



**POWER
FOR GOOD**

Chapter 13: Transport and Access

Preliminary Environmental Information Report

Volume 1

Steeple Renewables Project

Land at Sturton le Steeple, Nottinghamshire

13. Transport and Access

13.1 Introduction

13.1.1 This chapter of the PEIR assesses the likely significant effects of the Proposed Development in terms of traffic and transport.

13.1.2 This assessment reports on the baseline and design information available at the time of writing. The assessment will be updated as further information and assessments become available and any updates to the baseline will be reported in the Environmental Statement (ES).

13.1.3 The Proposed Development is located within the local highway authority (LHA) boundary of Nottinghamshire County Council (NCC). The proposed construction traffic routing (defined later in this chapter) also passes through the Doncaster Council LHA boundary, and the strategic road network (SRN) which is owned and operated by National Highways.

13.1.4 This chapter and assessment have been prepared by Pegasus Group (**see Appendix 1.4 EIA Statement of Competence** for further information on the lead author).

13.1.5 This chapter is supported by the following figures:-

- **Figure 13.1 – Site Location and Vehicle Routing Plan.**

13.1.6 Baseline and assessment work is ongoing, the following information will be made available in the subsequent ES: -

- Confirmation of design parameters of the Proposed Development to include vehicular access to each land parcel and/or field, and size and location of temporary construction / decommissioning compounds.
- Confirmation of the highway safety study (Personal Injury Collision data review).
- Refinement of forecast trips associated with the construction, operational and decommissioning phases of the Proposed Development to include but not limited to workforce and delivery vehicles, and the routing of these vehicles.

13.1.7 This PEIR chapter is brought forward in advance of the preparation of the supporting traffic and transport assessment work, which will include a Transport Statement and Construction Traffic Management Plan (CTMP) in due course.

13.2 Legislation and Planning Policy

13.2.1 Consideration of the traffic and transportation aspects of the Proposed Development in terms of environmental aspects will be carried out in accordance with the IEMA guidance document ‘Guidelines for the Environmental Assessment of Traffic and Movement’, published in July 2023 (referred to as the ‘IEMA Guidance’ in this chapter).

13.2.2 The Proposed Development will also be considered in the context of the following documents as appropriate:

- Overarching National Policy Statement (NPS) for Energy (EN-1 Section 15.4 ‘Traffic and Transport’) 2024.
- National Policy Statement for Renewable Energy Infrastructure (EN-3 Section 2.10 ‘Solar Photovoltaic Generation’) 2024.
- National Planning Policy Framework (NPPF) 2024.
- National Planning Practice Guidance (NPPG) 2014.
- Design Manual for Roads and Bridges (DMRB).
- Nottinghamshire’s Local Transport Plan 2011-2026.
- Bassetlaw Local Plan 2020-2038.

National Policy Statements

13.2.3 National Policy Statement (NPS) EN-1¹ (‘Overarching National Policy Statement for Energy’) sets out guidance relating to traffic and transport at Section 5.14. Paragraph 5.14.5 states that the Applicant’s ES should include a transport appraisal, in this case a Transport Statement, using the DfT’s Transport Analysis Guidance. Paragraph 5.14.6 confirms that Applicants should consult with National Highways and Highways Authorities as appropriate.

13.2.4 National Policy Statement EN-3² (‘National Policy Statement for Renewable Energy Infrastructure’) sets out guidance relating to access and the potential impacts and

¹ [EN-1 Overarching National Policy Statement for Energy](#)

² [National Policy Statement for renewable energy infrastructure \(EN-3\)](#)

- mitigations for construction traffic relating to new solar farms at Chapter 2.10. Chapter 2.10 suggests that applicants should assess the potential routes for deliveries and the suitability of these routes, and the mitigation measures that may be required to be implemented by the Highway Authority or the Secretary of State.
- 13.2.5 NPS EN-1 (paragraph 5.14.7) considers that a travel plan should provide details of proposed measures to improve access by active, public and shared transport to contribute to decarbonisation of the transport network, reduce the need to travel, and ensure modal shift through an offer of genuine modal choice.

Nottinghamshire's Local Transport Plan (LTP3) 2011-2026

- 13.2.6 The LTP3 comprises the local transport strategy which details how transport improvements will be delivered in the county, and an implementation plan to set out the measures and investment to deliver the strategy, including encouraging a transfer to lower carbon vehicles.
- 13.2.7 The goals of the LTP3 include to minimise the impacts of transport and maximise opportunities to improve the environment and help tackle carbon emissions, and encourages the uptake of 'smarter choices' measures (such as travel plans, promotion and marketing of sustainable travel, and the better use of technology) to help influence travel behaviour.
- 13.2.8 The LTP3 indicates that the highway network should be resilient to changing climate with the County Council supporting the development of a low carbon transport system (with reference to solar power included), through:
- supporting the change to new vehicle technologies and lower carbon fuels.
 - promoting lower carbon transport choices.
 - encouraging a transfer to lower carbon vehicles.

Bassetlaw Local Plan 2020-2038

- 13.2.9 The Local Plan indicates that large scale ground mounted proposals for solar farms are capable of contributing substantially to total solar power generation nationally and recognises that they are now more prominent in the District.
- 13.2.10 The Local Plan includes policies promoting renewable and low-carbon energy and technologies and alternative energy sources to fossil fuels.
- 13.2.11 The Local Plan supports the efficient and safe operation of the local and strategic highway network.

13.3 Assessment Methodology

13.3.1 The assessment in this chapter has been prepared in accordance with the IEMA Guidance.

13.3.2 The pertinent issues for the PEIR in terms of transportation are the magnitude and consequences of changes at the assessment links within the study area as a result of the Proposed Development with regards to the following criteria:

- Severance and driver delay;
- Road safety; and
- Hazardous / large loads.

13.3.3 As the Proposed Development boundary includes existing footways and Public Rights of Ways (PRoWs) which cross and abut the Site, as set out below, it is considered that the following criteria would also benefit from being assessed although the number of users on PRoWs and footways in the vicinity of the Proposed Development are anticipated to be low. The criteria are:

- Non-motorised user amenity and delay; and
- Fear and intimidation.

