

Heckington Fen Solar Park

EN010123

ES Transport and Access Technical Note– Sensitivity of Cowbridge Road, Bicker Drove and Vicarage Drove

Applicant: Ecotricity (Heck Fen Solar) Limited

Document Reference: ExA.ESATN.D3.V1

Pursuant to: APFP Regulation 5(2)(q)

Deadline 3: 5th December 2023

Document Revision: 1

December 2023





ES TRANSPORT AND ACCESS TECHNICAL NOTE – SENSITIVITY OF COWBRIDGE ROAD, BICKER DROVE & VICARAGE DROVE

Document Properties		
Regulation Reference	Regulation 5(2)(a)	
Planning Inspectorate Scheme Reference	EN010123	
Application Document Reference	ExA.ESATN.D3.V1	
Title	ES Transport and Access Technical Note – Sensitivity of Cowbridge Road, Bicker Drove & Vicarage Drove	
Prepared By	Heckington Fen Energy Park Project Team (ES Technical Team)	
Version History		
Version	Date	Version Status
Rev 1	December 2023	Deadline 3



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O. Executive Summary

- 0.1. It is concluded through this updated assessment applying the July 2023 IEMA Guidance, that the proposed package of mitigation will ensure that the Proposed Development is acceptable and that there will be no adverse Significant effects at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove), even when classifying the sensitivity of the links as 'high'. This reflects Lincolnshire County Council's conclusion at page six of its response to the ExA's first questions (document reference REP2-092), that subject to the routing and mitigation measures proposed, the traffic and transport impacts during the construction, operation, and decommissioning periods would be Negligible (i.e. Not Significant).



1. Introduction

1.1. This ES Transport and Access Technical Note (TN) has been prepared by Pegasus Group on behalf of Ecotricity (Heck Fen Solar) Ltd in relation to its application for a Development Consent Order for a large scale ground mounted solar photovoltaic (PV) electricity generation and energy storage facility. It seeks to address item **ISH4-APIO** of the Examining Authority's Issue Specific Hearing 4 (ISH4) Environmental Matters Actions Points which were issued following Agenda Item 8 of ISH4 on Wednesday 22nd November 2023. It provides an update on the guidance set out in the Institute of Environmental Management and Assessment (IEMA) guidelines: Environmental Assessment of Traffic and Movement (July 2023) and provides an updated assessment of the sensitivity value of Cowbridge Road, Bicker Drove and Vicarage Drove, in relation to Transport and Access.

1.2. The Examining Authority's Written Questions and Requests for Information (ExQ1) (**document reference PD-012**) seeks Lincolnshire County Council's (LCC's) views at TT.1.6iii, in respect of whether it agrees with the Applicant's assessment of sensitivity of links four (Cowbridge Road), five (Bicker Drove) and six (Vicarage Drove), or if, having regard to Table 14.2 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, it considers that the sensitivity of any of these links should be increased. LCC's response (**document reference REP2-092**) states the following at pages five and six:

"Paragraphs 5.12 to 14.5.14 of ES Chapter 14 [PS-073] confirm that Cowbridge Road, Bicker Drove and Vicarage Drove are all subject to the national speed limit (60 mph) and do not have any footways. Given the location of these roads they are unlikely to be used heavily by pedestrians however, they may still be used by other non-motorised users as recreational routes. Therefore having regard to the criteria within Table 14.2, LCC would suggest that the sensitivity of these routes should be considered to fall within the scope of the definition of High (or at the very least Medium) rather than Negligible. If this sensitivity were applied then the Significance of Effect would increase from Negligible to Major (or Moderate) and therefore significant in EIA terms."

1.3. The Applicant confirmed in its Response to the Examining Authority's First Written Questions (**document reference ExA.ResponseFWQ-D2.V1**) that links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) have been assessed as having negligible sensitivity value as they do not serve any of the trip attractors such as schools, hospitals or tourist destinations which are listed at Table 14.2 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, and because they do not have any collision clusters or road safety concerns (noting their existing use by National Grid), or any junctions/highway links at or over capacity. Whilst it is acknowledged that there are no footways, there are no PRow connections nor desire lines for non-motorised users and there is unlikely to be a high number of people 'at home' or 'at work' on these roads. The sensitivity of the links is therefore considered to be negligible with consideration to Table 14.2 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**.



