQ3 (REP5A-037):-
- LV.3.01 Visual Impact Clay Lane, Bassingham

Section A Comments on REP5A-038 Applicant's Response to Deadline 5 submissions

Permanent sealing of agricultural land page 26,27 and 32

1.1 Applicant's response

The Applicant does not consider that it has changed its position on the issue of permanent sealing.

Gate Burton, Tillbridge, East Yorkshire Solar and Fenwick are examples of solar NSIPs where the applicant may not be removing vegetation planting or substations and therefore the impact was assessed as permanent.

The Applicant is unaware whether the Springwell applicant made any commitment to return soils to their current state. Springwell differs from the proposed development by the presence of Grade 1 and 2 agricultural land of which 14ha is solar PV with the potential for crushed gravel access tracks and concrete pad foundations on which solar stations will be sited. It is understandable why a developer, ExA or SoS may consider this impact of Grade 1 and 2 soils to be a permanent loss of agricultural land; it is more difficult to reinstate Grades 1 and 2 land back to it's current standard.

1.2 Comments in reply

1.2.1 When challenged about the statements it has made in relation to the issue of permanent sealing of agricultural land in other solar NSIPs throughout the examination, the

Applicant has repeatedly changed its position and made contradictory or factually incorrect assertions:-

Applicant's statement	Submission in response
1.The permanent sealing of agricultural land in the IEMA guidelines relates to the sealing of land and roads and not solar developments citing Tillbridge, Cottam and West Burton (ENV2-011).	Neither ExA report nor SoS decision letters make reference to IEMA Guidelines in relation to permanent sealing (REP1-106)
2.The Applicant is not aware of any solar NSIPs where hard infrastructure was considered as permanently sealed unless the intention was to not to remove those works on decommissioning (REP3-045 FS.2.02).	Hard infrastructure was intended to be removed on decommissioning and deemed permanently sealed- Mallard Pass, Heckington Fen and Beacon Fen (REP1-106 paragraph 2.4.3)
3. The issue of whether land is permanently sealed relates to the ALC grading of the soil on which the hard infrastructure is built referring to Mallard Pass (REP3A- 025 page 53)	The hard infrastructure was considered permanently sealed due to the length of time that the land was lost to agriculture and nothing to do with soil sensitivity (paragraphs 1.5-1.7 of REP5-045)
4. The schemes at Gate Burton, Tillbridge, East Yorkshire Solar and Fenwick have not assessed land as permanently sealed (REP3A-025 page 54).	The substations within each site were accepted as permanently sealed (REP5-045 paragraph 1.8)
5. The Applicant considers it prudent to follow current good industry practice rather than aligning with an assessment carried out in 2022 for Mallard Pass (REP3A-025 page 54).	In EIAs since Mallard Pass, namely Beacon Fen, Heckington Fen and Springwell, hard infrastructure has been accepted as permanently sealed (REP5-045 paragraph 1.10 and 1.11)
6. The hard infrastructure was deemed permanently sealed in Mallard Pass as the original application was not time limited and the ES was not revisited when the time limit of 60 years was introduced (REP4-018 page 71).	Contradicts the assertion made by the Applicant at 3. that the hard infrastructure was deemed to be permanently sealed due to the high sensitivity of the soils. The ES was revisited when the 60 year time limit was introduced (REP5-045 paragraph 5.1.4)
7.The issue of whether land is permanently sealed relates to the ALC grading of the soil on which the hard infrastructure is built referring to Heckington Fen (REP5-025 page 48).	No distinction was made between the substation on Grade 3b land and the access tracks and solar stations which were on higher grade land (REP5A-064 paragraph 4.2.3)

1.2.2 The Applicant asserted at point 4 of the table at paragraph 1.2.1 that there was no permanent sealing of hard infrastructure in the schemes at Gate Burton, Tillbridge, East Yorkshire solar and Fenwick (REP3A-025 page 54). However, the Applicant's assertions were factually incorrect as in each of those schemes the substation was deemed to be permanently sealed. The Applicant has shifted it's stance again in REP5A-038. It now accepts that the substations were deemed permanently sealed but for the reason that the applicant may not be removing this hard infrastructure on decommissioning (and that this does not apply to Fosse Green as the hard infrastructure is to be removed). Whilst the future of the hard infrastructure was in some doubt in these schemes, there are recent examples in Beacon Fen, Heckington Fen and Springwell where the hard infrastructure was to be removed, similar to Fosse Green, and the land considered to be permanently sealed.

1.2.3 The Applicant considers that Springwell differs from Fosse Green in that the hard infrastructure in Springwell is on Grade 1 and 2 agricultural land which is more difficult to reinstate (REP5A-038 page 27). Paragraphs 11.8.23 and 11.8.24 of Chapter 11 Land, Soil and Groundwater (REP1-014) of Springwell state that all infrastructure will be removed on decommissioning and that the land will be restored to its current condition. None of the hard infrastructure is to be sited on Grade 1 or 2 agricultural land as the Applicant asserts (Table 11-12 of REP1-014 Springwell).

Noise impact on PRoW page 29

2.1 Applicant's response

The range of noise levels along the PRoW from the operation of the proposed development (which would be below those associated with regular speech) and the transient use of them are not considered to constitute a permanent impact on user's health and quality of life.

Baseline sound surveys along the PRoW could only establish indicative sound levels in the area, akin to the surveys already undertaken. Such levels would not alter the transient and relatively low levels of noise exposure along the PRoW.

2.2 Comments in reply

2.2.1 The Applicant has concluded that the noise levels along the PRoW do not constitute a permanent impact on user's health and quality of life. Yet the Applicant has scoped PRoW out of the EIA. It is therefore difficult to understand on what basis the Applicant has arrived at it's conclusions without carrying out a noise assessment.

2.2.2 Paragraph 11.4.14 of Chapter 11 Noise and Vibration (APP-036) defines non-sensitive noise locations as including those where no human activity takes place or where such activity would not be affected by noise from the proposed development. On this basis PRoW are sensitive noise locations as human activity takes place there and users of the PRoW are potentially affected by noise from the proposed development. Yet Table 11-4 which sets out non-residential receptors do not include PRoW.

