Heckington Fen Solar Park

ENO10123

Environmental Statement | Volume 1: Technical Chapters

Chapter 14: Transport and Access

Applicant: Ecotricity (Heck Fen Solar) Limited

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CHAPTER 14: TRANSPORT AND ACCESS

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14 TRANSPORT AND ACCESS

14.1 EXECUTIVE SUMMARY

14.1.1 This chapter considers the environmental impact of the Proposed Development in terms of traffic and transport. It has been prepared further to a Scoping Opinion received from PINS in February 2022 and following statutory and non-statutory consultation on the Project.

14.1.2 This chapter considers construction vehicle routes associated with both the Energy Park and the Off-site Cable Route Corridor from both the A17 east and A17 west. It concludes that during the construction and decommissioning phases there will be direct, short-term, temporary, negative effects; and that during the operational phase there will be direct, long-term, temporary negative effects. These effects will all be **negligible**, and therefore **Not Significant.**

14.1.3 It is concluded that the proposed package of mitigation will ensure that the Proposed Development is acceptable and that there will be **no adverse significant effects.**

14.2 INTRODUCTION

14.2.1 This chapter is not intended to be read as a standalone assessment and reference should also be made to the other chapters within the ES. The chapter is written in accordance with the definitions provided in **Chapter 4: Proposed Development** (document reference 6.1.4). Where appropriate, a distinction has been made between the 'Energy Park' (including the solar photovoltaic (PV) infrastructure, Onsite Substation, and Energy Storage System (ESS)), and the 'Proposed Development' which also encompasses the underground cable route within the Cable Route Corridor and above and below ground works at the National Grid Bicker Fen substation, together with any associated ancillary infrastructure, including temporary construction compounds and security fencing.

14.2.2 Reference should also be made to the **Outline Construction Traffic Management Plan (OCTMP)** (document reference 7.10) accompanying the ES and Application which secures the mitigation and provides traffic and transport information relating to the construction phase of the Proposed Development.

14.2.3 It is envisaged that construction will take approximately 30 months and that decommissioning of the Energy Park will take approximately 6 to 18 months.

14.3 ASSESSMENT APPROACH

Methodology

14.3.1 The assessment has been prepared in accordance with the Institute of Environmental Management and Assessment (IEMA) document 'Guidelines for the Environmental Impact of Road Traffic'[1].

14.3.2 The pertinent issues for the ES in terms of transportation are the magnitude and consequences of changes at the assessment links (detailed at Section 14.5) within the study area as a result of the construction phase of the development on:

[1] The Institute of Environmental Management and Assessment (1993) Guidelines for the Environmental Impact of Road Traffic. [Online] Available at: [redacted]

- driver severance and delay;
- accidents and safety;
- hazardous and dangerous loads; and
- dust and dirt.

14.3.3 The study area was submitted in the **Scoping Report** (**Appendix 1.1** (document reference 6.3.1.1)) issued to PINS and includes the A17 only along the Energy Park frontage.

14.3.4 The impact of noise generated by construction vehicles is considered in detail at **Chapter 12: Noise and Vibration** (document reference 6.1.12).

14.3.5 Based on the nature of the temporary construction phase and that there are anticipated to be a relatively low number of pedestrians within the vicinity of the Energy Park Site (noting the absence of continuous footway provision on the A17), pedestrians are likely to be limited to those using footpath HECK/15/1 in the northwest corner of the Energy Park Site. It is therefore not considered necessary to consider the impacts of the development on:

- Pedestrian severance.
- Pedestrian delay.
- Pedestrian amenity; and
- Fear/intimidation.

14.3.6 The methodology parameters set out above are in accordance with the PINS **Scoping Opinion** (**Appendix 1.2** (document reference 6.3.1.2)).

Assessment of Significance

14.3.7 As set out in **Chapter 2: EIA Methodology and Consultation** (document reference 6.1.2), there are four levels of impact magnitude considered which are negligible, minor, moderate and major.

14.3.8 The IEMA 'Guidelines for the Environmental Assessment of Road Traffic' sets out two rules to be considered when assessing the impact of development traffic on a highway link as follows:

> **"Rule 1: include highway links where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%)**
>
> **Rule 2: include any other specifically sensitive areas where traffic flow (or HGV component) are predicted to increase by more than 10%."**

14.3.9 The 30% threshold is based upon research and experience and the IEMA guidelines suggest that less than a 30% increase results in imperceptible changes in the environmental effects of traffic, apart from in sensitive locations.

14.3.10 Definitions of magnitude have been based on these guidelines and are shown in **Table 14.1**.

Table 14.1-Criteria for Magnitude of Impact

Impact	Magnitude of Impact / Threshold			
	Neutral	**Low**	**Medium**	**High**
Traffic Flow	Change in peak or 24 hr traffic within study area by less than 5%	Change in peak or 24 hr traffic within study area between 5% and 15%	Change in peak or 24 hr traffic within study area between 15% and 30%	Change in peak or 24 hr traffic within study area by 30% or more
Severance	Change in peak or 24 hr traffic within study area by less than 5%	Change in peak or 24 hr traffic within study area between 5% and 15%	Change in peak or 24 hr traffic within study area between 15% and 30%	Change in peak or 24 hr traffic within study area by 30% or more
Pedestrian Delay	The 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.			
Driver Delay	Change in peak or 24 hr traffic within study area by less than 5%	Change in peak or 24 hr traffic within study area between 5% and 15%	Change in peak or 24 hr traffic within study area between 15% and 30%	Change in peak or 24 hr traffic within study area by 30% or more
Pedestrian Amenity	Pedestrian Amenity is impacted by traffic flow, composition and width of pavement and is related to fear and intimidation thresholds. As suggested by national guidance a threshold of where traffic or HGV flows have halved or doubled will be used to indicate whether there is a significant effect.			
Accidents and Safety	Number of predicted personal injury collisions (PICs) does not exceed the number of observed PICs.		The number of observed PICs will be compared against the predicted number of PICs that could be expected over the time period of the observed data (e.g. 3 years) in accordance with the COBA Manual (DMRB Volume 13, Section 1, Chapter 4). The calculations will be based on variables including: observed AADT traffic flow, road speed, length of road section and type of road. This analysis will be interpreted with professional judgement and used to inform and determine the impact on Accidents and Safety.	
Fear and Intimidation	As suggested by national guidance a threshold of where traffic or HGV flows have halved or doubled will be used to indicate whether there is a significant effect.			

14.3.11 Negligible, minor, moderate and major Impact Magnitudes can have either a beneficial or adverse Impact Significance, as set by the Significance Scale included in **Chapter 2: EIA Methodology and Consultation** (document reference 6.1.2).

Sensitive Receptors

14.3.12 Sensitive receptors have been identified using the principles set out in the IEMA guidelines for the categories of effect assessed in this chapter.