- 1.5. The IEMA published new guidance for the Environmental Assessment of Traffic and Movement in July 2023 (referred to herein as '2023 IEMA guidance') which makes changes to how the assessment methodology, including how sensitive receptors are defined. This supersedes the guidance that was prevailing at the time at which the **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)** was originally prepared. The changes to guidance are addressed at **Section 2** of this TN.
- 1.6. With consideration to the 2023 IEMA guidance, it remains Pegasus Group's view that the sensitivity of links four to six should still be considered negligible for the reasons set out at **paragraph 1.3**. However, further to LCC's comments and the ExA's request during ISH4 (agenda item 8), the Applicant's sensitivity assessment considering links four to six at a high level of sensitivity has been revisited within this TN.
- 1.7. It should be noted that the assessment of the A17 (links one to three in **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**) are not affected by the changes to the IEMA guidelines and the assessment included in ES chapter remains valid.

2. Assessment Approach – 2023 IEMA Guidance

- 2.1. The same assessment criteria are applied in this TN, as per Section 14.3 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, with the exception of the following paragraphs which have been updated by the 2023 IEMA guidance and are therefore replaced by the content of this **Section 2**:
- Paragraph 14.3.10 and Table 14.1 (Magnitude of Impact); and
 - Paragraphs 14.3.13 to 14.3.15 and Table 14.2 (Sensitive Receptors).
- 2.2. This TN does not consider any cumulative effects on the basis that paragraph 3.169 of the ES Technical Note – Updated Information on Cumulative Projects (**document reference REP2-050**) confirms that there are no forecast cumulative effects at links four to six.

Magnitude of Impact

Traffic Flows (Referred to in the previous 1993 IEMA Guidance as Traffic Impact)

- 2.3. As set out at paragraph 14.3.8 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, there are two rules to be considered when assessing the impact of development traffic on a highway link. These rules remain the same in the 2023 IEMA guidance, and determine that increases in traffic flows of up to 30%, or increase in HGV movement by 30% are imperceptible, except in sensitive locations where this threshold is reduced to 10%.
- 2.4. The 2023 IEMA guidance states at paragraph 3.9 that the impact of traffic and movement will vary for each type of impact and at paragraph 3.11 confirms that the assessment may depend on description and judgement rather than any commonly agreed method. For the purpose of this assessment, it is considered appropriate to maintain the assessment thresholds for traffic flows at Table 14.1 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**. However, noting that the guidance suggests that an element of judgement is applied, it is Pegasus Group's maintained professional judgement that (as Chapter 14 of the ES already states) the percentage increase in trips at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) is skewed by the current very low traffic flows on these roads.

Severance (same description as in the previous 1993 IEMA Guidance)

- 2.5. Paragraph 3.14 of the 2023 IEMA guidance states that the measurement and prediction of severance is extremely difficult. It also confirms that there are no predictive formulae that give simple relationships between traffic factors and levels of severance. However, paragraph 3.16 of the document suggests that changes in traffic flow of 30%, 60% and 90% have historically been regarded as producing slight, moderate and substantial changes in severance by the Department for Transport. It confirms that whilst these thresholds no longer appear in guidance, they are established by case law and have not been replaced. These thresholds have therefore been considered as appropriate at **Table 2.1** below (replacing the previous at Table 14.1 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**). It is this **Table 2.1** that we apply in our assessment, in **Section 3** of this TN.
- 2.6. Notably, in the context of links four to six, paragraph 3.16 of the 2023 IEMA guidance states that *'caution needs to be observed when applying these thresholds as very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic'*. It is Pegasus Group's view that this applies to any impact criteria assessed by a percentage change in traffic.