2.2.3 Paragraph 4.5 of IEMA Guidelines for Environmental Noise Impact Assessment 2014 deals with the selection of noise sensitive receptors and sets out a number of types of possible receptors that need to be considered when determining the baseline noise levels. These include open air amenities. Paragraph 4.6 of the guidelines explains that "open air amenities" covers a wide range of receptors and sensitivities and advises that sites such as nationally recognised footpaths which should be considered as particularly sensitive. It is clear from the guidelines that PRoW can amount to non-residential noise sensitive receptors. Other NSIP schemes such as Mallard Pass and The Droves have included PRoW within the order limits as noise sensitive receptors with medium sensitivity.

2.2.4 The justification for scoping out PRoW from the noise assessment in paragraph 11.4.18 of Chapter 11 Noise and Vibration (APP-059), is that there will not be a material change in the experience of using the PRoW as a result of the proposed development. The Applicant has jumped to this conclusion without having carried out the necessary assessment. The correct question to be addressed at this stage in accordance with the guidelines is whether the PRoW are likely to be adversely affected by the proposed development. As the Applicant has acknowledged in paragraph 11.4.17 of Chapter 11 that noise experienced along the PRoW from the proposed development will amount to an adverse noise effect, then PRoW should have been scoped into the assessment.

2.2.5 Paragraph 5.6 of the IEMA Guidelines for Environmental Noise Impact Assessment explains that the function of establishing baseline noise levels is to provide context for the noise levels predicted to arise from the proposed development against which they may be appraised. The Applicant says that baseline sound surveys along the PRoW could only establish indicative sound levels in the area, akin to the surveys already undertaken. The position of the monitoring locations for the sound surveys is at Fig 11-1 Receptor and Noise Monitoring Locations (APP-099). Noise levels measured at these locations will inevitably be higher than on the PRoW network which are away from roads and residential properties. None of the monitoring locations were on the PRoW within the order limits.

2.2.6 The Applicant has provided noise contour plans showing the predicted operational noise levels for the centralised BESS (AS-062) and the distributed BESS (AS-063) which illustrates that the PRoW between Aubourn and the PRoW (existing and proposed new permissive paths) to the west of Thorpe on the Hill will be subjected to noise levels of between 30dB and 55dB. However, without data for baseline noise levels along PRoW, it is not possible to assess the numerical level of noise change in these locations as a result of the proposed development.

2.2.7 Paragraph 7.54 of the IEMA Guidelines for Environmental Noise Impact Assessments advises that the numerical change in noise levels should not be solely relied on to assess the noise impact and consequential significance of effects. Paragraph 7.57 notes that "for an area that is valued because of its soundscape, a relatively small impact could be considered as having a potentially substantive effect if the quality of the noise environment were to be eroded. This particularly relates to tranquil, quiet or calm areas". Paragraph 7.70 refers to amenity areas and says that the effect of a disruptive impact may mean that people no longer use the amenity because of the new noise intrusion spoiling their enjoyment of the area. Paragraph 7.71 notes that "to determine an effect on human receptors, the assessor

must form a view regarding the extent of the impact that the proposed development is likely to cause and any consequential change in attitude, behaviour and health effects".

2.2.8 As the Applicant has scoped PRoW from the noise impact assessment, it has failed to properly consider the impact of the noise from the proposed development on PRoW, citing the linear nature of the PRoW, the ambient noise environment and the transient usage as the justification for concluding that there will no effect on user's health or quality of life.

2.2.9 The Applicant has produced no evidence in support of its conclusions. It has carried out no survey of users of PRoW within the order limits to ascertain potential impacts of the noise from the proposed development on such users.

2.2.10 The Applicant has failed to take into account the erosion of the quality of the existing noise environment of the PRoW which is tranquil and quiet as referred to in paragraph 7.70 of the IEMA Guidelines for Environmental Noise Impact Assessments. This is reinforced by the World Health Organisation "Guidelines for Community Noise" which sets out in Table 1 that existing quiet outdoor areas should be preserved.

2.2.11 The Applicant has not taken into account the particular vulnerability of those suffering from depression who are likely to have a higher sensitivity to unwanted noise. Paragraph 2.7.7 of the Health and Wellbeing Summary Statement (REP3-047) acknowledges that the percentage of the population in Lincolnshire diagnosed with depression (15.8%) is higher than regional and national levels. The World Health Organisation "Guidelines for Community Noise" discusses the effects of environmental noise on mental health and notes the importance of taking vulnerable groups into account, because they are not able to cope sufficiently with unwanted environmental noise and this is particularly true of children, the elderly and people with pre-existing illnesses, especially depression.

2.2.12 In conclusion, the Applicant has scoped ProW out of its noise assessment without justification and as a result it has failed to carry out baseline noise levels along the ProW in order to determine change in noise levels. It has also failed to consider the erosion of the quality of the existing noise environment of the PRoW which is tranquil and quiet and failed to consider the effects of particular vulnerability of a proportion of the local population to the impacts of noise along the PRoW.

Visitor Economy page 31

<u>3.1 Applicant's response</u>

The Applicant accepts that visual and experiential factors can influence walking preferences but the EIA assessment draws on EIA practice which recognises that route availability, connectivity and safety are primary determinants of route use at a network level. The evidence presented does not demonstrate that changes to landscape character would result in a measurable reduction in use of routes within the study area or give rise to a likely significant effect.

Chapter 12 Socio Economics and Land Use considers cumulative effects. Effects to PRoW during construction are not considered within the cumulative assessment as the proposed development would not make a meaningful contribution to any cumulative effect which may occur from other developments in the area.

The assessment does not rely on operational data from large-scale solar schemes. In line with EIA practice, it draws on professional judgment, available literature and experience from comparable infrastructure projects. The absence of extensive operational precedent does not invalidate the assessment; rather, a proportionate and evidence based approach has been applied to determine the likely significant effects on the visitor economy are not anticipated.

3.2 Comments in reply

3.2.1 Paragraph 12.4.18 of Chapter 12 Socio-Economics and Land Use (AS-016) sets out that as there is no statutory guidance on the methodology for undertaking assessment of the socio-economic and land use effects, the Applicant has based its assessment on best practice and professional judgment.

3.2.2 The Applicant has failed to follow the guidance from the Institute of Public Rights of Way and Access "Environmental Impact Assessment: Appraising Access" 2020. Paragraph 1.44 of the guidance advises on establishing baseline information that includes not only the legal and policy framework but also the characteristics of the access resources and the numbers, types and preferences of affected access users. Such data can be obtained from third party surveys, user monitoring and user intercept surveys. In contrast, the baseline information provided by the Applicant amounts to a list of the existing resources in and around the order limits (Paragraphs 12.5.30 to 12.5.36 of Chapter 12).