14.3.13 The IEMA 'Guidelines for the Environmental Assessment of Road Traffic' include the following:

> **"The need to identify particular groups or locations which may be sensitive to changes in traffic conditions.**
>
> **The list of affected groups and special interests set out in the guidance.**
>
> **The identification of links or locations where it is felt that specific environmental problems may occur.**
>
> **Such locations "...would include accident black-spots, conservation areas, hospitals. Links with high pedestrian flows etc."**

14.3.14 The criteria for assessing the sensitivity of a receptor are set out in **Table 14.2**.

Table 14.2– Criteria for Sensitivity of Receptor

Significance	Description
High	• Schools / colleges • Care / retirement homes • Roads with no footways that are likely to be used by pedestrians • Accident black-spots
Medium	• Hospitals / surgeries / clinics • Parks and recreational areas • Retail areas • Roads with narrow footways that may be used by pedestrians
Low	• Open spaces • Tourist and visitor attractions • Places of worship
Negligible	• Links not covered by the above

14.3.15 It is understood that the Elm Grange business units located at the Energy Park Site frontage with the A17 have recently been converted to a new Special Educational Needs and Disabilities (SEND) school operated by the Keys Group – the site is currently known as Build-A-Future, East Heckington and is being used for vocational courses. On this basis it is considered that the extent of the A17 located within the vicinity of the temporary Energy Park construction is of high sensitivity significance. However, to provide a robust assessment it has been assumed for the purpose of this assessment that the full extent of the transport and access study area is of high sensitivity significance.

Significance of Effect

14.3.16 The Significance of Effect is determined by combining the predicted magnitude of impact with the assigned sensitivity of the receptor. The Significance of Effect is set out in **Table 14.3**. The shading indicates that those significance ratings that are deemed to be 'significant' effects are 'Major' or 'Moderate'.

Table 14.3-Significance Matrix

Magnitude of Change	Sensitivity of Receptor			
	High	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor to Moderate	Negligible
Low	Moderate	Minor to Moderate	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Legislative and Policy Framework

14.3.17 The traffic and transportation aspects of the scheme have been carried out in accordance with IEMA 'Guidelines for the Environmental Assessment for Road Traffic'.

14.3.18 The proposals have also been considered in the context of the following documents:

- National Policy Statement EN-1.
- Draft National Policy Statement (EN-1).
- National Planning Policy Framework (2021).
- National Planning Policy Guidance (2014); and
- Lincolnshire Local Transport Plan 5 (2022).

National Policy Statements

14.3.19 National Policy Statement EN-1[2] sets out guidance relating to Traffic and Transport at Section 5.13. It states at paragraph 5.13.3 that the Applicant's ES should include a Transport Assessment (in this case provided as an OCTMP) using WebTAG guidance and that the relevant highway authorities should be consulted.

14.3.20 The subsequent Draft National Policy Statement EN-1[3] sets out guidance relating to Traffic and Transport at Section 5.14. The draft changes generally replicate the guidance principles set out within the current EN-1.

[2] Department of Energy & Climate Change (2011) Overarching National Policy Statement for Energy (EN-1). [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf

[3] Department for Business, Energy & Industrial Strategy (2021) Draft Overarching National Policy Statement for Energy (EN-1). [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015233/en-1-draft-for-consultation.pdf

National Planning Policy Framework (NPPF)

14.3.21 In transport terms the thrust of the NPPF[4] is:

- A presumption in favour of sustainable development (paragraph 11).
- To make the fullest use of public transport, walking and cycling (paragraph 104) and when making planning decisions ensuring the opportunities for sustainable transport modes have been taken up (paragraph 110) whilst noting that opportunities will vary between urban and rural areas (paragraph 105).
- Ensuring a safe and suitable access to the can be achieved for all users (paragraph 110); and
- That development should only be refused on transport round where the residual cumulative impacts are severe (paragraph 111).

National Planning Policy Guidance (NPPG)

14.3.22 The NPPG[5] provides advice on when Transport Assessment and Transport Statements are required and what they should contain. The NPPG confirms that these types of documents can positively contribute to:

- Encouraging sustainable travel.
- Lessening traffic generation and its detrimental impacts.
- Reducing carbon emissions and climate impacts.
- Creating accessible, connected, inclusive communities.
- Improving health outcomes and quality of life.
- Improving road safety; and
- Reducing the need for new development to increase existing road capacity or provide new roads.

Lincolnshire Local Transport Plan 5

14.3.23 The Lincolnshire Local Transport Plan 5[6] sets out Lincolnshire County Council's aims and focuses for the up to 2050. It identifies opportunities to promote energy development within the County to create a steady, local supply of energy for the region and to be exported across the Country. It seeks to see a shift from fossil fuels to modern and greener forms of energy supply and emissions.

14.3.24 It is not considered that the Proposed Development constitutes a departure from any of these policies.

[4] Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework. [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

[5] Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2014) National Planning Policy Guidance Travel Plans, Transport Assessments and Statements [Online] Available at: https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements

[6] Lincolnshire County Council (2022) Local Transport Plan 5 [Online] Available at: https://www.lincolnshire.gov.uk/downloads/file/7200/local-transport-plan-5

Scoping Criteria

14.3.25 This Transport and Access chapter deals specifically with the following transport and access issues pertinent to an EIA. This includes the magnitude and consequences of changes in traffic flows on the local road network (along the potential routes for construction traffic), including operational and safety impacts as a result of the construction phase.

Limitations to the Assessment

14.3.26 No limitations or difficulties have been identified.

14.4 CONSULTATION

14.4.1 A summary of consultation prior to issue of the Preliminary Environmental Assessment Report (PEIR) in June 2022 is included below, outlining matters raised within the Scoping Opinion and how these have been addressed through the ES in relation to Transport and Access.

Table 14.4- Summary of Scoping Opinion Responses

Consultee	Details of Consultee response	How is Matter Addressed	Location of Response
Lincolnshire County Council	Full details of any new or existing access tracks improvements should be included within the ES and include full details of their design, spec to ensure they are safe and suitable	Details of the access arrangement are set out in detail in the OCTMP.	**OCTMP** (document 7.10) **Chapter 3: Site Description, Site Selection and Iterative Design Process** (document reference 6.1.3) and **Chapter 7: Residential Visual Amenity** (document reference 6.1.7)
	HGV movements for access track aggregate need to be included in the TA for construction and decommissioning	The number of HGVs required for construction of the internal access tracks is set out in the OCTMP. Stone is likely to arrive on ten metre tipper trucks and it is assumed that around 500 deliveries of stone may be required.	**OCTMP** (document 7.10) - Table 5.2
Network Rail	Construction Traffic Route should consider if any Network Rail assets such as bridges, level crossings etc will be utilised in the construction & operation of the site.	The route for all construction traffic is set out in the OCTMP. This confirms that there are no height restrictions or level crossings along the proposed route. Any abnormal loads will be subject to a separate assessment in due course.	**OCTMP** (document 7.10) and **Chapter 4: Proposed Development** (document reference 6.1.4)

North Kesteven District Council	Sensitive locations on the road network also need to be agreed with NKDC.	Construction vehicles will only access the Proposed Development via the designated construction routes identified in the OCTMP. The routes will ensure, as far as practicable, that heavy construction vehicles associated with the site will use A-roads as far as possible. The Energy Park is accessed directly from the A17.	**OCTMP** (document 7.10) and **Chapter 4: Proposed Development** (document reference 6.1.4)
	Additional trips for the permissive footpath and community orchard need to be taken into account in the modelling.	There will be no vehicular trips associated with the use of the permissive path. A small number of vehicles (weekly) may be associated with the community orchard. These facilities are for the local community including the educational facility.	n/a

14.4.2 In addition, **Table 14.5**, outlines a summary of Section 42 consultation responses since the PEIR. Some comments are paraphrased to identify the key information to address.