Driver Delay (same description as in the previous 1993 IEMA Guidance)

- 2.7. Paragraph 3.20 of the 2023 IEMA guidance states that driver delay is only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. It suggests that junction modelling software can be used to determine delay, and paragraph 3.22 suggests that it will normally be based on technical work reported on within Transport Assessment work. This broadly reflects the previous IEMA guidance.
- 2.8. A Transport Assessment including junction modelling has not been completed for this scheme given the relatively low forecast levels of construction and operational traffic. It is therefore considered appropriate to apply the assessment thresholds for traffic flows at Table 14.1 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)** noting that the recorded low traffic flows on links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) suggest that they are not at or close to capacity. This also reflects Pegasus Group's experience and on-site observations of these links.

Pedestrian Delay (Incorporating Delay to all Non-Motorised Users) (Referred to in the previous 1993 IEMA Guidance as Pedestrian Delay)

- 2.9. The 2023 IEMA guidance states at paragraph 3.24 that in general, increases in traffic levels are likely to lead to increases in pedestrian delay but that it will also depend on the general level of pedestrian activity and other factors such as visibility and general physical conditions. Paragraph 3.26 states that it is not considered wise to set definitive thresholds and it is recommended that the expert uses their judgement to determine whether pedestrian delay constitutes a significant effect.
- 2.10. The 2023 IEMA guidance broadly reflects the previous version. It is therefore considered appropriate to maintain the assessment thresholds for traffic pedestrian delay at Table 14.1 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)** for the purpose of this assessment.

- 2.11. Pedestrian delay was scoped out of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**. This is still considered to be appropriate based given that the general level of pedestrian activity on links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) is considered to be low, on the basis that there are no footways, there are no PRoW connections nor desire lines for non-motorised users and there is unlikely to be a high number of people 'at home' or 'at work' on these roads.

Non-Motorised User Amenity (Referred to in previous 1993 IEMA Guidance as Pedestrian Amenity)

- 2.12. Paragraph 3.30 of the 2023 IEMA guidance confirms that the previous suggested threshold of significant changes (where the traffic flow (or HGV component) is halved or doubled) no longer appears in Department for Transport guidance. However, it goes on to advise that this has not been superseded within the new guidance and that it is established through case law and therefore remains applicable for ES assessment. The 2023 IEMA guidance broadly reflects the previous version. It is therefore considered appropriate to maintain the assessment thresholds for non-motorised user amenity at Table 14.1 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**.
- 2.13. Pedestrian amenity (now referred to as non-motorised user amenity) was scoped out of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**. This is still considered to be appropriate given that the general level of non-motorised activity on links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) is considered to be low, for the reasons set out at **paragraph 2.10**.

Fear and Intimidation (same description as in the previous 1993 IEMA Guidance)

- 2.14. The 2023 IEMA guidance sets out a weighting system which replaces previous guidance to assess fear and intimidation. It is based on a scoring system combining average traffic flow over 18 hours, total 18 hour heavy vehicle flow and average vehicle speeds (Table 3.1 of the guidance). The respective scores relate to an overall level of fear and intimidation which can be categorised as extreme, great, moderate and small (Table 3.2 of the guidance) and the magnitude of impact relates to the relative change determined by this assessment (Table 3.3 of the guidance) which can be categorised as negligible, low, medium and high.
- 2.15. An assessment has been undertaken for links four to six against the criteria at **Table 3.1** and **3.2** below, and this confirms that the level of fear and intimidation would be 'small' and the magnitude of impact would be negligible for all links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) in both the baseline and with development scenarios.
- 2.16. Fear and intimidation was scoped out of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**. This is still considered to be appropriate based on the fact that the magnitude of impact of fear and intimidation is forecast to be negligible.



Road Safety (Referred to in previous 1993 IEMA Guidance as Accidents and Safety)

- 2.17. Paragraph 3.43 of the 2023 IEMA guidance suggests that accident and safety impacts can be assessed by reviewing collision data to identify any emerging patterns or factors that could be exacerbated by traffic or movement generation. This approach has therefore been considered as appropriate at **Table 2.1** below (replacing the previous at Table 14.1 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**). It is this **Table 2.1** that we apply in our assessment, in **Section 3** of this TN.