3.3.3 The IPROW guidance has been used to base Suffolk County Council's "Public Rights of Way and Green Access Supplementary Guidance Document" July 2024. The Guidance states that the preference is for PRoW and amenity to be dealt with in their own chapter of the EIA because PRoW have unique additional characteristics that are not shared with other highways. Specifically, they make a significant contribution to the local communities sense of place, mental health, physical health and overall well-being. In addition, the contribution that PRoW make to community access and sense of place has an important relationship to the offer and function of the visitor economy. The guidance advises that the EIA methodology should consider the combination of effects that will impact on the quality of the amenity experienced by the receptors ie walkers, cyclists, equestrians, wheeled users as well as the effect on the physical resource. The effects to be considered include impacts on the tranquillity and ambience experienced by recreational receptors.

3.3.4 The Applicant has included very narrowly drawn criteria in Table 12-7 of Chapter 12 which lists the impact sensitivity criteria. These refer to the level of "importance" of the PRoW (which is not defined) and the availability of alternative routes. There is no reference for example to the vulnerability of users of the PRoW, such as the elderly or people with disabilities who may be disproportionally affected by small changes.

3.3.5 Similarly, in Table 12-14 of Chapter 12 the magnitude criteria (from High to Very Low) solely relates to the increase/decrease in journey length, travel patterns and opportunities to access the wider network and or community infrastructure. There is no reference to the scale of the degree of change to the amenity and recreation experience, there is no reference to the geographic extent of the change to that experience, nor to the duration of the time that it would be experienced.

3.3.6 By failing to gather adequate baseline data and by applying narrowly drawn criteria for both sensitivity and magnitude of impact, the resultant conclusion that there will be negligible effects on PRoW during construction (paragraph 12.7.34 of Chapter 12 refers) and a minor beneficial effect during operation (due to the provision of additional permissive paths) (paragraph 12.7.54 of Chapter 12 refers) is unreliable.

3.3.7 This, in turn, undermines the Applicant's conclusions concerning cumulative impacts in paragraphs 12.10.11 (construction and decommissioning) and 12.10 22 (operation).

Traffic and Transport page 33

4.1 Applicant's response

There is no specific requirement to carry out iRAP assessments. The approach adopted is the typical means of assessment adopted for other similar schemes. The approach set out in the ES Scoping Report and the Preliminary EI Report were submitted to LCC and no requirement for an alternative methodology was requested.

Regarding L11, as the HGV % impact assessed was 52% and there has been one collision in the last 5 years, a slightly higher % impact would not materially affect the assessment result.

Regarding Clay Lane, Bassingham the public footpath ThuN/5/1 (shown on AS-020) is the right of way which was described as running parallel to it within 200m.

Regarding the sensitivity of Clay Lane, Bassingham the criteria cited in Table 13-28 only applies to PRoW as stated in Table 13-7 where the assessment criteria have been split depending on the type of receptor ie Road Links v Walk/Cycle Links. Since Clay Lane is a road link, it has been assessed using the sensitivity criteria for Road Link ie Very Low as there are no sensitive users (defined in Table 13-7) ie no residential or workplace frontages and no off road cycle route. The PRoW criteria are not relevant to the assessment of Clay Lane as it is not a PRoW.

Regarding the magnitude of effect, the magnitude has been downgraded as stated in paragraph 13.7.45 due to very low total traffic flows as shown in Appendix 13-D. The magnitude has not been adjusted by way of a blanket rule but has been considered on an individual basis.

4.2 Comments in reply

Road Safety assessment- Magnitude of Effect -Link 11 Butts Lane/South Hykeham Road

4.2.1 Paragraph 13.4.19 of Chapter 13 Traffic and Transport (REP3-010) states that the assessment methodology has been informed by the 2023 IEMA Guidelines. Paragraph 3.45 of those guidelines advocates use of the "Safe System" using iRAP or similar to assess road safety. The 2023 guidelines superseded the 1993 Guidelines for the Environmental Assessment of Road Traffic (GEART). Paragraph 4.42 of the 1993 guidelines, relating to accidents and road safety, calls for an analysis of the existing accident rates and statistical assessment of the likely increase or decrease in the number of accidents resulting from changes to the traffic flows; that where a development is expected to produce a change in the character of the traffic eg HGV movements on rural roads, then data on existing accident levels may not be sufficient and professional judgment is needed to assess the implications of local circumstances, or factors which may elevate or lessen the risks of accidents A comparison of the provisions of both sets of guidelines is usefully contained in the Review of IEMA Guidelines on EA of Traffic and Movement in the Rampion 2 Offshore Windfarm NSIP (REP2-017). Table 2-5 of that document highlights that the use of a "Safe System" is a more sophisticated replacement of the application of professional judgment in relation to "local circumstances or other factors" to existing collision data.

4.2.2 By considering solely collision data in its assessment of road safety impacts, the Applicant has fallen between two stools in that it has neither applied the professional judgment to consider local circumstances or other factors as required by the 1993 guidelines neither has it applied the more technical iRAP or other protocols as required by the 2023 guidelines to assess the road safety impacts of the proposed development.

4.2.3 In the absence of using iRAP, other solar NSIPs have retained the use of professional judgment to consider local circumstances or other factors in their methodology for assessing road safety impacts. For example, paragraph 15.6.15 of Chapter 15 (APP-058) of Rosefield Solar states that "professional judgment has been used to assess the implications of local or other circumstances, or factors which may elevate or lessen the risks of accidents". Page 13 of Chapter 9 Transport and Access (APP-058) of The Droves Solar Farm repeats this phrase it its assessment methodology. Paragraph 13.4.40 of Chapter 13 Transport and Access (APP-050) in Green Hill Solar says in it's methodology statement that "Patterns or road safety factors that could be exacerbated by traffic or movement have been identified and considered in the context of construction movements strategies, their managements and the temporary nature of effects".