Table 14.5- Summary of Section 42 Consultation Responses Since PEIR

Consultee	Details of Consultee Response	How is Matter Addressed	Location of Response
British Horse Society	Request consideration for the permissive routes to be inclusive of equestrians and other users.	The Applicant has responded to the BHS regarding the request for a permissive path and it has been confirmed that this is not possible as the Applicant does not have the requisite land rights to enable this.	n/a
	Any abnormal loads which may be transported should be notified in advance to allow equestrians to choose to avoid the area on that day.	Any abnormal load will be subject to an abnormal load assessment in due course. This will require police escort and advance notice via the press etc.	**OCTMP** (document 7.10) - paragraph 4.7 / 4.8

	Appropriate information for development workers and signage giving priority to users of the PRoW would be welcome and there should be additional signage during construction to warn traffic of equestrians and other vulnerable road users in the area, and ensure they are considerate in terms of vehicles stopping if necessary and allowing PRoW users to pass safely.	There are no PRoWs which cross the Energy Park or the Off-site Cable Route Corridor.	**OCTMP** (document 7.10) - paragraph 2.13 / 2.14
	Research continues into historical evidence which indicates a number of routes surrounding the site are unrecorded or under recorded as footpaths, these routes can be reasonably alleged to subsist at a minimum of bridleway status.	It is understood that these routes are largely privately owned and the Applicant's agreements do not give us the ability to offer third party rights over them.	n/a
Lincolnshire County Council	Full details of any proposed highway improvement work (temporary or permanent) need to be provided within the ES. Any works and associated mitigation measures identified will need to be clearly described and assessed so extent of any impacts associated with such works are understood.	Details of proposed permanent and temporary highway improvements are set out in the ES Chapter and OCTMP.	**OCTMP** (document 7.10), **Chapter 4: Proposed Development** (document reference 6.1.4) and **Chapter 7: Residential Visual Amenity** (document reference 6.1.7); and within this chapter **section 14.5**; Schedule of Works 4, 5 and 7.

	Investigate route of Heckington FP15 to confirm if rights exist to the east of the NKDC boundary.	This part of FP15 (also known as HECK/15/1) sits outside of the Site boundary. The Applicant does not have the land rights to re-instate the footbridge onto the Head Dike but this could be explored outside the DCO process.	**Figure 2.1- Indicative Site Layout** (document reference 6.2.2)
	Provide a suitable replacement bridge on the above route.	As above	As above
	The proposed provision of a new circular route recreational route that interconnects with the existing Public Rights of Way (PRoW) network is welcomed, however, LCC would prefer any such route to be secured as permanent route that would be adopted as part of the adopted PRoW network. If not, then detailed information should be made available and/or be presented as part of the ES to demonstrate that the permissive route would be retained and made available for use for the duration/life of the development.	The permissive path will be incorporated into the site layout design and retained throughout the lifetime of the Energy Park.	**DCO, Schedule 2, Requirement 17** (document reference 3.1)
National Highways (Historic Railways)	Identify any disused railway structures.	No disused railway structures have been identified.	n/a
National Highways	National Highways do not consider there will be any adverse impact on the Strategic Road Network, in this instance the A1 which routes approximately 20 miles to the east [sic west] of Heckington Fen. As such National Highways has no further comments to make.	n/a	n/a

Network Rail	The routing of construction and operational traffic will require further consideration and discussion with Network Rail if such routes take in railway assets such as bridges and railway level crossings.	Construction vehicles will only access the Proposed Development via the designated construction routes identified in the OCTMP. The access points associated with the Energy Park and Off-site cable corridor will not affect the level crossing at Swineshead Station.	**OCTMP** (document 7.10) and **Chapter 4: Proposed Development** (document reference 6.1.4)
North Kesteven District Council	A Requirement might be necessary to address safety measures/ closures for footpath users of Heck 15/1 during construction.	PRoW route Heck 15/1 follows the northern boundary of the Energy Park site and will be unaffected by the construction phase. If considered necessary, a temporary closure of the PRoW will be requested in order to install new footbridges to facilitate it's use (currently not usable as footbridges are no longer in existence).	**OCTMP** (document 7.10) paragraph 3.14; DCO Schedule (document 3.1)
	At what point will construction traffic revert from the temporary construction access to the construction/operational access as shown on Plate 14.1? The ES chapter should set out the scale and type/extent of preparatory works being constructed from the temporary Construction Access and how the trigger point for reversion to using the main construction/operational access will be secured/enforced etc?	The temporary construction access will be used until such time that the permanent access has been constructed and is open. The trigger for use of the permanent access will therefore be "upon completion of the permanent access". The estimated construction period is two months.	**OCTMP** (document 7.10) and **Chapter 3: Site Description, Site Selection and Iterative Design Process** (document reference 6.1.3)
	(PRoW) network is welcomed, however consideration should be given to securing this route as a permanent route that would be adopted as part of the adopted PRoW network rather than permissive routes.	Due to the lifetime of the Proposed Development of 40 years, it is not possible with the land agreements in place to offer a permissive path as permanent.	n/a
Royal Mail	Cumulative impact of this development and those in the vicinity that are of concern.	The cumulative impact of the Proposed Development with other schemes in the locality are considered within this ES chapter. This confirms that there will be no material impact, and the increase in daily traffic as a result of the proposals will be negligible.	Within this Chapter **Section 14.8**

South Kesteven Council	Defers to LCC in respect of any comments in relation to highways.	n/a	n/a

14.5 BASELINE CONDITIONS

Local Highway Network

14.5.1 The Energy Park comprises fields to the north of the A17 within the vicinity of East Heckington. It is bound by undeveloped parcels of land and the Head Dike to the north, Sidebar Lane and undeveloped land to the west, the A17 to the south and Holland Dike to the east. The cable route comprises further agricultural fields, and will require the crossing of infrastructure such as the A17, the railway, the South Forty Foot Drain, a gas pipeline and other roads and watercourses.

A17

14.5.2 The A17 is a single carriageway road which is routed between Newark-on-Trent to the north and Kings Lynn to the south. Locally, the A17 provides a connection between Sleaford and Boston and Spalding. It links with the A52 at a roundabout junction approximately seven kilometres south of the proposed Energy Park access and with the A15 at a roundabout junction approximately 15 kilometres north of the access. The road is subject to a 50mph speed limit within the vicinity of the Energy Park frontage.

14.5.3 The carriageway measures approximately eight metres wide at the Energy Park frontage. A footway measuring approximately two metres wide is located on the southern side of the carriageway between the Four Winds Service Station in the east to The Heathers House to the west.