Hazardous Loads/Large Loads (same description as in the previous 1993 IEMA Guidance)

- 2.18. Paragraph 3.50 of the 2023 IEMA guidance suggests that the assessment needs to clearly outline the estimated number and composition of dangerous and hazardous loads, and where the number of movements is considered significant, the assessment should include a risk or catastrophe analysis. There are no forecast hazardous loads as part of the Proposed Development.
- 2.19. Paragraph 3.52 states that the traffic and movement expert must consider appropriate routes for abnormal indivisible load (AIL) movements and mitigation strategies to secure safe passage. It suggests that if frequent abnormal load movements are anticipated, the expert should consider if other impacts could be induced (e.g. fear and intimidation, driver delay etc).
- 2.20. As set out in the Applicant's response to the ExA's question TT1.5ii (**document reference ExA.ResponseFWQ-D2.V1**), National Grid has confirmed that there will be no AILs associated with the extension of Bicker Fen Substation and, therefore, no AILs associated with the Applicant's project are proposed to use links four to six .

Criteria for Magnitude of Impact

- 2.21. The 2023 IEMA guidance on assessing the magnitude of impact at **paragraphs 2.3 to 2.19** has been used to derive and update definitions of magnitude previously set out at 14.1 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**. The revised criteria for magnitude of impact are summarised at **Table 2.1**. The full scope of impacts are listed for completeness, with those relevant to this TN highlighted in yellow. It is this **Table 2.1** that we apply in our assessment, in **Section 3** of this TN.

Table 2.1 – Criteria for Magnitude of Impact

Impact	Magnitude of Impact/Threshold			
	Negligible	Low	Medium	High
Traffic Flow	Change in peak or 24 hr traffic and/or HGVs within study area by less than 5%	Change in peak or 24 hr traffic and/or HGVs within study area between 5% and 15%	Change in peak or 24 hr traffic and/or HGVs within study area between 15% and 30%	Change in peak or 24 hr traffic and/or HGVs within study area by 30% or more
Severance	Change in peak or 24 hr traffic and/or HGVs within study area up to 30%	Change in peak or 24 hr traffic and/or HGVs within study area between 30% and 60%	Change in peak or 24 hr traffic and/or HGVs within study area between 60% and 90%	Change in peak or 24 hr traffic and/or HGVs within study area above 90%
Driver Delay	Change in peak or 24 hr traffic and/or HGVs within study area by less than 5%	Change in peak or 24 hr traffic and/or HGVs within study area between 5% and 15%	Change in peak or 24 hr traffic and/or HGVs within study area between 15% and 30%	Change in peak or 24 hr traffic and/or HGVs within study area by 30% or more
Pedestrian Delay	IEMA guidance recommends that professional judgement is used to determine the impact on Pedestrian Delay, considering local factors such as pedestrian activity, visibility and the physical conditions of the site.			
Non-motorised User Amenity	Pedestrian Amenity is impacted by traffic flow, composition and width of pavement and is related to fear and intimidation thresholds. IEMA guidance suggests threshold of where traffic or HGV flows have halved or doubled will be used to indicate whether there is a significant effect.			
Fear and Intimidation	No change in step changes	One step change in level, but with <400 vehicle increase in average 18hr AV two-way vehicle flow; and/or <500 HV increase in total 18hr HV flow	One step change in level, but with >400 vehicle increase in average 18hr AV two-way vehicle flow; and/or >500 HV increase in total 18hr HV flow	Two step changes in level
Accidents and Safety	IEMA guidance suggests that accident and safety impacts can be assessed by reviewing collision data to identify any emerging patterns or factors that could be exacerbated by traffic or movement generation.			

Sensitive Receptors

2.22. Paragraph 1.28 of the 2023 IEMA guidance states a number of population groups that may be sensitive to changes in traffic conditions and should be considered as part of the Transport and Access assessment. This includes the following:

- Non-motorised users.
- Public right of way users.
- Motorists and freight vehicles.
- Public transport; and
- Emergency services.