4.2.4 In paragraphs 6.1.4 to 6.1.9 of my submission at REP5-045 I challenged the future baseline number of 209 HGV at L11 given by the Applicant which would give rise to an increase of 52% in HGV at L11 as a result of the proposed development. The Applicant considers that the downward trend in the numbers of HGV over the last few years represents a "marginal degree of variation". The completion of the North Hykeham Relief Road in summer 2029 will also result in lower numbers of HGV at L11. Currently the route through Haddington is a "rat-run" from the A46 to the A15. The new relief road will create a faster short cut from Pennells roundabout on the A46 eastwards to the eastern bypass on the A15. In using National Road Traffic growth forecast figures to calculate future baseline traffic flows, the Applicant has failed to take into account local factors. The Applicant considers that a "slightly" higher % impact would not materially affect the assessment

result. On the basis of the 2024 DfT traffic count, the 172 HGV at L11 as a baseline figure would give rise to an increase of 63% HGV as a result of the proposed development. If the downward trend in the number of HGV continues and taking into account the likely effect of the new North Hykeham relief road, the baseline figure will be even less than 172 with an increasingly larger % impact. The Applicant does not define a "slightly" higher impact but if this amounts to 63% or more, then this calls into question the Applicant's assessment.

4.2.5 In conclusion, the Applicant has used narrowly defined criteria for assessing the magnitude of effect for road safety and has failed to consider the impact of a potentially lower number of baseline HGVs on the link road from those calculated by the Applicant based on local rather than local trends. The Applicant has previously noted that the original assessment of magnitude of effect for L11 should have been Medium and not Low (REP4-018 page 72). This should be further reviewed in the light of the above comments.

<u>Road Safety assessment- Sensitivity -Link 11 Butts Lane/South Hykeham Road</u>

4.2.6 The Applicant has failed to respond to my submission at paragraph 6.1.1 of REP5-045 that the sensitivity of L11 should be High/Medium rather than Low.

<u>Severance, Pedestrian Delay, Non-motorised User Amenity and Fear and Intimidation assessment- Sensitivity- Clay Lane Bassingham</u>

4.2.7 The Applicant suggests that I have misapplied the sensitivity criteria set out in Table 13-7 of Chapter 13 Traffic and Transport (REP3-010) which the Applicant says have been split depending on the type of receptor being considered ie Road Links v Walk/Cycle Links. There are a number of points to be made in response. Firstly, there is nothing that explicitly says that only one element of the criteria should be applied depending on the type of receptor being considered. Secondly, whilst Road Links, Junctions and PRoW are considered in Chapter 13 as receptors, "Walk/Cycle Links" are neither defined nor considered as receptors so it is not clear how the sensitivity criteria in the Table relates to these routes. Thirdly, in assessing the Clay Lane as being Very Low sensitivity, the Applicant states in REP2-018 page 72 that this is because "no residential properties have a direct frontage to the highway, **it has no pedestrian footways, or designated cycle infrastructure, and it is not a PRoW, but has a PRoW running parallel and adjacent to it.**" If, as the Applicant asserts, it is not relevant to consider the sensitivity criteria relating to "Walk/Cycle Links including PRoW" why has the Applicant made specific reference to these criteria in it's assessment of Clay Lane? Fourthly, in considering sensitivity criteria for High and Medium values for "Road Link and Junctions", there is no mention of pedestrians and cyclists. Surely the Applicant is not suggesting that these users should not be considered as a factor?

4.2.8 Looking at the way that other solar NSIPs have dealt with the assessment of sensitivity criteria, both Helios (Table 10.1 of Chapter 10 APP-030) and The Droves (Table 6.1 of Chapter 9 APP-058) consider that "areas with no footways with high pedestrian footfall and congested areas" have high sensitivity.

4.2.9 There are no footpaths along the entire length of Clay Lane which is part of the Bassingham Circular Stepping Out Walk and therefore particularly attractive to walkers. Nor

is there any off-road provision for cyclists. The way that the Applicant has applied the sensitivity criteria in Table 13-7 is inconsistent with the comments made in REP5A-038 about their application, and there is no explanation of how the criteria for Road Links and Junctions should be considered in relation to the provisions for cyclists and pedestrians.

Non-motorised User Amenity- Magnitude - Clay Lane Bassingham L18

4.2.10 The Applicant states that the magnitude for Clay Lane L18 has been downgraded in Table 13-36 as stated in paragraph 13.7.45 from High to Medium due to very low total traffic flows as shown in Appendix 13-D; that the magnitude has not been adjusted by way of a blanket rule but has been considered on an individual basis.

4.2.11 Paragraph 13.4.23 of Chapter 13 Traffic and Transport (REP3-010) sets out that a "movement rule" has been considered against the baseline hourly traffic flows to allow the magnitude of impact to be downgraded by one category if specified conditions are met and that magnitudes which have been adjusted in this way for each assessment category are detailed in Section 13.7. Paragraph 13.7.45 states that for L18 the high magnitude assessment has been downgraded to medium due to low baseline traffic flows.

4.2.12 It appears therefore that the movement rule has been applied in accordance with paragraph 13.4.23 as the conditions of the rule have been met and the initial magnitude level has been downgraded by one category which has then been detailed in paragraph 13.7.45. If, as the Applicant asserts, each case is considered on an individual basis, the "movement rule" is superfluous. That it is called a "movement rule" (rather than a movement guideline which can be applied flexibly) dictates that if the conditions apply, then the magnitude of impact is automatically downgraded by one category.

4.2.13 Paragraphs 3.29 and 3.30 of the IEMA Guidelines states with regard to non-motorised user amenity that "pedestrian amenity is broadly defined as the relative pleasantness of a journey and is considered to be affected by traffic flow, traffic composition, and pavement width/separation from traffic. The assessment of amenity should pay full regard to the specific local conditions."

4.2.14 The Applicant has applied a "rule" in considering the magnitude for Clay Lane, rather than paying full regard to local conditions as the guidelines require.

Ecology-Bats page 36

5.1 Applicant's response

The limitations of comparing the Tinsley study to the proposed development have already been pointed out. However, the advice in that study to ensure that solar energy does not negatively impact biodiversity have been adopted within the FLEMP.

The comments in paragraph 4.3.1 of REP1-106 relating to artificial lighting are not relevant as the proposed development will not be lit at night (other than low level PIR security lighting) which would not light boundary features within the Order limits.

The comments in REP1-106 regarding noise are not relevant as they relate to bats which are not native to the UK ie the pallid bat (Antrozous pallidus) or they relate to noise from different types of development (roads and natural gas). Noise from the proposed development would be in localised areas. In relation to the BESS, that would be located away from the areas within the Order limits /boundary habitats used by bats. At these locations, noise would be below the suggested threshold of 50-55bBA where noise may start to affect some bat species.

There would be only limited, temporary and short-term habitat fragmentation as hedgerow loss will be compensated with significant areas of new hedgerow planting and enhancement and other landscape scale enhancement.