14.5.4 The A17, A52, and A15 are all principal routes that are used by heavy goods vehicles (HGVs) on a regular basis.

Triton Knoll Access Road

14.5.5 The Triton Knoll access road is located approximately 660 metres south of the lane leading to Royalty Farm, to the south of South Forty Foot Drain. It measures around 35 metres wide at the bellmouth and tapers to around seven metres wide within the site. There are no footways located along the access road.

Access Road North of South Forty Foot Drain

14.5.6 The access road to the north of the South Forty Foot Drain is located approximately 430 metres north of the junction between the A17 and the A1121. It measures around 24 metres wide at the bellmouth and varies in width within the site, although generally measures around 20 metres wide. There are no footways located along the access road.

Royalty Lane

14.5.7 The lane that runs to Royalty Farm from the A17 is a no through road located to the south of South Forty Foot Drain and is subject to the national speed limit (60mph). It measures around five metres wide for the first 200 metres before narrowing to around 2.5 metres wide. There are no footways located along the lane. It should be noted that the name of the lane is spelt a number of ways including Royalty Lane, Royality Lane, and Royalty Farm Lane.

Substation Access

14.5.8 Access to the Bicker Fen Substation by National Grid is currently achieved via Bicker village and the A52 haul road. This will not change as a result of the Proposed Development. Access for construction vehicles associated with the extension to the Substation will continue to access via Bicker, in line with National Grid's existing arrangements.

National Grid Access Road

14.5.9 The National Grid access road is served from the A52 Bicker Bar, approximately 600 metres south west of the junction with Drury Lane. It measures around 55 metres wide at the bellmouth and tapers to around eleven metres wide internally. There are no footways located along the access road.

Public Rights of Way

14.5.10 Public Right of Way (PRoW) footpath HECK/15/1 is located along the northern boundary of the Energy Park site. The footpath follows field boundaries along the Head Dike from the B3195 Sidebar Lane in the west towards Maryland Bank in the east. Access onto the Head Dike raised bank is no longer possible with a bridge crossing the drainage ditch no longer in existence.

14.5.11 In the vicinity of the off-site cable route corridor, PRoW footpath Swhd/14/1 and Bridleway Swhd/13/1 follow the alignment of the South Forty Foot Drain. Footpath Swhd/14/1 borders the north of the South Forty Foot Drain for approximately two kilometres and Bridleway Swhd/13/1 borders the south east of South Forty Foot Drain for approximately four kilometres.

Personal Injury Collisions

14.5.12 Personal Injury Collision (PIC) data has been obtained from Lincolnshire Road Safety Partnership for the most recent five-year period between 31/03/2018 and 31/03/2022. The study area comprises approximately 4.5 kilometres along the A17 between the junction with the A1121 to the east and the layby serving Garwick café to the west.

14.5.13 A summary of the PIC records is shown in **Appendix 14.1- Summary of Personal Injury Collisions** (document reference 6.3.14.1). This confirms that there has been a total of 14 slight, three serious and one fatal incident within this five-year study period within the study area.

14.5.14 With respect to the fatal incident which occurred on 16/04/2020 at 10:00, it is understood that two vehicles were involved, including a car and a 7.5 tonne goods vehicle. The incident appears to have occurred when the car, which was travelling westbound along the A17, drove towards the nearside kerb and when correcting the direction of the vehicle, entered the opposing side of the carriageway into the path of the goods vehicle. Road conditions were dry, daylight was present, and the weather was fine without high winds.

14.5.15 Assessment of these incidents confirms that they are generally randomly located, that all incidents appear to have occurred as a result of temporary driver error or misjudgement. It is therefore concluded that there are no obvious highway safety patterns or problems within the study area.

Site Description and Context

14.5.16 The local highway network is described in detail within the OCTMP (document reference 7.10). It is briefly described below for the purposes of the ES.

14.5.17 The proposal is for the construction of a new large-scale ground mounted solar photovoltaic (PV) electricity generation and energy storage facility (the "Energy Park"). The connecting Off-site Cable Route Corridor extends from the Energy Park to the connection point at the National Grid Bicker Fen substation, around nine kilometres from the centre of the Energy Park to the south. National Grid Bicker Fen Substation will be extended as part of the scheme to connect the electricity generated by the Proposed Development into the National Grid infrastructure system. Further details of the proposal and the technology are outlined within **Chapter 3: Site Description, Site Selection and Iterative Design Process** (document reference 6.1.3) and **Chapter 4: Proposed Development** (document reference 6.1.4) used together with the proposed **Indicative Site Layout** (Figure 2.1- document refence 6.2.2).

The Energy Park Site

14.5.18 The Energy Park Site is located to the immediate north of the A17, approximately 3.7 kilometres to the east of Heckington and around 8.9 kilometres to the west of Boston.

14.5.19 Access to the Energy Park during the construction and operational phases is proposed from the A17 to the south of the Energy Park site, approximately 900m northwest of the junction with Six Hundreds Drove via a new junction. An access in this location was previously granted planning consent as part of the previous wind farm proposals at the Energy Park. Whilst the proposed access is under construction, a temporary construction access will be provided via an existing junction with the A17, approximately 600m southeast of B1395 Sidebar Lane junction at Elm Grange.

The Off-Site Cable Corridor

14.5.20 Access for the construction of the Off-site Cable Route Corridor is proposed in two locations; one to the north and one to the south of the South Forty Foot Drain. Access from the north of the drain is proposed via an existing junction with the A17 located approximately 430 metres north of the junction with the A1121; and access to the south of the South Forty Foot Drain is proposed via the Triton Knoll access with the A17. Localised access is also proposed via Royalty Lane. The access locations are shown at **Plate 6.1**.

Plate 6.1 – Proposed Off-Site Cable Corridor Access Locations

National Grid Bicker Fen Substation Extension

14.5.21 Access to the Bicker Fen Substation is currently achieved via a haul road from the A52. This will not change as a result of the Proposed Development. Access for construction vehicles associated with the extension to the Substation will continue to access via the A52, in line with National Grid's existing arrangements.

14.5.22 The construction traffic routes for each part of the Proposed Development is detailed further in the **OCTMP** (document reference 7.10).

Baseline Survey Information

14.5.23 The sources of baseline information are included in **Table 14.6**.

Table 14.6-Baseline Information

Baseline Topic	Data Source	Date
Automatic Traffic Count Surveys	360 Traffic Surveys Ltd	March 2022
Highway Search	Lincolnshire County Council	October 2021 – December 2022
Personal Injury Collision Data	Lincolnshire Road Safety Partnership	April 2022
Base Mapping	Ordnance Survey	October 2021