2.23. Paragraph 1.30 of the 2023 IEMA guidance also states a number of special interests that should be considered when defining sensitive receptor geographic locations. This includes the following:

- People at home.
- People at work.
- Sensitive and/or vulnerable groups (including young age, older age, income, health status, social disadvantage, and access and geographic factors).
- Locations with concentrations of vulnerable road users (e.g. hospitals, places of worship, schools).
- Retail areas.
- Recreational areas.
- Tourist attractions.
- Collision clusters and routes with road safety concerns; and
- Junctions and highway links at (or over) capacity.

2.24. With consideration to the population groups and sensitive receptors outlined in the 2023 IEMA guidance, it is considered appropriate to apply the criteria for assessing the sensitivity of a receptor set out at **Table 2.2** below. This replaces the sensitive receptor criteria set out at Table 14.2 of **Chapter 14: Transport and Access** (document reference 6.1.14/PS-073).

Table 2.2 – Criteria for Sensitivity of Receptor

Significance	Description
High	Schools, colleges, playgrounds, hospitals, retirement homes. Heavily congested junctions, densely populated residential areas.
Medium	Congested junctions, shops/businesses, areas of heavy pedestrian/ cycling use, areas of ecological/nature conservation, populated residential areas.
Low	Tourist/visitor sites, places of worship, residential areas set back from the highway with screening, sparsely populated residential areas.
Negligible	Those people and places located away from the affected highway link.

- 2.25. Pegasus Group’s conclusions on the sensitivity of links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) does not change from that set out at paragraph 14.3.15 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, with reference to the new criteria set out at **Table 2.2** (i.e. negligible sensitivity). However, further to LCC’s response to ExQ1, agenda Item 8 of ISH4 and **ISH4-API0** of the ExA’s ISH4 Environmental Matters Actions Points a sensitivity assessment that considers links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) at a ‘high’ level of sensitivity has been carried out within this TN at **Section 3**.

3. Assessment of Likely Significant Effects

3.1. Using the information in **Section 2** above (which relates to the 2023 IEMA guidance and the new approach we are to apply), our assessment of likely significant effects based on that updated guidance is provided below.

Baseline Conditions

3.2. The baseline conditions remain valid as per section 14.5 in the ES Chapter 14 (**document reference 6.1.14/PS-073**).

Construction

Traffic Flows – National Grid Bicker Fen Substation Extension

3.3. Table 14.9 of Chapter 14: Transport and Access (**document reference 6.1.14/PS-073**) confirms the annual average daily traffic (AADT) and HGV trips for the busiest times during the construction period of the Proposed Development. These equate to an AADT of 15 vehicles including ten HGVs at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove), associated with the extension to the National Grid Bicker Fen Substation¹. The impact on each of the links is set out in **Table 3.1**.

Table 3.1 – Traffic Flow Magnitude of Impact

Link		Baseline Two-Way AADT	Baseline plus Heckington Fen AADT	Additional Two-Way Traffic		Magnitude of Impact	
				Total Vehs	HGVs	Total Vehs	HGVs
Link Four – Cowbridge Road	AADT	136 (5 HGVs)	151	15 [11.0%]	10 [200%]	Low	High
Link Five – Bicker Drove		108 (3 HGVs)	123	15 [11.9%]	10 [333%]	Low	High
Link Six – Vicarage Drove		69 (2 HGVs)	84	15 [21.7%]	10 [500%]	Low	High

3.4. The magnitude of change in the number of vehicles at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) is low and the magnitude of change in the number of HGVs at links four to six is high when assessed against the criteria at **Table 2.1**.

¹ As set out in paragraphs 14.6.14 to 14.6.16 of Chapter 14: Transport and Access (**document reference 6.1.14/PS-073**), the substation extension will be associated with 18 two-way trips per day. This equates to 15 AADT trips. It should be noted that there is an error in Table 14.9 of Chapter 14: Transport and Access (document reference 6.1.14/PS-073) which adds 18 vehicles to the “Baseline plus Heckington Fen AADT” column instead of 15 vehicles. This has been updated in Table 3.1 above. This does not affect the ES assessment nor the conclusions as column 3 (Additional Two-Way Traffic) is compared with column 1 (Baseline Two-Way AADT).