Assessment of Significance

13.3.4 There are four levels of impact magnitude considered which are Negligible, Low, Medium, and High.

13.3.5 The IEMA Guidance sets out two rules to be considered when assessing the impact of Proposed Development traffic on a highway link³ as follows:

- Rule 1: include highway links where traffic flows will increase by more than 30% (or where the number of heavy goods vehicles will increase by more than 30%); and
- Rule 2: include highway links of high sensitivity where traffic flows have increased by 10% or more.

13.3.6 The 30% threshold is based on research and experience and the IEMA Guidance suggests that less than a 30% increase results in imperceptible changes in the environmental effects of traffic, apart from in sensitive locations.

³ A highway link is a length of road between two junctions (DMRB CD109 Highway Link Design)

- 13.3.7 Sites that are considered to be sensitive receptors with reference to the IEMA Guidance are Conservation Areas, schools, health facilities, community facilities, and congested junctions.
- 13.3.8 Definitions of magnitude set against the criteria to be considered have been based on these guidelines and are shown in **Table 13.1**.

Table 13.1 Criteria for magnitude of impact

Impact	Magnitude of impact / threshold			
	Negligible	Low	Medium	High
Traffic flow	Change in peak or 24 hours traffic within the study area by less than 5%.	Change in peak or 24-hour traffic within the study area between 5% and 15%.	Change in peak or 24-hour traffic within study area between 15% and 30%.	Change in peak or 24-hour traffic within study area by 30% or more.
Severance	Change in peak ⁴ or 24-hour traffic within study area by less than 30%.	Change in peak or 24-hour traffic within study area of 30%-60%.	Change in peak or 24-hour traffic within study area of 60%-90%.	Change in peak or 24-hour traffic within study area by 90% or more.
Driver Delay	Change in peak or 24-hour traffic within study area by less than 5%.	Change in peak or 24-hour traffic within study area between 5% and 15%.	Change in peak or 24-hour traffic within study area between 15% and 30%.	Change in peak or 24-hour traffic within study area by 30% or more.
Road Safety	Personal Injury Collisions (PICs) data does not show an accident pattern or cluster which could indicate an existing highway safety issue. This analysis will be interpreted with professional judgement and used to inform and determine the impact of the Proposed Development on Road Safety.		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 (i.e. three years) in accordance with the COBA Manual (DMRB Volume 13, Section 1, Chapter 4). The calculations will be based on variables including: observed Average Annual Daily Traffic (AADT) flow, road speed, length of road section, and type of road.	

⁴ 'Peak' traffic relates to the busiest times on the highway network, usually 0800-0900 and 1700-1800.

Impact	Magnitude of impact / threshold			
	Negligible	Low	Medium	High
			This analysis will be interpreted with professional judgement and used to inform and determine the impact on Road Safety and consideration of mitigation should the accident risk perceived to be excessively and above the PICs that could be expected under baseline conditions.	
Non-motorised User Amenity	Non-motorised user amenity (formerly Pedestrian Amenity) is impacted by traffic flow, composition, and width of pavement, and is related to Fear and Intimidation thresholds. A 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	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.			
Non-motorised User Delay	The IEMA Guidance recommends that professional judgement is used to determine the impact on Non-motorised User Delay (formerly Pedestrian Delay) considering local factors such as pedestrian activity, visibility, and the physical conditions of the site.			

13.3.9 Negligible, Low, Medium, and High Magnitudes of Impact can have either a beneficial or adverse Impact Significance.

Sensitive Receptors

13.3.10 The criteria for assessing the sensitivity of a receptor are set out in **Table 13.2**.

Table 13.2 Criteria for sensitivity of receptor

Receptor Sensitivity	Receptor Type
High	Receptors of greatest sensitivity to traffic flows, such as schools, playgrounds, accident blackspots, retirement homes, areas with no footways with high pedestrian footfall.
Medium	Traffic flow sensitive receptors, such as congested junctions, hospitals, shopping areas with active frontages, narrow footways, parks, and recreational areas.

Receptor Sensitivity	Receptor Type
Low	Receptors with some sensitivity to traffic flow, such as conservation areas, listed buildings, tourist attractions, and residential areas.
Negligible	Receptors with low sensitivity to traffic flows, and those distant from affected roads.

Significance of Effect

13.3.11 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 13.3** below. The shading indicates significance ratings that are deemed to be ‘Significant’ effects.

Table 13.3 Significance matrix

Sensitivity of Receptor	Magnitude of Impact			
	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

13.3.12 Significance thresholds can also be categorised as temporary or permanent and can have an effect for the short, medium, or long term. The relevant definitions in terms of longevity of the effect are set out below:

- A short-term effect: - an effect that will be experienced for 0 to five years.
- A medium-term effect: - an effect that will be experienced for five to 15 years; and
- A long-term effect: - an effect that will be experienced for 15 years onwards.

13.4 Assessment Assumptions and Limitations

13.4.1 At the time of writing, no limitations or difficulties have been identified. The Proposed Development is still being developed and as it progresses the assumptions and limitations could also change.

13.5 Stakeholder Engagement

- 13.5.1 At this preliminary stage, stakeholder engagement has included a Scoping Request to the Secretary of State (SoS), and a Highways Scoping Request to Nottinghamshire County Council as the Local Highway Authority (LHA) in which the Site is located.
- 13.5.2 Initial scoping engagement has commenced with additional stakeholders relating to highways and transport matters at this early stage, which has been undertaken at a high level and will continue as the Proposed Development progresses.
- 13.5.3 A summary of stakeholder engagement undertaken to date is presented in **Table 13.4** below.