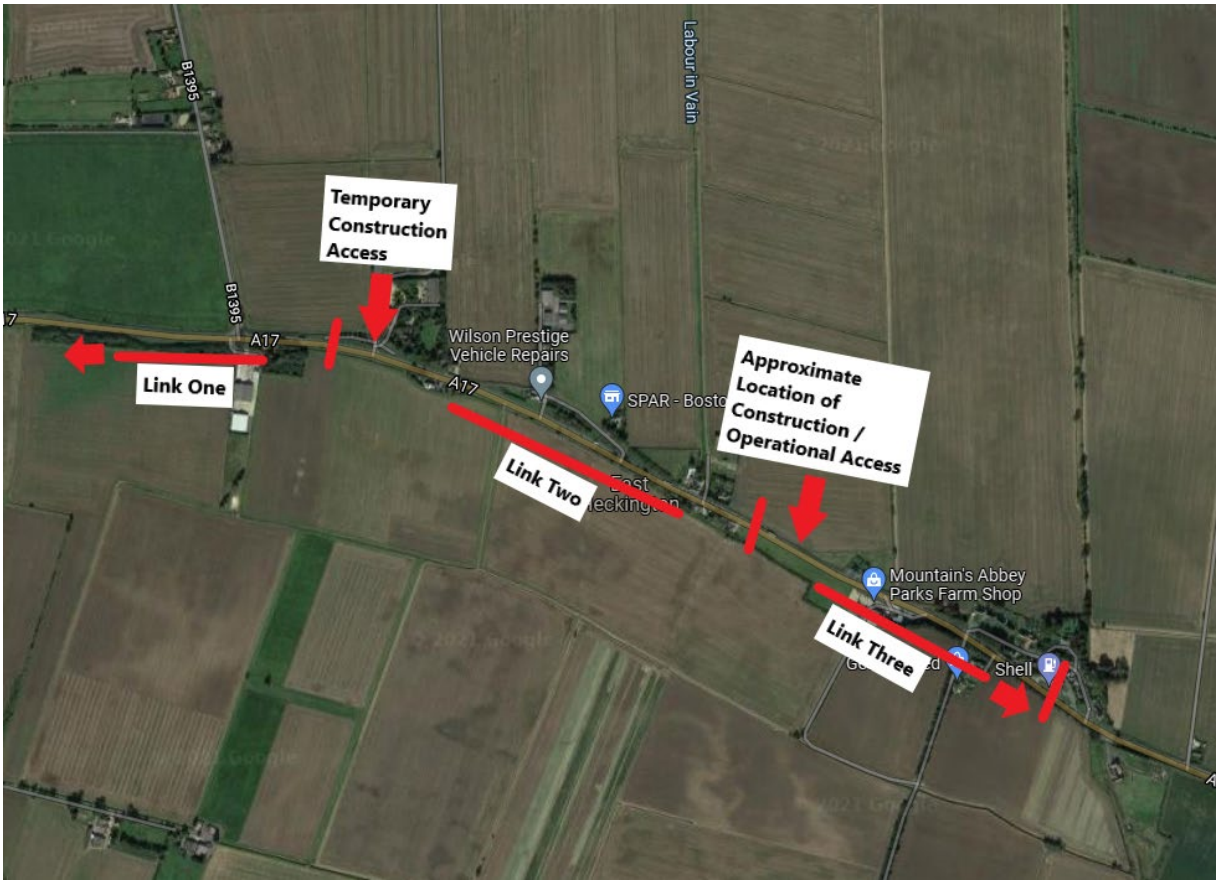
Baseline Traffic Flows

14.5.24 Automatic Traffic Count (ATC) surveys were undertaken by 360 Traffic Surveys Limited (an independent traffic surveyor) between Thursday 24th March 2022 to Wednesday 30th March 2022 at the following locations, to enable a daily profile on each of the potential routes for construction traffic to be determined:

- A17 west of proposed temporary construction access.
- A17 west of proposed construction / operational access; and
- A17 east of proposed construction / operational access.

14.5.25 The approximate link locations (as submitted with the Scoping **Report** (**Appendix 1.1** (document reference 6.3.1.1)) are shown at **Plate 14.1** and the raw survey data is included at **Appendix 14.2** (document reference 6.3.14.2).

Plate 14.1 – Approximate Link Locations



14.5.26 **Table 14.7** sets out the recorded baseline two-way flows for the ES transport study area.

Table 14.7– 2022 Baseline AADT Flows

Link		Baseline Two-Way AADT	Baseline Number of Heavy Goods Vehicles (HGV) with Percentage of AADT
Link One - A17 west of proposed temporary construction access	AADT	20,373	4,350 [21.4%]
Link Two - A17 west of proposed construction / operational access	AADT	21,307	3,487 [16.4%]
Link Three - A17 east of proposed construction / operational access	AADT	21,249	3,485 [16.4%]

NOTE: HGVs included within total traffic flow. Link flows are two-way. Counts exclude pedal cycles.

14.6 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

Construction

Traffic Flows – Energy Park

14.6.1 The number of trips by HGVs that could be associated with the construction phase of the Energy Park is set out in detail in the OCTMP and summarised in **Table 14.8**.

Table 14.8– HGV Development Traffic Flows to the Energy Park

Activity	Type of Vehicle	Total Number of Construction Vehicles
Solar Park Components - Modules[7]	16.5 metre articulated	1,500
Solar Park Components - Frames		900
Energy Storage Units[8]		300
Energy Storage Supports[9]		200
Substation Components[10]		80
Cable		1,200
Spares Containers[11]		20
Compound Containers[12]		50
Building Components[13]		250
Materials[14]		4,195
Solar Park Components – Central Inverters[15]	12 metre rigid	130
Substation Transformers[16]	Abnormal Indivisible Load	7
Crane[17]		100
Access Tracks[18]	10 metre tipper trucks	2,100
General	16 metre Low Loader	50
Total		**11,082 (12,190 including 10% contingency)**

NOTE: Total vehicles across full construction phase. AADT figures are set out at paragraph 14.6.7.

14.6.2 Assuming a 30-month construction period (total) and a six day working week (720 days total) equates to around 17 HGV deliveries per day on average (or up to 34 two-way movements per day). This could be higher or lower at times depending on the stage of construction. A 10% contingency has been applied to account for the fact that in reality, some deliveries could be made using smaller vehicles which would subsequently increase the overall number.

[7] Assuming 930,000 modules delivered at 620 modules per container.

[8] Containers for energy storage, inverters, switchgear and transformers. Assuming 200 for each energy storage container and 100 for inverters and transformers.

[9] Steelwork for foundations for 400 containers.

[10] Components for 1 x 400kV substation which includes 4 high voltage substations.

[11] Assuming 1 HGV per container.

[12] Assuming 1 HGV per container.

[13] Blocks, tiles, doors, welfare etc for control rooms.

[14] Building materials for energy storage compound and substation including stone, reinforced concrete and fencing.

[15] Each inverter assumed to be transported individually.

[16] Assuming 3 x deliveries for main step-up and 4 x auxiliary deliveries.

[17] Assuming a crane will arrive at the site once a week for a period of 18 months.

[18] Assuming up to 19 kilometres of access track (comprising 10.3 kilometres of new track and 8.7 kilometres of existing).

14.6.3 The construction of the Energy Park will require around 107 Abnormal Indivisible Loads (AIL) for the transformer and crane deliveries. The deliveries will be planned with an AIL route assessment and will be escorted and managed along the route from the port of entry into the UK and the site. Any impacts will be minimised, and the arrangements will be secured through an AIL assessment in due course in conjunction with LCC and the Police. Given the high level of management of these loads, no significant impacts are anticipated.