Llanwern solar farm (noting the limitations of the report as there was an incomplete baseline data set) is within a different habitat type comprising grassland and a network of drains where baseline bat activity might be expected to be higher (due to invertebrate prey being higher in grasslands and wetlands) and then potentially reduced where replaced by solar panels. This is unlikely to be the same for the proposed development which has large intensively managed arable fields with limited wetlands, with resulting low bat activity within the fields which will be replaced by solar panels and grassland. No conclusions can be made from the use of one bat box only as very few bat boxes were installed and the take up of bat boxes may take years, particularly as no roosts were lost and the roosting resource remains similar to the baseline. The mitigation proposed is not comparable to Llanwern which is much smaller with a different habitat type. The large scale change from intensively managed arable to grassland and solar PV, new species-rich and permanent grassland, new hedgerows etc will provide a net benefit to foraging and commuting bats.

Hedgerow loss of approximately 2 km is temporary/short term as new hedgerows will likely be established by year 5 and likely to function as a habitat resource and commuting route before then.

Paragraph 3.3.20 of App 8-I and the assessment guidance has been followed. This guidance and Table 2 of App 8-I states that the conservation importance for individual species and not the overall bat assemblage score is used in the assessment.

5.2 Comments in reply

Tinsley study

5.2.1 The Applicant states that the advice in Tinsley *et al* 2023 “Renewable energies and biodiversity: Impact of ground-mounted solar photovoltaic sites on bat activity” In Journal of Applied Ecology 7 August 2023 is that to ensure solar energy does not negatively impact biodiversity, measures should be taken to mitigate for lost foraging space such as planting insect-friendly vegetation, providing wildlife corridors and creating alternative habitats.

However, Tinsley goes on to say that where a solar PV site is proposed in proximity to a roost or on a known important commuting route of the species which have been identified as affected by the presence of solar panels (including serotine and common pipistrelle), then consideration should be given to whether alternative siting of the development at a less sensitive location would be more appropriate. Both serotine and common pipistrelle bats are present within the area of the proposed development and will inevitably be likewise negatively impacted by the presence of the solar arrays as the Tinsley research illustrated.

Artificial lighting

5.2.2 Paragraph 4.3.5 of the 2025 CIEEM UK Bat Mitigation Guidelines considers the research around the disturbance of roosts from artificial lighting and paragraph 4.4.10 considers its impact on foraging and commuting bats. In providing guidance on mitigation strategies, paragraph 7.3.16 refers to the guidance from the Bat Conservation Trust and in the Institution of Lighting Professionals which highlights the importance of early involvement and collaboration between a lighting professional and the ecologist which will help to ensure that the design is informed by *inter alia* a baseline lighting survey. Paragraph 7.3. reiterates that it is important to request baseline lighting levels (horizontal and vertical) and likely changes to those levels to get a real indication of the likely impacts. A commuting route where the existing light levels are tolerated by bats, augmented by additional light which seems to be relatively low as modelled, may cumulatively render the post-development commuting route unattractive to light-averse species. Paragraph 7.3.19 goes on to say that lighting from headlights may also need to be controlled/ limited by screening if there will be frequent vehicle movements next to features used by bats.

5.2.3 It is not apparent that the Applicant has carried out a baseline lighting survey as the guidelines advise in order to properly assess the impacts of lighting on the assemblage of bats. Nor has the Applicant considered the potential impact from vehicle headlights either during construction or operation.

Noise

5.2.4 The Applicant asserts that the comments made in my submission a REP1-106 (paragraph 4.3.2) about noise impacts on pallid bats are not relevant as pallid bats are not native to the UK. The reference in REP1-106 was to the research paper Allen L C *et al* 2021 "Noise distracts foraging bats" In Proc R.Soc. B 288 20202689. Pallid bats are highly sensitive to noise pollution as they hunt by passively listening for low-frequency sounds of ground prey (gleaning) rather than by echo-location. The primary gleaning bats in the UK include the Brown Long-eared bat and Natterer's bat both of which are present within the proposed development site.

5.2.5 The Applicant asserts that the research papers referred to in my submission at REP1-106 regarding the impact of compressor stations associated with natural gas extraction and highway noise are not relevant to solar development. These papers were cited as examples of anthropogenic noise impacting on bat activity which will be present not only during the two year construction phase but also for the 60 year operational period of the proposed

development. The overarching message is that “anthropogenic noise must be considered as a serious form of environmental change and pollution as it affects aquatic and terrestrial species” (P Hansjoerg and R Schmidt 2019 “The effects of anthropogenic noise on animals: a meta-analysis” In Biology Letters Vol 15 Nov 2019).

5.2.6 The Applicant says that noise from the proposed development would be in areas located away from the boundary habitats used by bats and at those boundaries noise levels would be below the 50-55 dBA where noise may start to affect some bat species. In the research paper by Reason P and Bentley C 2020 “Noise impacts on Bats: A sound assessment” In Practice CIEEM Issue 108 June 2020, the authors say that applying the precautionary principle, non-natural, unfamiliar or unpredictable noise levels exceeding 50 dB, L_{max} at 8+kHz within a roost could begin to have deleterious effects but that this should not be cited as a threshold for disturbance. Factors to be considered in any bat noise impact assessment include tolerance to noise which differ between species, baseline conditions indicating existing levels of tolerance, the duration of the development works, the character of the sound and contributory factors such as lighting and human disturbance.

5.2.7 The Applicant’s comments referred to in paragraph 5.2.6 relate to the operational phase of the development. During the construction period, noise levels from construction machinery, noise from vehicles and human noise and disturbance will not be localised but present throughout the development site and this will continue for 2 years.

Habitat fragmentation

5.2.8 The Applicant states that the loss of nearly 2km of hedgerow is temporary/short term as new hedgerows will likely be established by year 5 and likely to function as a habitat resource and commuting route before then. In Tarcy N *et al* “Managing hedgerows for biodiversity: Disentangling the effects of trimming, structure and connectivity on the use of linear features by bats” In Journal of Applied Ecology 25 November 2025 hedgerow monitoring for bat activity considered six hedgerow characteristics namely trimming method, foliage density, height, width, connectivity and woody plant diversity. The results showed that height and connectivity together with trimming method were the primary drivers of bat activity.