Table 13.4: Summary of Stakeholder Engagement

Consultee	Summary of Comment	Applicant Response
Secretary of State Scoping Opinion dated 3 rd June 2024.	The Inspectorate is content to scope out detailed assessments where the relevant thresholds have not been exceeded, subject to the ES confirming the numbers and types of vehicles for all phases (with reference to thresholds within guidance), as well as proposed access/ transport routes to justify this position.	It is therefore, at this stage, considered that the Proposed Development in terms of Operational Phase transport matters could be scoped out of the ES, given the low number of vehicles anticipated to require access to the Proposed Development site. The Construction and Decommissioning phases are to be confirmed in due course. The EIA would be supported by a Construction Traffic Management Plan (CTMP), a Transport Assessment/ Transport Statement and a Decommissioning Traffic Management Plan.
	The Scoping Report states that it is anticipated that the development impact, comparing to the existing flows on the Strategic Road Network (SRN) will be negligible, and therefore it is anticipated these links will be scoped out of any further assessment.	It is therefore considered at this stage, that the Operational and Decommissioning phases of the Proposed Development in terms of transport impact could be scoped out of the ES with relation to the impact on the SRN. The need to assess construction traffic impact of junction A1(M) junction 34, which

Consultee	Summary of Comment	Applicant Response
	<p>Given the presence of PRoWs within the Site, the ES should confirm whether the Proposed Development would result in any PRoW or other recreational routes being diverted or stopped up, on either a temporary or permanent basis.</p>	<p>forms part of the proposed vehicle routing will be considered with National Highways.</p> <p>Several PROWs are within or abut the Site and therefore a PROW Management Plan will be provided to assess the impact on PROWs and include a management strategy for the Proposed Development.</p>
<p>The Highways Scoping Request also received a response from Nottinghamshire County Council as the LHA, via email on 15 May 2024.</p>	<p>NCC advised a proposal of this magnitude will have significant impact on the existing transportation network mainly during the project’s construction phase.</p> <p>Includes the request for a Transport Assessment, CTMP, Safety Audits, PROW management, Construction Management Plan to assess the additional traffic demands and any required mitigation to the highway network, prepared in accordance with current Planning Practice Policy, Nottinghamshire County Council’s Design Guide and other industry accepted guidance on TA’s. Necessary mitigation measures through planning condition and S106 obligations.</p>	<p>Moving forwards with the application process, discussion with the LHA will be ongoing as appropriate to prepare a TA, and other documents, in line with policy and guidance. This will include, as necessary, liaison with highway officers and specific officers at NCC such as the Public Rights of Way (PROW) officers, abnormal indivisible loads officers, and others, to address the matters raised.</p>
<p>Nottinghamshire County Council PROW team. Meeting with PROW (legal) officer 4th November 2024.</p>	<p>Advised that the landowner rights of access should be confirmed.</p>	<p>The Applicant is working with the landowner to confirm the access rights. Subject to this, the PROW management plan will be developed for the Proposed Development.</p>

Consultee	Summary of Comment	Applicant Response
National Highways Meeting with the Spatial Planning (Midlands) team 9 th December 2024.	Indicated that the use of A1(M) junction 34 would be acceptable in principle during construction however assessment required.	Assessment will be provided of A1(M) junction 34. Pre-application discussions are ongoing.
Doncaster Council Highways. Meeting with highways development control officers and highways operation officers on 16 th December 2024.	Requested assessment of the A631 / A638 junction.	Assessment of the A631 / A638 signalised junction which forms part of the proposed construction traffic route, will be provided. Pre-application discussions are ongoing.

13.5.4 In summary, the Scoping Opinion states that the proposed EIA scope is “*broadly agreed*” and it is noted that the EIA would be supported by a Construction Traffic Management Plan (CTMP), a Transport Assessment/ Transport Statement and a Decommissioning Traffic Management Plan, which will “*be agreed upon with NCC as LHA for the Site location in due course.*”

13.6 Baseline Conditions

13.6.1 The Proposed Development comprises two parcels of land in the vicinity of the villages and hamlets of Sturton-le-Steeple, North Leverton with Habbleshthorpe, North Wheatley, and Fenton. It is approximately five kilometres to the southwest of Gainsborough and nine kilometres to the northeast of Retford.

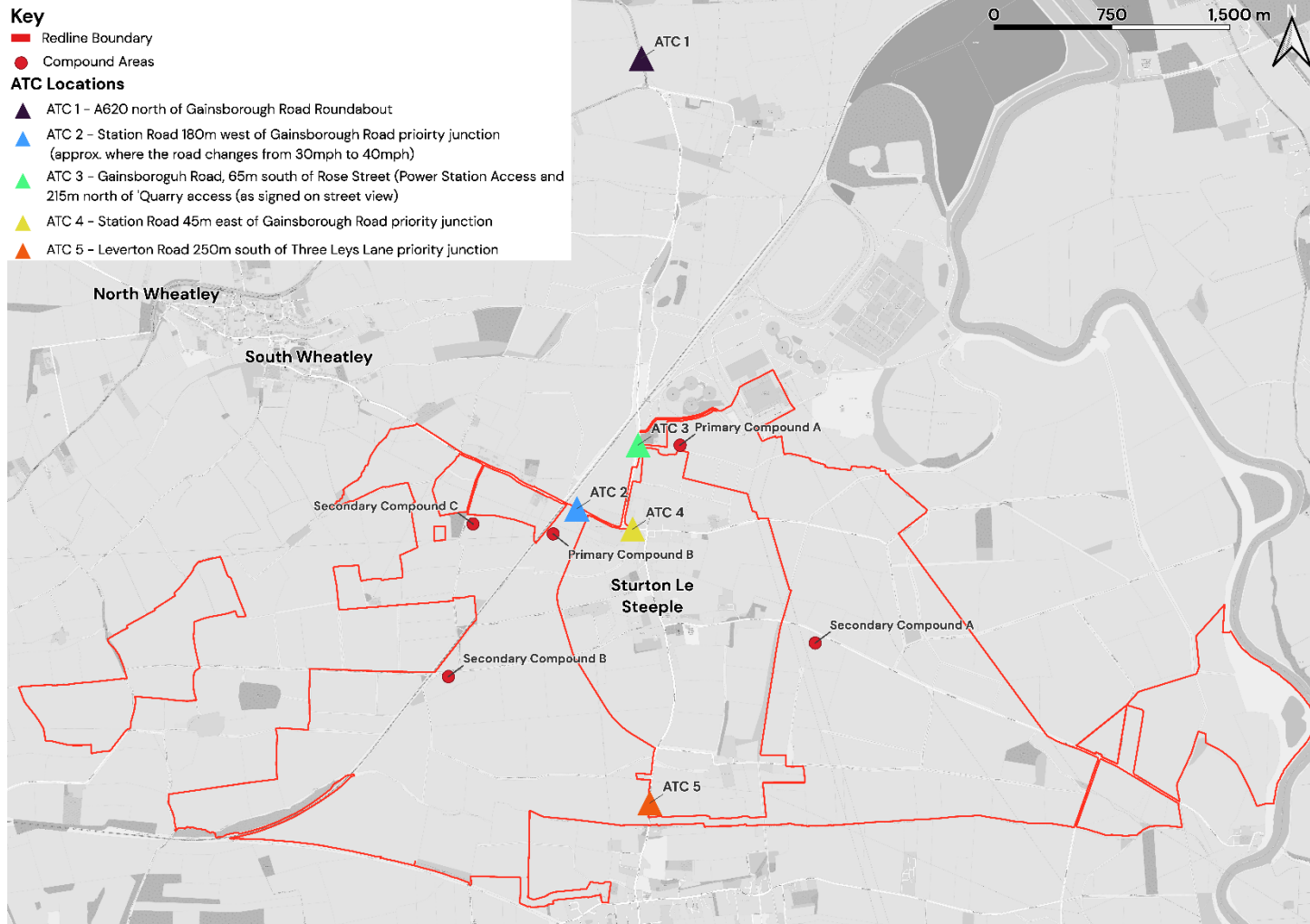
13.6.2 The Proposed Development comprises the following:

- The first land parcel (the ‘western parcel’) is located on the western side of the Proposed Development and to the west of Sturton-le-Steeple. It is northwest of North Leverton with Habbleshthorpe, and south east of North Wheatley and comprises largely existing agricultural land and associated buildings.

- The second land parcel (the ‘eastern parcel’) is located on the eastern side of the Proposed Development and to the east of Sturton-le-Steeple. It includes the area surrounding Fenton and comprises largely existing agricultural land and associated buildings.
- 13.6.3 The Proposed Development location including the location of the eastern parcel and western parcel is shown at **Figure 2.1 ‘Construction Phase Parameter Plan and Figure 2.2 ‘Operational Phase Parameter Plan’**.
- 13.6.4 The proposed study area for the construction, operational and decommissioning phases have been set out through the assessment of appropriate vehicle routing connecting the Site to the Strategic Road Network (SRN) with reference to vehicle restrictions along routes in the local area and existing villages.
- 13.6.5 This route to and from the SRN to and from the Site includes delivery trips to the site arriving/departing using the route via the A1(M) junction 34, A614, A638, A631, A620 and travel south into the site accesses into the Primary Compounds from Gainsborough Road (Eastern Parcel) and Station Road (Western Parcel).
- 13.6.6 At this stage of the design, it is proposed that a total of five links are assessed through the EIA process relevant to the routing set out above.
- 13.6.7 Automatic Traffic Counter Data (ATC) was obtained along these links (between 24 June and 03 July 2024). The proposed link/ATC locations are indicatively shown in **Inset 13.1** below and are listed as follows:
1. Saundby Road (A620), circa 100m north of Gainsborough Road Roundabout.
 2. Station Road 180m west of Gainsborough Road priority junction (approximately where the speed limit increase from 30mph to 40mph).
 3. Gainsborough Road 65m south of Rose Street (Power Station Access) and 215m north of the Gainsborough Road quarry access.
 4. Station Road 45m east of Gainsborough Road priority junction.
 5. Leverton Road 250m south of Three Leys Lane priority junction.
- 13.6.8 These have been derived through consideration of the anticipated construction, operational and decommissioning route to / from the Proposed Development to and from the SRN. At this stage, it is assumed that all HGV construction and decommissioning trips associated with the construction and decommissioning phases of the Proposed Development will route to and from A1(M) junction 34. HGVs

- associated with the Operational Phase will also utilise this route, however smaller vehicles during operation may use alternative routing to access the Proposed Development which are yet to be confirmed.
- 13.6.9 Other construction routes and the relative benefits and constraints of these have been considered as part of the assessment, with the above route identified as the most appropriate route given the restrictions in place on the surrounding road network and avoiding clusters of sensitive receptors.
- 13.6.10 It should be noted that the ATC/Links identified are based on the baseline data already collected. As the Proposed Development (including the access strategy) progresses, additional baseline traffic data will be collected for new links as appropriate. The additional locations will be subject to routing and access discussions with the Local and Strategic Highway Authorities. Therefore, the location of the additional links will evolve as the Proposed Development progresses and access options are considered.
- 13.6.11 The sensitivity of each receptor in the study area will be assessed in due course.
- 13.6.12 The locations of the existing ATCs are provided in **Inset 13.1**.

Inset 13.1: Locations of existing ATCs



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13.6.13 The Average Annual Daily Traffic (AADT) flows and HGV percentages recorded by the ATC surveys undertaken as listed above are summarised in **Table 13.5**.

Table 13.5: 2024 Baseline AADT Flows

ATC/Link Ref.	2024 Baseline Two-Way AADT	Baseline Number of Heavy Goods Vehicles (HGV)	HGV Percentage based on AADT
1	3420	391	11.4%
2	387	50	12.9%
3	1143	119	10.4%
4	1378	155	11.2%
5	1471	146	9.9%

Highway Boundary and Public Rights of Way (PRoW)

13.6.14 Records of Highways Maintainable at Public Expense (HMPE) and an extract of the Definitive PRoW map have been obtained from NCC through online mapping and by Via East Midlands on behalf of NCC.

13.6.15 The PRoW which cross or abut or the site are summarised in **Table 13.6** below. The Development Proposal site boundary is still being refined and therefore this may change as a result of this.