14.6.4 In addition to the HGV movements identified in **Table 14.8**, there will also be a small number of construction movements associated with smaller vehicles such as the collection of skips for waste management, the transport of construction workers and sub-contractors.

14.6.5 A maximum of up to 400 construction workers are also anticipated to be on Energy Park Site at any one time during peak time of the construction period (assumed to be a six month period). The average number of workers expected on site for the majority of the Construction Phase is 150.

14.6.6 The location where staff will travel from is unknown at this stage as it will depend on the appointed Contractor. However, it is anticipated at this stage that any non-local workforce will stay at local accommodation and the vast majority of general operatives will be transported to the Energy Park Site by minibuses to minimise the impact on the local highway network. Assuming 14-seater minibuses are used, there could be around 29 crew minibuses during the peak time of construction (58 two-way trips) and around 11 crew minibuses per day (22 two-way trips) in non-peak times. The number of car trips to the site will be minimised to those senior staff such as project managers and the Health and Safety Executive.

14.6.7 Therefore, a total of 92 two-way movements are anticipated per day on average during the busiest construction periods, including 34 HGV trips, are forecast to be associated with the typical construction phase of the Energy Park Site. This equates to an AADT value of around 79 two-way movements ((92 x 6 days)/7 days), including around 29 HGV trips.

14.6.8 The number of vehicles are likely to be considered **Negligible** when assessed against the criteria at **Table 14.1** and would be on a temporary basis, and therefore in EIA terms is considered **Not Significant**.

Traffic Flows – Off Site Cable Route Corridor

14.6.9 The Applicant has advised that the construction of the cable route will be associated with a number of vehicles and machinery including 21 tonne, 13 tonne and 8 tonne excavators, 9 tonne dumpers, tractors, self-propelled tracked drill rigs and a small number of 16.5 metre articulated vehicles.

14.6.10 Vehicles/machinery will generally be brought to the site at the start of the project and stored overnight within a temporary fenced area within the vicinity of where construction works are being carried out. Light plant, fuel and staff vehicles would return to the compound on a daily basis. As such, the Applicant has advised that there will typically only be around five vehicles moving between the main Energy Park site and the cable route corridor each day (around ten two-way movements). This could be higher or lower at times depending on the stage of construction.

14.6.11 In addition to the movements identified at paragraph 14.6.9 there will also be a small number of construction movements associated with smaller vehicles such as the transport of construction workers and sub-contractors. This is assumed to be one minibus arriving and departing each day (noting that there is anticipated to be a maximum of ten staff working on the cable route).

14.6.12 Based on the above, it is estimated that there could be around 12 daily vehicle movements associated with the cable route in total. This equates to a maximum AADT value of around ten two-way movements ((12 x 6 days) / 7 days).

14.6.13 The proposed access arrangements will seek to ensure that no vehicles associated with the construction of the cable route will pass through the village of Bicker, as far as practicable. However, should it ultimately be necessary to route vehicles via Bicker, the number of vehicles are likely to be considered **Negligible** when assessed against the criteria at **Table 14.1** and would be on a temporary basis, and therefore in EIA terms is considered **Not Significant**.

Traffic Flows – National Grid Bicker Fen Substation Extension

14.6.14 National Grid will be responsible for extending the substation. Notwithstanding this, the Applicant has included the Bicker Fen Substation Extension works within the DCO and has assessed its impacts in the EIA.

14.6.15 The estimated length of works is 30 months. National Grid has provided an estimate of the number of vehicles that could be associated with the Proposed Development. This equates to a total of 361 vehicles over the 30 month (720 days) period and an average of one vehicle every two days.

14.6.16 Based on the above, it is estimated that there could be an average of less than one daily vehicle movement associated with the Substation in total. This equates to a maximum AADT value of around less than one vehicle movement ((0.5 x 6 days) / 7 days).

14.6.17 The number of vehicles associated with the Substation works are likely to be considered **Negligible** when assessed against the criteria at **Table 14.1** and would be on a temporary basis, and therefore in EIA terms is considered **Not Significant**.

Cumulative Traffic Flows

14.6.18 Construction traffic routes could be from the A17 east or west, depending on the origin of the materials being transported to the site. However, a "left in – left out" arrangement will be implemented at the site access and as such any traffic arriving from either direction will ultimately result in a departure in the opposite direction. As such, it is expected that each vehicle will have a two-way movement either side of the site access junction.

14.6.19 This ES chapter considers construction vehicle routes associated with both the Energy Park and the Cable Route Corridor from both the A17 east and A17 west, and the impact on each of the potential routes is set out in **Table 14.9**. Negative refers to a negative impact magnitude and positive refers to a positive impact magnitude, in line with the parameters previously set out within the significance scale in **Chapter 2: EIA Methodology and Consultation** (document reference 6.1.2).

14.6.20 Details of mitigation measures are summarised later in this chapter and considered in detail in the **OCTMP** (document reference 7.10).

Table 14.9- 2022 With Development Total Traffic Flows

Link		Baseline Two-Way AADT	With Dev Total Traffic Flow	Additional Two-Way Traffic		Impact Significance	
				Total Vehs	HGVs	Total Vehs	HGVs
Link One – A17 west of proposed temporary construction access	AADT	20,373 (4,350 HGVs)	20,462	89* [<1%]	29 [<1%]	Negligible	Negligible
Link Two – A17 west of proposed construction / operational access	AADT	21,307 (3,487 HGVs)	21,396	89* [<1%]	29 [<1%]	Negligible	Negligible
Link Three – A17 east of proposed construction / operational access	AADT	21,249 (3,485 HGVs)	21,338	89* [<1%]	29 [<1%]	Negligible	Negligible

**Including 79 vehicles associated with the Energy Park construction and 10 vehicles associated with the Cable Route Corridor.*

14.6.21 Environmental impact will occur as a result of construction vehicular traffic associated with the development proposals on any of the proposed routes. The implications are increases in vehicular traffic, including HGVs. Increases in traffic generally result in a temporary **Negligible** level of impact significance, and therefore **Not Significant** in EIA terms.

14.6.22 The location of the Energy Park Site is such that the levels of Impact Significance are minimised, with access and routes for construction traffic taken from principal highways. However, the **OCTMP** (document reference 7.10) will seek to manage deliveries during the construction phase.

14.6.23 It should be noted that the forecast numbers of HGVs associated with the construction phase will be within the range of daily variation on the local highway network on all major routes.

14.6.24 During the Construction Phase there will be direct, short-term, temporary, negative effects. Overall they are of **Negligible** level of impact significance, and therefore **Not Significant** in EIA terms.

Accidents and Safety – Energy Park and Off-Site Cable Route Corridor

14.6.25 As set out in **Appendix 14.1 - Summary of Personal Injury Collisions** (document reference 6.3.14.1) there is not considered to be any underlying safety problem on the A17 close to the Proposed Development.

14.6.26 The Energy Park access will operate on a "left in – left out" only basis and banksmen can be made available at the site access to indicate to drivers when it is safe to enter or exit the site access junction, if considered necessary. The proposed Energy Park Site access arrangement (set out in more detail in the **OCTMP** (document reference 7.10) will enable HGVs to pull off the A17 in one movement and allow two HGVs to pass one another on the internal site access road preventing the need for large vehicles to stop in the highway.