5.2.9 Part 1 of Schedule 11 to the draft DCO (REP5A-006) sets out the lengths of hedgerow to be removed ranging from 1m to 143m. Paragraph 5.2.13 of REP5A-022 states that these areas of hedgerow are to be removed for access. The Applicant describes the hedgerow loss as short-term and temporary and this appears to be a reflection of paragraph 8.12.17 of Chapter 8 Ecology (REP1-019) where Hedgerow Removal is described as temporary and that any replanting required has been embedded within the design of the proposed development as shown in the FLEMP. There is also a reference to the restoration of hedgerow habitats post-construction in Table 8-15 on page 154. In the section on Embedded Mitigation on page 122 there is a reference to “small areas of hedgerow and scrub will be lost mainly for access widening”. The FLEMP (REP5A-022) provides no further clarity about the intention to replace the hedgerow which has been removed, with paragraph 5.2.13 reiterating that existing hedgerow will be removed where access is required. The basic premise in the DCO is that approximately 2 km of hedgerow is to be

removed and not replaced. As connectivity is one of the drivers of bat activity, the habitat fragmentation caused by the removal of the hedgerows will have an adverse impact on the ability of the bats to forage and commute along the hedgerow corridors.

Llanwern solar farm

5.2.10 The Applicant notes the limitations of the Year 3 monitoring report as there was an incomplete baseline. This is a reference to Appendix 2 of the Ecological Monitoring and Review -Year 3 Report dated January 2024 which explains that static automated bat detectors were deployed at six locations across the site chosen previously for baseline data collection. Data from 2023 was compared to that from previous monitoring in 2021 and also to the baseline data from 2015. The baseline data was not as complete as the monitoring data as monitors during the baseline surveys were only deployed in certain locations in each season. However, comparisons in the 2024 Monitoring Report were only made between data sets from equivalent seasons.

5.2.11 The Applicant points out that Llanwern is within a different habitat type comprising grassland and a network of drains where baseline bat activity might be expected to be higher (due to invertebrate prey being higher in grasslands and wetlands) and then potentially reduced where replaced by solar panels. Paragraph 11.7.55 of the Environmental Statement dated January 2018 noted that the bat activity transect survey showed low/moderate levels of commuting and foraging with most activity along linear features of hedgerows and ditches (as opposed to across the open fields). The static bat detectors both during the baseline surveys and the 2023 surveys were also located within hedgerows and woodland edges. The conclusion drawn in paragraph 11.10.64 of the Environmental Statement dated January 2018 was that “bat activity was relatively low within the open fields”.

5.2.12 The Applicant states that the habitat within the proposed development site comprises large, intensively managed arable fields with resulting low bat activity within the fields. The Fosse Green surveys identified most of the bat activity associated with woodland edges, field boundary habitats with hedges and trees and within close proximity to water (paragraph 5.1.11 Chapter 8 Ecology (REP1-019). This is similar to the baseline survey data for Llanwern which also showed low bat activity within the fields (paragraph 5.2.11 above refers). Despite the Applicant’s assertion that baseline bat activity might be expected to be higher in grassland and wetlands habitat, the Fosse Green surveys demonstrate that the habitat of intensively managed arable fields still supported an assemblage of bats of National Importance.

5.2.13 The consistent trend from the Year 3 Monitoring Report at Llanwern was that the number of bat passes at the locations associated with the array areas had decreased considerably compared to the baseline. The level of bat activity noted in the monitoring report outside the panel areas was the same or higher in 2023 in comparison to the baseline, so if as the Applicant suggests, the reduction in bat activity was due to reduced levels of prey then the same reduction in bat activity would have been evident in these areas.

5.2.14 The conclusions in the 2024 Year 3 Monitoring Report were that the monitoring had shown “a large decline in the abundance of bats (in terms of number of passes) in the solar array fields compared to the baseline. The overall diversity of bats showed no difference between the solar array fields and the control areas but abundance was much lower in the solar array fields. The results of the bat monitoring broadly agree with the conclusions drawn in Tinsley which also found no consistent change in bat species diversity in solar array fields compared to control sites but with a significantly lower abundance. This indicates that in the short-term post-construction bat abundance has been affected by the new solar arrays at Llanwern”.

Assessing the importance of the bat assemblage

5.2.15 In REP4-018 (page 75) the Applicant states:- “The Applicant has not identified a bat assemblage of national importance”. This is a complete contradiction of the Applicant’s statement in Table 2 of App8-I (APP-141) that the overall bat assemblage score is 92.3% which meets the threshold for National importance. The Applicant now says that the assessment guidance has been followed in assessing the conservation importance for individual species and not the overall assemblage. The Applicant has been selective in applying the assessment guidance. The CIEEM Bat Mitigation Guidelines (2025) considers the assessment of the importance of the bat assemblage at paragraph 3.4.26:- “Sites of importance to bats often support several species and it can be helpful to consider the importance of the assemblage as a whole after the individual bat species Important Ecological Features (IEF) have been assessed”. Whilst the Applicant has assessed the IEF of each species, and noted the presence of a bat assemblage of national importance, it has made no further reference to this and not considered for example how this might impact the type of survey work carried out, the cumulative analysis and mitigation strategies.

Water run off page 39

<u>6.1 Applicant’s response</u>

The Applicant is unable to comment on the effectiveness of the flood mitigation implemented on other schemes.

<u>6.2 Comments in reply</u>

6.2.1 This thread of submissions arose from paragraph 9.7.74 of Chapter 9 (REP3-008) Water Environment where the Applicant stated that in order to limit channelisation as a result of water runoff from the solar PV panels, the areas around the panels would be planted with native grassland and wildflower mix which would intercept and absorb rainfall. ExQ 1 WE.1.05 asked for evidence that this approach would manage water run-off from the panels. There followed a discussion of research papers including the ADAS report in REP2-029 page 111, REP3A-037 paragraph 12, REP4-018 page 79. My submission at REP5-045 paragraph 10 was intended to illustrate, using the example of Cleve Hill, that despite the professional, expert assessment that the effects of water run-off from the panels would be negligible, the reality is that seeding the areas under the drip lines “to prevent rilling and

increase the surface run-off rates" has not worked as the site has flooded, presumably as a result of the anticipated 41.62% increase in water runoff rates.