- 3.5. If the sensitivity of links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) is assessed as 'high', when this is cross referred to the significance matrix at Table 14.3 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, this confirms that the significance of effect is likely to be **Moderate** for total vehicles, and **Major** for HGVs.
- 3.6. Environmental impact will occur as a result of construction vehicular traffic associated with the development proposals on links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove). During the construction phase there will be direct, short-term, temporary, negative effects on traffic flows. Overall, they are of a **Major** level of impact significance, and therefore **Significant** in EIA terms, without mitigation.
- 3.7. However, with consideration to **paragraph 2.3**, whilst the total number of construction traffic trips (both light and heavy vehicles) are relatively low, the percentage impact at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) are particularly high given that the baseline level of traffic and HGV percentages are so low (as shown in the 'Baseline Two-way AADT' column of **Table 3.1**). As set out in **paragraph 2.4**, the percentage impact of the construction traffic on these links is skewed by the current very low traffic flows on these roads.
- 3.8. The Outline Construction Traffic Management Plan (OCTMP), which is secured by Requirement 14 of the DCO, sets out mitigation measures to be implemented during the construction phase, including HGV management, signage and a highway condition survey of links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove).

Severance

- 3.9. The magnitude of change in severance at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) is likely to be considered negligible for total vehicles and high for HGVs when assessed against the criteria at **Table 2.1**. When this is cross referred to the significance matrix at Table 14.3 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, this confirms that the significance of effect is likely to be **Negligible to Major**.
- 3.10. During the Construction Phase there will be direct, short-term, temporary, negative effects on severance. Overall, the increase in HGV movements are of a **Major** level of impact significance, and therefore **Significant** in EIA terms, without mitigation. Mitigation is proposed in the form of the OCTMP, as set out at **paragraph 3.8**.

Driver Delay

- 3.11. The magnitude of change in driver delay at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) is likely to be considered negligible for total vehicles and high for HGVs when assessed against the criteria at **Table 2.1**. When this is cross referred to the significance matrix at Table 14.3 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, this confirms that the significance of effect is likely to be **Major** for HGVs.
- 3.12. During the Construction Phase there will be direct, short-term, temporary, negative effects on driver delay. Overall, the increase in HGV movements are of a **Major** level of impact significance, and therefore **Significant** in EIA terms, without mitigation. Mitigation is proposed in the form of the OCTMP, as set out at **paragraph 3.8**.



Accidents and Safety

- 3.13. As set out in **Appendix 14.1 – Summary of Personal Injury Collisions (document reference 6.3.14.1/APP-217)** there is not considered to be any underlying safety problem within the study area. The magnitude of change in accidents and safety at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) is therefore likely to be considered neutral at all links when assessed against the criteria at **Table 2.1**. When this is cross referred to the significance matrix at Table 14.3 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)**, this confirms that the significance of effect is likely to be **Negligible**.
- 3.14. During the Construction Phase there will be direct, short-term, temporary, negative effects on accidents and safety. Overall, they are of a **Negligible** level of impact significance, and therefore **Not Significant** in EIA terms.

Operation

- 3.15. Once operational, it is anticipated that there will be around five visits to the Energy Park Site per day for equipment maintenance, tending of sheep and maintenance of Biodiversity Net Gain Areas (including the community orchard). It is therefore anticipated that there will be little to no development traffic using links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove) which serve the substation during the operational phase. Therefore there will be direct, long-term, temporary, negative effects, with an overall Negligible significance, and therefore Not Significant in EIA terms.

Decommissioning

- 3.16. Paragraph 14.6.42 of **Chapter 14: Transport and Access (document reference 6.1.14/PS-073)** confirms that the Substation will not be removed following decommissioning.

4. Mitigation, Enhancement and Residual Effects

Mitigation and Enhancement

- 4.1. No further mitigation and enhancement measures are considered necessary, because the existing, 'Mitigation by Design' section in Chapter 14: Transport and Access (**document reference 6.1.14/PS-073**) remains adequate, and valid in light of the assessment findings in **Section 3** of this TN.