14.6.27 The Off-site Cable Route Corridor will be accessed using existing junctions with the A17 or the A52 Bicker Road, none of which have a material highway safety patterns or problem.

14.6.28 It is therefore not considered that there will be an increase in incidents associated with the temporary 30 month construction phase, and therefore **No Significant** effects.

Hazardous Loads

14.6.29 There are no dangerous or hazardous loads associated with the construction of the Energy Park or Off-Site Cable Route Corridor, and therefore **No Significant** effects.

Severance – Energy Park and Off-Site Cable Route Corridor / Bicker Fen Substation

14.6.30 As set out in **Table 14.9**, the change in total traffic associated with the temporary construction phase is less than 10% on all links. The overall effect is therefore considered **Negligible** (**Not Significant**) in accordance with the significance criteria outlined in **Table 14.3**.

Driver Delay– Energy Park and Off-Site Cable Route Corridor

14.6.31 National Highways (formerly Highways England) suggests that the threshold for detailed traffic assessment relates to those developments which generate 30 two-way peak hour vehicle trips. When assessed against the existing traffic levels in **Table 14.9** it is evident that there would be **No Significant** traffic impact on the surrounding highway network as a result of the temporary construction phase during the morning and evening peak periods.

Other Impacts – Energy Park and Off-Site Cable Route Corridor

14.6.32 The key potential impacts of construction traffic to be considered are:

- unsocial hours disturbance.
- mud on the roads; and
- dust, noise and air quality nuisance

14.6.33 It is envisaged that the construction working hours at the Energy Park and off-site cable route corridor will generally be 0800-1800 Monday to Friday and between 09:00 to 13:00 on Saturdays. In some circumstances, such as when drilling has begun and cannot be stopped until it is complete, operational hours may be required to be extended beyond 18:00. However, it is considered that this will be an infrequent occurrence and works will typically be complete by 18:00. As no working is proposed at night on a frequent basis, it is considered that noise related to construction traffic movements will not give rise to disturbance to local receptors.

14.6.34 In hot, dry conditions dust will be managed through the provision of sprinklers. The transfer of mud on to the local highway could be managed through the provision of (dry) wheel washing facilities at the point where the access road meets the adopted highway, although this is likely to be minimal due to the use of existing and improved tracks within the Energy Park, and distance to the highway. A road sweeper can also be provided as and when necessary.

14.6.35 Mitigation measures are set out in detail in **Section 14.5** and in the **OCTMP** (document reference 7.10).

Operation

14.6.36 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). The largest vehicles that are likely to be used for this is not expected to be any larger than a 7.5 tonne van or 4x4 vehicles.

14.6.37 These vehicles frequently use the local highway network on a daily basis. It is therefore considered that there will be a **Negligible** impact on the local highway network whilst the development is operational.

14.6.38 During the operational phase there will be direct, long-term, temporary, effects, with an overall **Negligible** (adverse) significance, and therefore **Not Significant** in EIA terms.

Decommissioning

14.6.39 The activities involved in the decommissioning process for the Energy Park are not yet known in detail. The likely timeframes for the Energy Park are set out in paragraph 2.8. The Energy Park will become operational in 2027 and is expected to be decommissioned in 2067 or 2068, with an operational life of 40 years[19]. There would be expected to be some traffic movements associated with the removal (and recycling, as appropriate) of material arising from removal. However, vehicle numbers are not expected to be any higher than those experienced during the construction period.

14.6.40 The works at National Grid Bicker Fen Substation are assumed to be removed, however could remain subject to National Grid's requirements. It is the intention with the off-site cables that they will be at a depth of over one metre. Therefore, it is expected that all cables will remain in place and will not need to be removed in the decommissioning process.

14.6.41 Current baseline data collected for the purposes of this assessment will not be valid at the year of decommissioning, which is currently anticipated to be in 2067 or 2068. However, it is considered unlikely that baseline traffic figures on local roads will reduce over the next 40 years or more, it is considered that the percentage increase in traffic due to decommissioning would be **Negligible**, and that overall the effects of decommissioning traffic would be no greater than that of the construction traffic detailed above. Effects are therefore assessed as likely to be **Not Significant.**

[19] Allows for construction to start in 2025, with 30 month construction period and the 40 year operational life starting once the whole of the Energy Park is constructed.

14.6.42 A similar number of vehicles are likely to be required for the decommissioning of the Energy Park as the construction (excluding any cable works). This equates to around 10,870 two-way vehicular trips plus 29 crew minibuses per day (58 two-way trips). Decommissioning is anticipated to be carried out over a six to 18 month period. Assuming a minimum decommissioning period of six months and a six day working week (156 days total), this equates to around 128 two-way vehicular movements per day or an AADT value of around 110 two-way movements ((128 x 6)/7). This could be higher or lower at times depending on the stage of decommissioning. The forecast development AADT associated with the decommissioning of the Energy Park represents less than a 1% increase on the 2022 baseline traffic flows, which is not considered to be materially different to the impact of construction over a 30 month period. It is therefore considered that the impacts of decommissioning are likely to be **Negligible**, and therefore **Not Significant.**

14.6.43 During the decommissioning phase there will be direct, short-term, temporary effects with an overall **Negligible** (adverse) significance, and therefore **Not Significant** in EIA terms.

14.7 MITIGATION AND ENHANCEMENT

14.7.1 The impact significance of the construction phase is generally considered to be of '**Negligible or Minor Significance'** on a typical construction day. The mitigation measures discussed below are forecast to reduce the residual impact of the project phase by one level of significance, resulting in overall **Negligible Adverse Impact**, and therefore in EIA terms is **Not Significant**.

Mitigation by Design

14.7.2 A CTMP will be implemented during the construction phase of the project, based on the principles of the **OCTMP** (document 7.1) and secured by DCO requirement. The aim of the Plan (document reference 7.10) is to minimise the impact of the construction phase on local residents, businesses and the highway network. Construction traffic movements will be kept to agreed working hours where practicable and designed to minimise disruption to the highway network and local residents (including during the night-time).

14.7.3 It contains a package of mitigation measures which are expected to include:

- A "left in – left out" arrangement at the permanent Energy Park site access.
- Provision of contractor's compounds within the site, providing an area on site for HGVs to park and manoeuvre, off the local highway network.
- The arrival and departure of the HGVs will be strictly managed by the site manager. The drivers will adhere to a delivery schedule and will be required to call ahead to ensure that any emerging vehicles can be held within the compound. No HGVs will therefore be required, or permitted, to wait on the public highway.
- Details limiting the hours of site operation and the routing of construction traffic to protect local residential areas from construction traffic, especially from HGVs where possible. This will be discussed at the appropriate stage and if considered necessary by the County Council these could be secured separately in a final version of the CTMP, to be discharged prior to commencement of development.
- The introduction of (dry) wheel washing facilities, should ground conditions dictate, before allowing vehicles to return to the local highway. In addition, a road sweeping vehicle could be made available to remove any site residue upon the local roads as and when necessary.
- It is envisaged that the construction working hours will generally be 08:00 – 18:00 Monday to Friday and 09:00 – 13:00 on Saturdays.

