

West Burton Solar Project

Environmental Statement Chapter 14: Transport and Access

Prepared by: Transport Planning Associates
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Issue Sheet

**Report Prepared for: West Burton Solar Project Ltd.
DCO Submission**

Environmental Statement Chapter 14: Transport and Access

Prepared by:

Name: Transport Planning Associates

Approved by:

Name: James Darrall

Title: Director

Date: February 2023

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14 Transport and Access

14.1 Introduction

- 14.1.1 This chapter of the Environmental Statement (ES) reports the findings of the likely significant effects on Transport and Access as a result of the Scheme.
- 14.1.2 The chapter has been prepared by Transport Planning Associates (TPA). TPA is a corporate partner of the Chartered Institution of Highways and Transportation (CIHT) (see Statement of Competence at **ES Appendix 1.1: [EN010132/APP/WB6.3.1.1]**).
- 14.1.3 Solar farm developments do not generate significant traffic flows once operational. Typically, there will be only a handful of trips per month by Transit Van (or similar) for maintenance purposes (less than one vehicle trip per day on average). Therefore, all operational effects are negligible in significance. In addition, it is not anticipated that the effects associated with decommissioning will be worse than during the construction phase. Therefore, the focus of this Chapter is on the construction phase.
- 14.1.4 This ES Chapter assesses the Transport and Access Effects of West Burton 1, 2 and 3 and the Cable Route Corridor separately. The Cable Route Corridor is considered separately as the effects are more temporary in nature (just 90 working days per access). Further information is set out at Section 14.7.
- 14.1.5 This chapter is not intended to be read as a standalone assessment and, where relevant, cross references are included to other chapters within this ES Chapter. In addition, this chapter should be read in conjunction with:
- The Transport Assessment, shown in **Appendix 14.1 [EN010132/APP/WB6.3.14.1]**;
 - The Outline Construction Traffic Management Plan (CTMP) shown in **Appendix 14.2 [EN010132/APP/WB6.3.14.2]**. and
 - The Outline Public Right of Way Management Plan, **Appendix 14.3 [EN010132/APP/WB6.3.14.3]**.

14.2 Consultation

- 14.2.1 An Environmental Impact Assessment (EIA) Scoping Report was submitted to the Secretary of State for Business, Energy and Industrial Strategy (replaced by ESNZ) in January 2022, with a Scoping Opinion adopted by the Planning Inspectorate on behalf of the Secretary of State in March 2022. In addition, a Preliminary Environmental Information Report (PEIR) was prepared and issued in conjunction with the Applicant's Section 42 statutory consultation undertaken in July 2022.
- 14.2.2 Separately, a Transport Scoping Note has been submitted to Lincolnshire County Council. A meeting was held with officers at Lincolnshire County Council to discuss the proposals on 22nd April 2022.

14.2.3 Section 42 consultation responses from local stakeholders have also been received.

14.2.4 **Table 14.1** provides a summary of the transport and access related comments made by relevant stakeholders and how these responses have been addressed in this ES.

Table 14.1: Summary of Consultation

Consultee	Comments / Matters Raised	Response / Matters Addressed
EIA Scoping Opinion		
The Planning Inspectorate (1)	"The Applicant proposes to scope out effects during the operational phase as "there are anticipated to be only a handful of visits to the Site per month by vehicle for maintenance". The number of movements required either for each solar array Site or the Proposed Development as a whole are not quantified".	Operational phase movements are quantified in this ES Chapter. There will be a small number of trips per Site per month for maintenance purposes (less than one a day on average).
The Planning Inspectorate (2)	"The Inspectorate agrees to scope this matter out subject to confirmation that the frequency and type of maintenance visits and vehicles, with reference to relevant thresholds (e.g. as set out in the Guidelines for Environmental Assessment of Road Traffic, 1993) would not give rise to a significant effect, taking account of any potential cumulative traffic effects".	Operational phase movements are quantified in this ES Chapter at paragraph 14.7.65. There will be less than one per day per Site, which will not give rise to any significant effects, in line with the relevant thresholds set out in Guidelines for Environmental Assessment of Road Traffic, 1993.
The Planning Inspectorate (3)	"The Inspectorate would expect to see a Decommissioning Plan, agreed with the Local Authority, secured through the inclusion of an Outline Decommissioning Plan or similar with the Application. The ES should clearly set out if and how decommissioning is to be assessed and any components which may remain following decommissioning. The Inspectorate is not content to scope this matter out on this basis"	An Outline Decommissioning Plan has been prepared [EN010132/APP/WB7.2] .
The Planning Inspectorate (4)	"The Scoping Report states that "the majority of the non-local workforce will stay at local accommodation and be	Information on the workforce is provided in this ES Chapter paragraph 14.7.9.