6.2.2 It is surprising that the Applicant says that it is unable to comment on other schemes. Many of the chapters in the EA include a methodology based on best practice and professional judgment from other assessments undertaken on comparable energy infrastructure projects eg paragraph 5.10.5 of Chapter 5 Impact Assessment Methodology (APP-030) "AECOM has developed an approach based on professional judgment which is consistent with that followed on previous NSIPS", Table 6-6 of Chapter 6 Climate Change (REP3-006) "The project's GHG impacts would be fully consistent with ….good practice design standards for projects of this type", paragraph 9.4.20 Chapter 9 Water Environment (REP3-008) "IA Methodology based on professional judgment and experience of other similar solar DCO schemes", paragraph 12.4.18 of Chapter 12 Socio-Economic and Land Use, (AS-016) "the assessment follows best practice methodology and professional judgment from other assessments undertaken on comparable energy infrastructure projects". As Cleve Hill is the only operational solar NSIP, it would be expected that professionals from all areas of expertise would be studying the site to compare the results of the EIA with empirical data to inform future assessments.

Clay Lane Bassingham permissive path mapping page 40

7.1 Applicant's response

Figure 3-2A Indicative Fixed South Facing Site Layout Plan (REP5-006) and Figure 3-2B Indicative Single Axis Tracker Site Layout Plan (REP5-007) are indicative whilst the Streets, Rights of Way and Access Plans (REP5-004) are detailed secured plan showing the proposed permissive path at Clay Lane adjoining the western edge of the highway.

7.2 Comments in reply:

7.2.1 Whilst the Indicative Fixed South Facing Site Layout Plan (REP5-006) and Figure 3-2B Indicative Single Axis Tracker Site Layout Plan (REP5-007) are indicative, it would surely not have been too difficult to show the location of the route of the permissive path so as to be consistent with other plans. Whilst those indicative plans show the permissive path within the highway and the Streets, Rights of Way and Access Plans (REP-004) show the permissive path to the west of the highway, there is a further version shown on the FLEMP Appendix A Figure 7.15.1 (REP5-017) Sheet 9 which shows the permissive path partially within the highway and partially to the west. Three different versions of the route of this path!

Section B Applicant's response to ExQ3 (REP5A-037) -LV.3.01 Visual Impact Clay Lane, Bassingham

8.1 Applicant's response

When reaching overall judgments on sensitivity of visual receptors, GLVIA3 states at paragraph 6.31 that separate judgments on value and susceptibility should first be assessed.

The Applicant acknowledges that NKDC disagrees with the medium level of susceptibility that the Applicant has attributed to the users of the Stepping Out walks and that NKDC would judge them to have a high level of susceptibility.

The Applicant has set out its justification in its response to ExQ2 (REP3-045). In summary, within the Applicant's LVIA methodology (APP-149) the Applicant distinguishes between users of public rights of way where their interest is likely to be focused on the landscape and users of public rights of way where appreciation of the view is unlikely to be the primary interest. The Applicant acknowledges that the landscape views are relevant to the experience of users of Stepping Out Walks but considers views to not be the specific reason for people choosing to use these routes.

With regard to the judgments on value attached to views, this is influenced by the quality or distinctiveness of the different elements, or lack thereof, within views. This is not influenced by the length of time spent experiencing the views and so would be attributed the same value regardless of the activity being undertaken by those experiencing the views. When assessing the value of views of users of Clay Lane, the Applicant considered the presence of moderate quality elements, specifically the local road surrounded by arable fields and groups of vegetation, to warrant a medium value.

The Applicant's professional judgment is therefore that a medium susceptibility, medium value and medium sensitivity is appropriate for both motorists and users of the Stepping Out walk along Clay Lane.

8.2 Comments in reply

Visual sensitivity- methodology

8.2.1 Paragraph 6.31 of the Landscape Institute and Institute of Environmental Management and Assessment 2013 "Guidelines for Landscape and Visual Impact Assessment" (GLVIA3) states that "Each visual receptor, meaning the particular person or group of people likely to be affected at a specific viewpoint, should be assessed in terms of both their **susceptibility** to change and visual amenity and also the **value** attached to particular views".

Visual value criteria

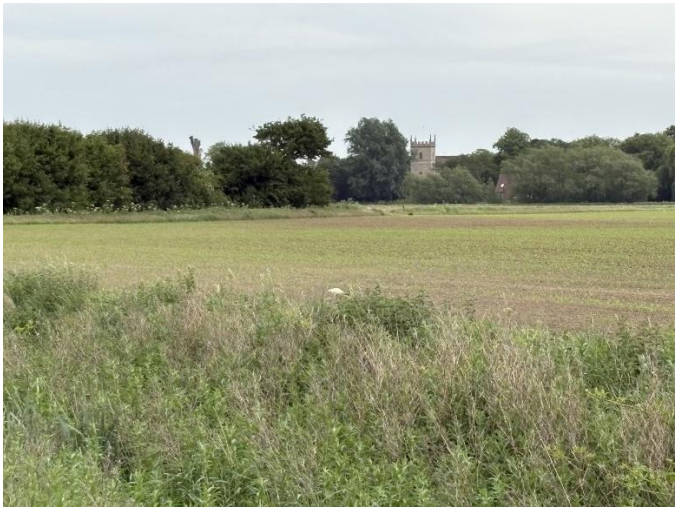
8.2.2 Paragraph 6.37 of the GLVIA3 gives further guidance on the value to be attached to views experienced which should take account of:-

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

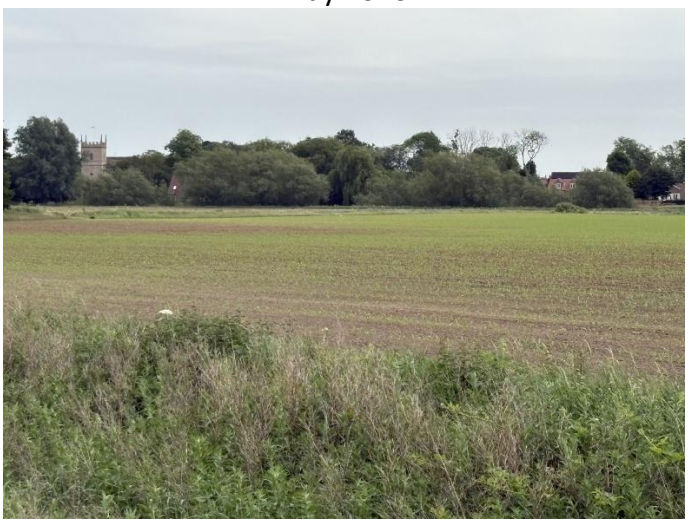
-indicators of the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment such as parking places, sign boards and interpretive material and references to them in literature or art.

The Applicant has used these guidelines in setting out Visual Value criteria in Table 6 of Appendix 10-B LVIA Methodology (APP-149).