- Temporary signage will be erected in the vicinity of the Energy Park and the cable route, and Bicker Fen Substation as appropriate during the construction phase to indicate that heavy construction vehicles are turning; and
- The contact details of the contractor and those of the highway department at Lincolnshire County Council will be exchanged before commencement of works on site.

14.7.4 A summary of the mitigation proposed for Transport and Access is included in **Table 14.10**.

Table 14.10- Mitigation

Ref	Measure to avoid, reduce or manage any adverse effects and/or to deliver beneficial effects	How measure would be secured	
		By Design	By DCO Requirement
1	Left in – left out permanent access arrangements away from existing development (School and Residential)	X	X
2	Outline Construction Traffic Management Plan		X

14.8 CUMULATIVE AND IN-COMBINATION EFFECTS

14.8.1 In-combination effects arising from Transport and Access would adversely affect air and noise quality, which are considered separately within this ES.

14.8.2 This ES chapter has considered the cumulative effects of the other developments set out below, also located within Lincolnshire:

- Vicarage Drove;
- Land at Little Hale Fen;
- Land at Ewerby Thorpe;
- Land to the North of White Cross Lane;
- Land South of Gorse Lane, Silk Willoughby;
- Land West of Cowbridge Road, Bicker Fen;
- Cottam Solar Project;
- Gate Burton Energy Park;
- West Burton Solar Project;
- Mallard Pass Solar Farm;
- Temple Oaks Solar Farm;
- Boston Alternative Energy Facility;
- Tillbridge Solar Project;
- Outer Dowsing Offshore Wind (Generating Station); and
- South Lincolnshire Reservoir.

14.8.3 The above sites are located some distance from the Energy Park Site. Based on the temporary nature of the Site's construction phase and the insignificant changes in AADT, it is not considered necessary to assess the cumulative transport and access impacts. There are therefore no cumulative effects relating to transport and access that need to be considered.

14.9 SUMMARY

Introduction

14.9.1 This Transport and Access ES chapter assesses the potential effects relating to transport and access. It considers the potential effects on vehicular traffic flows, accidents and safety, severance, driver delay, hazardous and dangerous loads and dust and dirt.

14.9.2 This chapter has been prepared alongside a supporting **OCTMP** (document 7.10).

Baseline Conditions

14.9.3 The Energy Park Site is located to the immediate north of the A17, approximately 3.7 kilometres to the east of Heckington and around 8.9 kilometres to the west of Boston.

14.9.4 Access to the Energy Park during the construction and operational phases is proposed with the A17 to the south of the site, approximately 900m northwest of the junction with Six Hundreds Drove. Whilst the proposed access is under construction, a temporary construction access will be provided via an existing junction with the A17, approximately 600m southeast of B1395 Sidebar Lane junction. The cable route within the Off-site Cable Route Corridor will be accessed using existing junctions with the A17.

14.9.5 Access for the construction of the cable route is proposed in three locations. Access from the north of the South Forty Foot drain is proposed via an existing junction with the A17 located approximately 430 metres north of the junction with the A1121; and access to the south of the drain is proposed via the Triton Knoll access with the A17. Localised access is also proposed via Royalty Lane and Timms Drove. However, the Triton Knoll access will predominantly form the southern access.

14.9.6 Baseline surveys from 2022 confirm that daily (24 hour) traffic flows past the site on the A17 are up to around 21,307 vehicles with around 16 percent HGVs. Data from the most recent five-year period show that there are not any existing highway safety issues on the local highway network that would be exacerbated by the Proposed Development.

Likely Significant Effects

14.9.7 Impact Magnitudes have been defined for the construction phase with regard to 'Guidelines for the Environmental Assessment of Road Traffic', which states that a significant environmental impact may occur when traffic flows increase by more than 10% where the study area is of high sensitivity significance. This has, for the purposes of this assessment, been considered to represent a negligible impact significance.

14.9.8 The impact of the construction phase traffic is considered to be of **Negligible** significance, and therefore in EIA terms is **Not Significant**.

Mitigation and Enhancement

14.9.9 Mitigation has been provided in the form of an **OCTMP** (document 7.10) to reduce the impacts of the construction phase.

Conclusion

14.9.10 It is concluded that the proposed package of mitigation will ensure that the Proposed Development is acceptable and that there will be **No adverse Significant effects**.

14.9.11 There are therefore no highways or transportation reasons which should prevent the Proposed Development.

14.9.12 **Table 14.11** provides a summary of effects, mitigation and residual effects.

Table 14.11- Summary of Effects, Mitigation and Residual Effects

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 (Energy Park and Cable)								
Link One - A17 west of proposed temporary construction access	Vehicular Traffic Flows	Temporary / Direct	High	Negligible	Local	Negligible	Provision of a Construction Traffic Management Plan	Negligible Adverse **(not significant)**
	Accidents and Safety		High	Negligible		Negligible		
	Severance		High	Negligible		Negligible		
	Driver Delay		High	Negligible		Negligible		
	Hazardous and Dangerous Loads		High	Negligible		Negligible		
	Dust and Dirt		High	Negligible		Negligible		
Link Two - A17 west of proposed construction / operational access	Vehicular Traffic Flows	Temporary / Direct	High	Negligible	Local	Negligible	Provision of a Construction Traffic Management Plan	Negligible Adverse **(not significant)**
	Accidents and Safety		High	Negligible		Negligible		
	Severance		High	Negligible		Negligible		
	Driver Delay		High	Negligible		Negligible		
	Hazardous and Dangerous Loads		High	Negligible		Negligible		
	Dust and Dirt		High	Negligible		Negligible		
Link Three - A17 east of proposed construction / operational access	Vehicular Traffic Flows	Temporary / Direct	High	Negligible	Local	Negligible	Provision of a Construction Traffic Management Plan	Negligible Adverse **(not significant)**
	Accidents and Safety		High	Negligible		Negligible		
	Severance		High	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
	Driver Delay		High	Negligible		Negligible		
	Hazardous and Dangerous Loads		High	Negligible		Negligible		
	Dust and Dirt		High	Negligible		Negligible		
Operation								
All	Vehicular Traffic Flows	Temporary / Direct	High	Negligible	Local	Negligible	n/a	Negligible Adverse **(not significant)**
	Accidents and Safety		High	Negligible		Negligible		
	Severance		High	Negligible		Negligible		
	Driver Delay		High	Negligible		Negligible		
	Hazardous and Dangerous Loads		High	Negligible		Negligible		
	Dust and Dirt		High	Negligible		Negligible		
Decommissioning								
Vehicular Traffic Flows	Temporary / Direct	High	Negligible	Local	Negligible	n/a	Negligible Adverse	Negligible Adverse **(not significant)**
Accidents and Safety		High	Negligible		Negligible			
Severance		High	Negligible		Negligible			
Driver Delay		High	Negligible		Negligible			
Hazardous and Dangerous Loads		High	Negligible		Negligible			
Dust and Dirt		High	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
Cumulative and In-combination								
n/a								