Table 13.6 Relevant PRoW routes

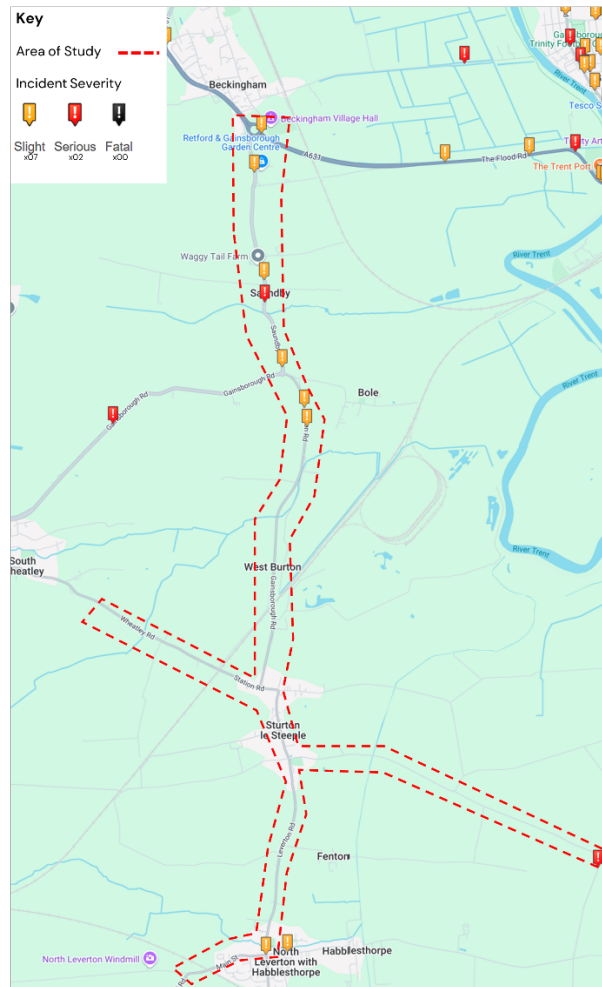
Site Parcel / Route Affected	Type Of Prow	Prow Name / Ref	Responsible Authority
'Western' parcel	Footpaths	24, 27, 29, 41	Nottinghamshire County Council (NCC)
	Bridleways	23, 25, 26, 28	NCC
	Restricted Byways	30, 31	NCC
'Eastern' parcel	Footpaths	17, 1, 16, 39, 15, 18, 37, 6	NCC
	Bridleways	32, 5	NCC
	Restricted Byways	32, 33	NCC
	Byways	7, 10	NCC
Sturton-le-Steeple	Footpaths	18, 19, 41	NCC

Personal Injury Collision Data

- 13.6.16 PIC data will be obtained from Via East Midlands on behalf of Nottinghamshire County Council, for the most recent three-year period. The study area is anticipated to comprise the local highway network between the A631 and the site access locations and will include the following:
- Sturton Road
 - Gainsborough Road
 - Wheatley Road
 - Low Holland Lane
 - Leverton Road
 - Main Street
- 13.6.17 The section of the Proposed Development construction routing including the A631 to the west of the Gainsborough Road, the A638 and the A614 junction to the A1(M) will not comprise part of the PIC assessment area as a high-level review of the Crashmap online database indicates that the PICs recorded on this section are consistent with what is expected with the level of traffic using the road and the data indicates that there are no obvious clusters or blackspots which would require further assessment.
- 13.6.18 The area for obtaining PICs is shown in **Inset 13.2**. The data indicates that during the most recent three-year period (2018 – 2022) there have been no incidents classified as ‘fatal’ in the study area (defined by DfT⁵ as a collision in which at least one person is killed within 30 of the collision), there have been two categorised as ‘Serious’ (defined by DfT as a collision in which at least one person is seriously injured or injuries causing death occurs 30 or more days after the collision), and seven classified as ‘Slight’ PICs (defined by DfT as a collision in which at least one person is slightly injured but no person is killed or seriously injured). Further review of the PICs recorded will be provided when the data is available and has been provided by Via East Midlands.

⁵ Department for Transport (DfT) ‘Road casualty statistics: definitions, symbols and conventions’ (dated 28 November 2024)

Inset 13.2 – Personal Injury Collision Data area (2018-2022) (Source: Crashmap Database)



Base Mapping

13.6.19 Topographical survey and Ordnance Survey (OS) data has been obtained throughout the project programme as set out in Chapter 3.

13.7 Assessment of Likely Significant Effects

13.7.1 The delivery trips to the Proposed Development, and the workforce trips to the Proposed Development during construction and decommissioning phases will likely utilise the same route and will arrive/depart the site using the route A1(M) J34, A614, A631, A620 (as shown in **Figure 13.1**) and travel south into the site accesses into the Primary Compounds (as shown in **Figure 2.1 ‘Construction Phase Parameter Plan’**). There are two Primary Compounds respectively accessing the Eastern Parcel and Western Parcel, to which all traffic will access (**see Figure 2.1 Construction Phase Parameter Plan**). The ‘primary’ traffic movements associated with these primary construction compounds (i.e. those trips to the primary

compounds only) are included in the assessment in this PEIR chapter, with further detail to follow in the subsequent ES.

- 13.7.2 From the Primary Compounds, vehicles will access the Secondary Construction Compounds. One Secondary Construction Compound is located within the Eastern Parcel and two further Secondary Construction Compounds are located within the Western Parcel. Trips from the Primary Compounds will also access individual fields using smaller vehicles for partitionable loads which will then be split and decanted onto other smaller vehicles, and larger vehicles for non-partitionable loads. The traffic associated with these ‘Secondary’ traffic movements will be included in a further assessment in the ES chapter once the Proposed Development layout has been developed further.
- 13.7.3 The construction period will be temporary (24 months) with the construction years anticipated at this stage to be 2027 – 2029.
- 13.7.4 The number of vehicle trips that could be associated with the Proposed Development, including Heavy Goods Vehicles (HGV) and Abnormal Indivisible Loads (AIL) has been considered at a high level at this stage for the Construction, Operational and Decommissioning phases, and set out below for ‘Primary’ trips.

Proposed Development Access

Construction Access Points

- 13.7.5 Construction access points are proposed for each land parcel including the Eastern and Western land parcels (as shown in **Figure 2.1**).
- 13.7.6 Given the scale of the Proposed Development, multiple access points will be required during the construction phase. At this stage, it is anticipated that access from the local highway network will be obtained at the following locations, however the access strategy is currently still evolving and therefore the access strategy will change as the Proposed Development layout progresses:
- Gainsborough Road, just south of the existing West Burton Power Station site;
 - Gainsborough Road existing access into the West Burton Power Station;
 - Wheatley Road;
 - Wood Lane;
 - Station Road to the west of Sturton-le-Steeple;

- Common Lane to the east of Sturton-le-Steeple;
- Cowpasture Lane;
- Upper Ings Lane;
- Littleborough Road;
- Thornhill Lane;
- Fenton Lane; and
- Leverton Road.

13.7.7 At this stage of the design of the Proposed Development, the above access points are being considered; however, these may be subject to review and potential change as the design of the Proposed Development progresses. **Figure 2.1 ‘Construction Phase Parameter Plan’** and **Figure 2.2 ‘Operational Phase Parameter Plan’** set out the current parameters of the Proposed Development.