8.2.3 In considering the application of these criteria to the users of Clay Lane and Bassingham Road, paragraph 16 “Key views and vistas” of Bassingham Conservation Area Appraisal 2016 states:- “Bassingham was originally an agricultural settlement and the village is surrounded by flat, fertile farmland, with the River Witham to the west. Wider countryside and riverside views exist from Church bridge. Looking towards the village from the open countryside to the west of the river, striking views of the crenellated tower of the Church of St Michaels and All Angels are visible above riverside shrubbery”. Thus the importance of the views towards and from Bassingham Conservation Area and the Grade II* Listed Building of St Michael and All Angels Church is acknowledged in the Conservation Appraisal. Views of the church tower described in the Conservation Appraisal can be seen along Clay Lane:-

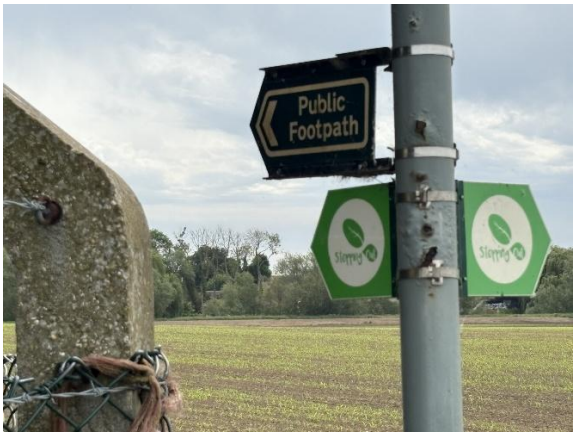


View of the tower of the Church of St Michael and All Angels from Clay Lane, Bassingham 29 May 2026



View of the tower of the Church of St Michael and All Angels from Clay Lane, Bassingham 29 May 2026

8.2.4 Clay Lane forms part of the Bassingham and Villages circular Stepping Out Walk. The Stepping Out Walks are a network of footpaths promoted by North Kesteven District Council. Details of the walks are published on the Hill Holt Wood website, available to view on the AllTrails app and advertised on the Lets Move Lincolnshire website. Many of the Stepping Out Walks are featured on led walks as part of the annual North Kesteven Walking Festival. 250,283 people used the Stepping Out network during 2024/25. (REP1-103 Springwell DCO submission by NKDC). The route of the Bassingham and Villages circular Stepping Out Walk is available on the Hill Holt website and at section 7-8 Norton Disney to Bassingham states:- "You will come to a junction where you will take the left turning down Clay Lane (single track lane). You will continue along this road for a good while. The road will bend round to the left and right several times and you will have open fields either side. The further along the road you go, you will start to see Bassingham church tower in the distance". The walk starts at Hammond Hall in Bassingham where there is parking provision and the route is signposted along Clay Lane:-



Stepping Out Walk signpost along Clay Lane, Bassingham

Visual Susceptibility Criteria

8.2.5 Paragraph 6.33 of the GLVIA3 states that the visual receptors most susceptible to change include residents or visitors who are engaged in outdoor recreation, including the use of PRoW, whose attention or interest is likely to be focused on the landscape and on particular views, visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to their experience and communities where views contribute to the landscape setting enjoyed by residents in the area. The Applicant has used these guidelines in setting out Visual Susceptibility criteria in Table 7 of Appendix 10-B LVIA Methodology (APP-149).

8.2.6 In considering the application of these criteria to the users of Clay Lane and Bassingham Road:-
a) Visitors using the Stepping Out Walk here are likely to be focused on the landscape and particular views across the open fields towards the church tower as they approach from Norton Disney. These views are specifically mentioned in the description of this part of the route in the tourist literature.

b) For visitors to Bassingham and residents of the village, part of the cultural heritage of the settlement is it's agricultural hinterland which is acknowledged in the Bassingham Conservation Area Appraisal. Views from and to the conservation area including the Grade II* listed St Michael's Church across the fields to the west of the village are an important contribution to the setting of these heritage assets.
c) Those views also contribute to the landscape setting enjoyed by the residents of the area.

Applicant's assessment

8.2.7 Turning to the Applicant's visual assessment of Clay Lane and Bassingham Road in Table 55 of Appendix 10-F (AS-120), the description of the receptor refers to motorists travelling along Clay Lane experiencing a flat and open landscape with scattered farmsteads and glimpses of the development in Bassingham. There is no reference to other users of Clay Lane likely to be affected, for example users of the Stepping Out Walk and visitors and residents where views contribute to the experience of the setting of the Conservation Area including the Grade II* Listed church as well as the wider landscape. By failing to identify these receptors, the Applicant has consequently failed to properly consider the value of views and the visual susceptibility of those receptors.

8.2.8 An example of the consideration of the visual impact of solar development on local routes around a settlement was considered in a Planning Appeal ref 6001477 dated 28 April 2026 in relation to land to the north of Stretton Road, Morton, Alfreton. The appeal was made by JBM Solar Projects 28 Ltd against the decision of North East Derbyshire Council to refuse planning permission for a 49.9MW solar farm. The planning inspector, in refusing the appeal, considered the visual impact of the proposed development along Evershill Lane. At paragraphs 30/31 of the decision letter, views along the lane are described as close to medium range encompassing vistas of agricultural fields and that expansive medium and long range open views are also possible. It was accepted that there would be a major adverse visual effect on receptors from Evershill Lane at year 1 but as new hedgerows mature post-construction screening the view, the applicant identified an overall visual effect reducing to negligible at year 15. The inspector agreed with the Council that the hedgerows themselves would have a harmful impact and that the experience of leaving the village and of entering a flat landscape would be a greatly foreshortened view. At paragraph 34 the inspector noted that "the extent of some long range views may vary over months or even years due to vegetation growth and management. Nonetheless, it is that very cyclicity and variance in natural features and seasons which engages communities with nature and the countryside, drawing people across the year, and creating interaction and anticipation. Restricting these views for a period of up to 40 years under the appeal proposal would go far beyond this anticipation, and the lived experience of how these hedgerows and fields have been historically managed. It would erode visual connectivity to the wider landscape character". At paragraph 39 the inspector concluded that "overall, the appeal proposal would severely degrade the qualitative experience of travelling along Evershill Lane and the PRoW, removing those views across open countryside which provide context and a sense of understanding of place. This degradation would occur during construction, during the period the industrial form of the panels and associated works remain visible and then also once the hedgerows have substantially grown. I find there would be major adverse visual effect along this route across the lifetime of the development causing significant harm".