Residual Cumulative Effects

Construction

- 4.2. Including for the proposed mitigation and enhancement measures, it is considered that during the construction phase of the Proposed Development there will be direct, short-term, temporary effects on links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove). LCC's response (**document reference REP2-092**) to **ExAQ1** states the following at pages five and six:

"LCC is of the view that a reasonable estimate of HGV and car traffic associated with the development has been applied by the Applicant for the construction phase and, subject to the routing and mitigation measures as proposed by the Applicant being secured as part of any DCO, then as confirmed in paragraph 7.7.18 of our LIR [REP1-028] the traffic and transport impacts during the construction, operation, and decommissioning (subject to agreement of a CTMP) would be neutral"

- 4.3. Pegasus Group agree with this view.

5. Summary and Conclusion

- 5.1. This ES Transport and Access Technical Note (TN) has been prepared by Pegasus Group on behalf of Ecotricity (Heck Fen Solar) Ltd. It seeks to address **ISH4-AP10** of the Examining Authority's Issue Specific Hearing 4 (ISH4) Environmental Matters Actions Points. It provides an update on the guidance set out in the Institute of Environmental Management and Assessment (IEMA) guidelines: Environmental Assessment of Traffic and Movement (July 2023) and provides an updated assessment of the sensitivity value of Cowbridge Road, Bicker Drove and Vicarage Drove, in relation to Transport and Access.
- 5.2. It is concluded through this updated assessment applying the July 2023 IEMA Guidance, that the proposed package of mitigation will ensure that the Proposed Development is acceptable and that there will be no adverse Significant effects at links four to six (Cowbridge Road, Bicker Drove and Vicarage Drove), even when considering the sensitivity of the links as high. This reflects Lincolnshire County Council's conclusion at page six of its response to the ExA's first questions (document reference REP2-092), that subject to the routing and mitigation measures proposed, the traffic and transport impacts during the construction, operation, and decommissioning periods would be Negligible (i.e. Not Significant).
- 5.3. **Table 5.1** below provides a summary of effects, mitigation and residual effects.



Table 5.1 – Summary of Effects, Mitigation and Residual Effects on Links Four to Six

Receptor/ Receiving Environment	Description of Effect	Nature of Effect	Sensitivity Value	Magnitude of Effect	Geographical Importance	Significance of Effects	Mitigation/ Enhancement Measures	Residual Effects
Construction								
Links Four, Five and Six	Vehicular Traffic Flows	Temporary / Direct	High	Low - High	Local	Moderate - Major	Provision of a Construction Traffic Management Plan including: <ul style="list-style-type: none"> HGV managemen t. Signage; and Highway condition survey. 	Negligible Adverse (Not Significant)
	Severance			Negligible - High		Negligible - Major		Negligible
	Driver Delay			Low - High		Moderate - Major		Negligible Adverse (Not Significant)
	Accidents and Safety			Negligible		Negligible		Negligible (Not Significant)
	Hazardous Loads			Negligible		Negligible		Negligible



Receptor/ Receiving Environment	Description of Effect	Nature of Effect	Sensitivity Value	Magnitude of Effect	Geographical Importance	Significance of Effects	Mitigation/ Enhancement Measures	Residual Effects
								(Not Significant)
Operation								
Links Four, Five and Six	Vehicular Traffic Flows	Temporary / Direct	High	Negligible	Local	Negligible	n/a	Negligible Adverse (Not Significant)
	Severance			Negligible		Negligible		
	Driver Delay			Negligible		Negligible		
	Accidents and Safety			Negligible		Negligible		
	Hazardous Loads			Negligible		Negligible		
Decommissioning								
Links Four, Five and Six	Vehicular Traffic Flows	Temporary / Direct	High	Negligible	Local	Negligible	Provision of a Decommissioning Traffic Management Plan	Negligible Adverse (Not Significant)
	Severance			Negligible		Negligible		
	Driver Delay			Negligible		Negligible		
	Accidents and Safety			Negligible		Negligible		
	Hazardous Loads			Negligible		Negligible		

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