13.7.8 At this stage it has been assumed that there will be two main vehicle access points for construction traffic to the Primary Compounds. These will be via Gainsborough Road (the Compound serving the eastern parcel) and Station Road (the Compound servicing the western parcel), as indicated by **Figure 2.1 ‘Construction Phase Parameter Plan’**.

13.7.9 The final access strategy is subject to further assessment, discussion with the LHA(s) and the evolving masterplan.

Operational Access Points

13.7.10 At this stage in the development process, following a high-level review of the access points available as listed above, it is anticipated that any of the potential Construction access points listed above could be used for Operational access.

13.7.11 The Operational access points of the Proposed Development will likely comprise (but not limited to) the following access points (as shown on **Figure 2.2**):

- Gainsborough Road quarry access (accessing the Eastern Parcel); and
- Main Street (in the location of an existing field access) (accessing the Western Parcel).

13.7.12 In addition to the main operational accesses, should a large component / equipment need to be replaced within the land located adjacent to the existing National Grid Power Station, Rose Street (accessed via Gainsborough Road) can be

utilised for access. Further, a site access corridor is proposed at the southern extent of the Site, to be used only if needed, adjacent to North Leverton as indicated by Operational Phase Parameter Plan (as shown on **Figure 2.2**).

Decommissioning Access Points

- 13.7.13 At this stage in the development process, the access strategy for the Decommissioning phase of the Proposed Development will consider the potential Construction and Operational accesses considered above and are likely to comprise a similar access strategy for the Decommissioning phase as well. This will be considered further in the Decommissioning Traffic Management Plan.

Construction

- 13.7.14 The details known at this stage, including the ‘Primary’ trips (to the Primary Compounds only), are set out below and further detail regarding each category will be provided within the ES in due course. The distribution of construction traffic associated with the ‘Secondary’ trips on the local highway network for the 24-month construction period is still being derived.

Workforce Trips

- 13.7.15 At this stage, it is anticipated that the workforce will stay in temporary accommodation in nearby towns and cities in Nottinghamshire, Lincolnshire, and Doncaster (for example in Nottingham, Doncaster, Retford and/or Scunthorpe, or other nearby locations). The accommodation options are currently being reviewed and will be confirmed in due course.
- 13.7.16 For the purposes of this PEIR assessment, the workforce are assumed to largely use the same route as the deliveries accessing the site as indicated on **Figure 13.1**, however at this stage the workforce accommodation is still being considered and therefore access to the Site may also be from other directions, as well as to and from the north of the site, and the traffic distribution assessment will be refined in due course.
- 13.7.17 The vehicles used by the construction workforce vehicle types are shown in **Table 13.7**. The number of proposed workforce trips is anticipated to fluctuate over the construction period as demand for a larger workforce during the programme dictates.

Table 13.7 – Construction workforce vehicle type summary

Trip Type	Type of Vehicles
Construction workforce	Mini-buses Light goods vehicles (e.g. vans) Private car

Delivery Trips

13.7.18 Construction trip generation will include a mixture of vehicles such as Heavy Goods Vehicles (HGVs), Light Goods Vehicles (LGVs) and Abnormal Indivisible Loads (AILs). The number of proposed delivery trips is anticipated to fluctuate over the 24 month construction period as demand for deliveries during the programme dictates. The AADT and type of construction vehicles associated with each land use (PV Solar, HV Substation and BESS) are outlined in **Table 13.8**.

Table 13.8 – Construction vehicle type summary for each land use

Proposed Land Use	Type of Vehicles
PV Solar	16.5m Artic 40ft Container Lorry 16.5m Artic Curtain Side Lorry 16.5m Artic Flatbed Trailer Lorry 12m Rigid Flatbed Lorry 12m Rigid Curtain Side Lorry 20 Tonne Tipper Lorry 6 m ³ Concrete Mixer
HV Substation	16.5m Artic Flatbed Trailer Lorry 12m Rigid Flatbed Lorry 16.5m Low Loader Lorry (AIL) 20 Tonne Tipper Lorry 6 m ³ Concrete Mixer
BESS	16.5m Artic Flatbed Trailer Lorry 12m Rigid Flatbed Lorry 16.5m Low Loader Lorry (AIL)

Proposed Land Use	Type of Vehicles
	20 Tonne Tipper Lorry 6 m ³ Concrete Mixer
Abnormal Indivisible Loads (AILs)	AILs are delivery vehicles with any of the following criteria: <ul style="list-style-type: none"> • weight over 44,000kg (43.3 tons); • an axle load of more than 10,000kg (9.84 tons) for a single non-driving axle or 11,500kg (11.31 tons) for a single driving axle; • width over 2.9 metres (9.5 feet); and • rigid length over 18.65 metres (61 feet).

13.7.19 The routing and access to the construction compound for AILs has been considered within the Proposed Development to limit the potential impact on the highway network. AILs will access the site through the Gainsborough Road access only due to the highway and access restrictions and have an AIL Management Plan in place.

13.7.20 The AADT baseline traffic (2024) and ‘Primary’ development flow are summarised in **Table 13.9** and the total traffic (baseline plus ‘Primary’ development AADT), and the percentage change is outlined in **Table 13.10**.

Table 13.9 – AADT Construction Traffic - Baseline and ‘Primary’ Development Trips.

ATC/Link Ref.	2024 Baseline		‘Primary’ Development Trips (Development Trips Source: Civil Design - Construction Traffic & Workforce Profiles for Steeple Solar (Ref: 04954-8516404), produced by RES dated 10 September 2024)	
	Two-Way AADT	Number of Heavy Goods Vehicles (HGV)	Two-Way AADT	Number of Heavy Goods Vehicles (HGV)
1	3420	391	182	67
2	387	50	109	39

		2024 Baseline		'Primary' Development Trips (Development Trips Source: Civil Design - Construction Traffic & Workforce Profiles for Steeple Solar (Ref: 04954-8516404), produced by RES dated 10 September 2024)	
ATC/Link Ref.	Two-Way AADT	Number of Heavy Goods Vehicles (HGV)	Two-Way AADT	Number of Heavy Goods Vehicles (HGV)	
3	1143	119	182	67	
4	1378	155	0	0	
5	1471	146	0	0	

Table 13.10 – AADT 'Primary' Construction Traffic (Percentage Change)

		2024 Baseline plus 'Primary' Development Trips		Percentage Change	
ATC/Link Ref.	Two- Way AADT	Number of Heavy Goods Vehicles (HGV)	Two- Way AADT	Number of Heavy Goods Vehicles (HGV)	
1	3602	458	5%	1.3%	
2	496	89	28%	5.0%	
3	1326	186	16%	3.6%	
4	1378	155	0%	0.0%	
5	1471	146	0%	0.0%	

13.7.21 The IEMA Guidance states that a significant environmental impact may occur where traffic flows increase by 30%, or more than 10% where the study area is of high sensitivity significance.

13.7.22 In terms of AADT total 'Primary' traffic, Link 4 (Station Road, west of Gainsborough Road junction), and Link 5 (Leverton Road, south of Three Leys Lane junctions) have

- zero impact and can therefore be ruled out of the assessment. Link 1 (Saundby Road) has an increase of 5% and therefore can also be ruled out of the assessment.
- 13.7.23 Link 2 (Station Road to the west of the Gainsborough Road junction) has a ‘Primary’ traffic increase of 28% traffic impact. Link 3 (Gainsborough Road south of Rose Street) has a ‘primary’ traffic increase of 16%. Links 2 and 3 are not considered as a high sensitivity significance, and therefore in accordance with the IEMA Guidance, can be ruled out of the assessment.
- 13.7.24 The AADT HGV development traffic impact indicates that all five of the links currently being assessed would have a negligible impact on HGV traffic and therefore can be ruled out of the assessment.

Operational

- 13.7.25 The trip generation has been derived at this early stage based on the Applicant’s experience of other similar sites, and the anticipated need for materials, equipment and maintenance during the operational phase and workforce to monitor and work on the site intermittently during the 40 years lifetime of the Proposed Development. These are outlined in **Table 13.11**.

Table 13.11 – Operational trip generation summary

Type of Trip	Number of persons / daily trips	Days on site	Frequency of visit	Additional information	Type of Vehicle
Preventative (active) Maintenance including for example Technicians, Monitoring/Control Room Staff, Engineers, Safety/Compliance Personnel, Administrative staff	7 persons (14 daily two-way trips).	Generally, Monday to Friday. Some operatives may require access on a 24 hour basis.	Regular	Office hours, arrival and departures outside of peak hours where possible.	Car, LGVs (7.5 tonne panel vans) and 4x4 type vehicles.

Type of Trip	Number of persons / daily trips	Days on site	Frequency of visit	Additional information	Type of Vehicle
Corrective (reactive) Maintenance: Replacement of large components (e.g. Inverters)	As required	Once every 5 to 15 years. Day/times, as required.	Ad-hoc	Deliveries. Cannot be predicted accurately as unable to predict if/when a repair or a replacement is needed.	Small number of HGVs.
Emergency Trips	As required	Unable to forecast.	Ad-hoc	Cannot be predicted accurately as unable to predict if/when an emergency will arise.	Emergency vehicles e.g. Fire appliance.

13.7.26 The daily traffic associated with the Operational Phase of the Proposed Development is considered to be low. The likely trips are lower than the Construction Phase of the development on all links for total traffic and HGV. In comparison to the baseline 2024 trips the impact will be negligible for all links during the Operational Phase and can therefore be ruled out of the assessment.

Decommissioning

13.7.27 Following the end of its operational period, the Proposed Development will be decommissioned and returned to its previous state so far as is practicable.

13.7.28 The removal of infrastructure from the Proposed Development will require the use of HGVs and workforce at the site.

13.7.29 The precise details of decommissioning are not known at this stage, however it is likely that the Decommissioning phase will be associated with around 50% of the construction traffic delivery and workforce trips.

- 13.7.30 It is intended that any requirements applicable to the construction of the Proposed Development in terms of consented access routes / points, working hours etc. will also apply to the decommissioning phase.

13.8 Mitigation and Enhancement

Mitigation

- 13.8.1 At this stage, the exact impact significance of the Proposed Development on the surrounding area has not been determined. However, the mitigation measures set out below are anticipated to be confirmed within the ES chapter to reduce any likely significant effects of the construction and decommissioning of the Proposed Development.
- 13.8.2 A Construction Traffic Management Plan (CTMP) will be implemented during the construction phase of the Proposed Development. The aim of the CTMP will be to minimise the impact of the construction phase on 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 residents (including during the night-time).
- 13.8.3 The CTMP will contain a package of measures which could include:
- Provision of contractor's Primary and Secondary compounds within the Site, providing an area on site for HGVs to park and manoeuvre without impeding the local highway network.
 - The arrival and departure of HGVs will be strictly managed by the Site manager. The drivers will adhere to a delivery schedule ensuring phased delivery of goods and HGV drivers will be required to call ahead to ensure vehicles accessing and egressing the site can be managed. No HGVs will therefore be required, or permitted, to wait on the public highway.
 - Details limiting the hours of the construction site operation during construction and the routing of construction traffic to protect local residential areas from construction traffic, especially from HGVs.
 - The introduction of wheel washing facilities should ground conditions dictate, before allowing vehicles to return to the local highway network. In addition, a road sweeping vehicle could be made available to remove any site residue on the local roads as and when necessary.

- Temporary signage would be erected on the local highway network in the vicinity of the Proposed Development 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 Nottinghamshire County Council will be exchanged with the contractor before commencement of works on site. This will allow for any issues to be resolved efficiently.
- 13.8.4 A PRoW Management Plan will be provided either within the CTMP or as a separate document. This will include details of any temporary closures and/or diversions and/or temporary management. The use of any Byways Open to All Traffic and Restricted Byways required for access will be managed appropriately.
- 13.8.5 A Travel Plan will be provided promoting sustainable travel to and from the Proposed Development for workforce trips during construction, operational and decommissioning phases. This will either be provided as a section within the CTMP. This will include for example, measures to minimise single occupancy car use by promoting car sharing and minibuses for staff, as appropriate.
- 13.8.6 A Construction Traffic Method Statement will be provided relating to the Point of Connection Cable Routing. This will be provided as a section within the CTMP or. This will provide information and measures to ensure safe and suitable access and other highways matters are mitigated on the local highway network on the cable route.
- 13.8.7 The Proposed Development access points have been incorporated within the design to include the provision of construction and operational access points at the location of existing accesses where possible, and new access points will only be provided where necessary due to highway (or other, such as environmental) constraints.
- 13.8.8 An Abnormal Indivisible Load (AIL) Management Plan will be provided to manage AIL vehicles accessing the site through the construction phase on the local highway network.
- 13.8.9 The ongoing design of the Proposed Development is incorporating the limitations of the local highway network (e.g. where there are height, width and weight

restrictions, and locations of PROWs) by proposing only solar panels (which will not require AIL) within the fields which are not accessible by AIL.

Enhancement

- 13.8.10 Any enhancements associated with the Proposed Development will be confirmed in the subsequent ES.

13.9 Residual Effects

- 13.9.1 Any residual effects associated with the Proposed Development will be confirmed in the subsequent ES.

13.10 Cumulative and In-combination Effects

Cumulative Effects

- 13.10.1 Given the nature of the Proposed Development, its traffic impact will be the greatest during the Construction phase, and will be very low during the Operational phase, and traffic is anticipated to be half the number of construction trips in the Decommissioning phase.

- 13.10.2 The subsequent ES will set out a detailed cumulative assessment. At this stage, the most pertinent cumulative sites for inclusion in the cumulative assessment are:

- 20/00117/FUL - Proposed Solar Farm at Land North West And South Of Field Farm Wood Lane Sturton Le Steeple Nottinghamshire.
- Al Quarry which is immediately adjacent to the Proposed Development boundary.

In-combination Effects

- 13.10.3 The in-combination effects arising from Transport and Access during the Construction, Operational and Decommissioning phases of the Proposed Development which could adversely affect air and noise quality, are considered separately within **Chapter 9 'Noise and Vibration'** and **Chapter 14 'Air Quality'** of this PEIR. For example, Air Quality could be affected by emissions arising from construction phase vehicle trips associated with the Proposed Development, which could lead to an impact on health and exacerbate respiratory or cardiovascular health issues; however, no significant effects were found within the Air Quality Chapter of this PEIR. Further detail with regard to the in-combination effects assessment will be provided within the ES, when the design of the Proposed Development has progressed.

13.11 Summary

Introduction

- 13.11.1 This Transport and Access PEIR chapter sets out the potential effects relating to transport and access. It considers the approach to assessing the potential effects on vehicular traffic flows, accidents and safety, severance, driver delay, hazardous and dangerous loads, dust and dirt, non-motorised user amenity, and fear and intimidation.
- 13.11.2 This PEIR chapter is brought forward in advance of the preparation of further supporting traffic and transport assessment work, which will include a Transport Assessment/Statement and draft Outline Construction Traffic Management Plan in due course.

Baseline Conditions

- 13.11.3 The Proposed Development comprises two parcels of land in the vicinity of the villages and hamlets of Sturton-le-Steeple, North Leverton with Habbleshthorpe, North Wheatley and Fenton.
- 13.11.4 The construction access strategy and vehicle routing for each parcel is being refined and further assessments within the ES chapter will seek to provide further details.
- 13.11.5 Data will be obtained from NCC including highway safety records within the vicinity of the Proposed Development and this will be confirmed in due course.

Likely Significant Effects

- 13.11.6 Impact magnitudes have been defined for the construction phase in accordance with the IEMA Guidance, which states that a significant environmental impact may occur where traffic flows increase by 30%, or more than 10% where the study area is of high sensitivity significance.
- 13.11.7 The impact of the Construction, Operational, and Decommissioning phases has yet to be fully determined. Further assessment will be carried out as the design of the Proposed Development progresses and this will be confirmed in the subsequent ES chapter.

Mitigation and Enhancement

- 13.11.8 It is proposed at this stage that mitigation for the Proposed Development will comprise a CTMP and a range of supporting documents to outline suitable mitigation.

- 13.11.9 Any additional mitigation identified as the programme progresses will be set out in the ES chapter.

Conclusion

- 13.11.10 The likely effects and the significance of the potential impacts and changes to the baseline have not been determined at this stage. Future assessment will set out in the ES chapter and the results of the assessment and advise whether there will be any adverse residual effects and the impact of proposed mitigation measures.
- 13.11.11 The likely effects and the significance of the impacts have not been determined at this stage. The ES chapter will set out the results of the assessment and advise whether there will be any adverse residual effects and the impact of proposed mitigation measures.
- 13.11.12 **Table 13.12** provides a summary for construction and operational phases and the residual effects of the Proposed Development relating to the Transport and Access ('Primary' Compound trips).

Table 13.12: Summary and Residual Effects – Transport and Access ('Primary' Compound trips)

Receptor/ Receiving Environment	Description of Effect	Nature of Effect *	Sensitivity Value **	Magnitude of Effect **	Significance of Effects ***	Mitigation/ Enhancement Measures	Residual Effects ***
Construction Users of local highway network, PROWs, residents and businesses	Additional vehicles (deliveries and workforce) on the highway network.	Temporary	Minor / Moderate	Minor / Moderate	Minor Adverse / Negligible	Primary Trips - None	Minor Adverse / Negligible
Operational Users of local highway network, PROWs, residents and businesses	Additional vehicles (maintenance staff and replacement part deliveries) on the highway network.	Temporary	Not Applicable	Negligible	Negligible	None	Negligible
Cumulative Users of local highway network, PROWs, residents and businesses	Additional vehicles on the highway network.	Temporary	Not Applicable	Negligible	Minor	Primary Trips - None	Negligible
Notes:							

Receptor/ Receiving Environment	Description of Effect	Nature of Effect *	Sensitivity Value **	Magnitude of Effect **	Significance of Effects ***	Mitigation/ Enhancement Measures	Residual Effects ***
<p>* Enter either: Permanent or Temporary / Direct or Indirect</p> <p>** Only enter a value where a sensitivity v magnitude effects has been used – otherwise ‘Not Applicable’</p> <p>*** Enter either: Major / Moderate / Minor / Negligible AND state whether Beneficial or Adverse (unless negligible)</p> <p>Note: Trips to Primary Compounds only considered at PEIR assessment stage. Further detail will follow in the subsequent ES chapter.</p>							