Consultee	Comments / Matters Raised	Response / Matters Addressed
	<p>transported to the Site by minibuses to minimise the impact on the strategic and local highway network". No indication is given of the expected total workforce during construction, consequently it is unclear what the impact of the traffic movements associated with the local workforce will be".</p>	
<p>The Planning Inspectorate (5)</p>	<p>"The Proposed Development Site will affect a number of PRow but no surveys are proposed to understand the baseline use of these PROWs.</p> <p>Surveys should be undertaken to provide baseline data in relation to the use of the PROWs affected by the Site where appropriate to define the change in characteristics of tourism and recreational use of PRow as is required to define receptor sensitivity in Table 21.3 and the magnitude of change in Table 21.4".</p>	<p>Information on the PROWs that are affected by the Scheme is provided in this ES Chapter at paragraph 14.5.8</p>
<p>Nottinghamshire County Council (1)</p>	<p>"The Transport Assessment (TA) methodology will be based on the Guidance for Transport Assessments (GTA), 2007. Although this has been archived, the methodology in the GTA complies with National Planning Practice Guidance and is therefore considered to be acceptable. The scope of the TA should include all main junctions within Nottinghamshire that would 'that would be likely to experience an increase in traffic greater than 30 two-way peak hour movements (based on passenger car units (PCU)".</p>	<p>There will not be an increase in traffic greater than 30 two-way peak hour movements at a single junction during the construction phase or the operational phase. Information about traffic flows associated with the construction phase is set out in this ES chapter.</p>

Consultee	Comments / Matters Raised	Response / Matters Addressed
Nottinghamshire County Council (2)	<p>"The proposed construction route to Site 4 is the A1, A614, A638, A631, and B1403 Clayworth Road. This is likely to be acceptable subject to the TA demonstrating that there is sufficient highway network capacity and road space for abnormal loads. It should be noted that the route passes through Bawtry and the A631/A638 junction which is the responsibility of Doncaster Metropolitan Borough Council as local highway authority. Where the TA addresses environmental impacts, this should be contained within a separate section to avoid confusion. It would also be helpful if the study area could be split into respective local highway authority areas".</p>	<p>Since consultation, West Burton 4, which was to be accessed via the A631 and B1403 Clayworth Road, has been removed from the scheme. Therefore, construction vehicles will no longer be using this route.</p>
Nottinghamshire County Council (3)	<p>"The West Burton Solar Project: Environmental Impact Assessment Scoping Report (EIASR) confirms that West Burton 4 is crossed by rights of way and has rights of way along its boundaries. The Grid Connection Corridor (GCC) also has the potential to affect several public rights of way in Nottinghamshire. Sites 1 to 3 are not in Nottinghamshire".</p>	<p>West Burton 4 no longer forms part of the scheme.</p>
Nottinghamshire County Council (4)	<p>"The CTMP should also include a chapter on construction worker travel patterns and measures to encourage travel by alternative modes to single occupancy vehicle"</p>	<p>Information on the workforce is provided in this ES Chapter at paragraph 14.7.9. A construction worker travel plan is included as part of the Outline CTMP at Appendix 14.2 [EN010132/APP/WB6.3.14.2].</p>
Nottinghamshire County Council (5)	<p>"Consideration should be given to: - how these are affected by the solar installation, such as width and surface of PROW corridors within or adjacent to the Site , views of the installations affecting amenity or</p>	<p>An Outline Public Right of Way Management Plan has been prepared and is shown at Appendix 14.3 [EN010132/APP/WB6.3.14.3].</p>

Consultee	Comments / Matters Raised	Response / Matters Addressed
	<p>the rural route, ensuing that views are still available</p> <p>- how PROW within the buffer zones will be affected visually, what methods will be employed to screen the Sites from view, will the geography assist □ vehicular access - if PROW are used as access how will the public safety be managed (will this require a temporary TRO), how is the surface to be managed to take the traffic, restoration and repair after installation and future maintenance for the duration of the development</p> <p>- Potential Increased connectivity of the PROW network is noted in para 4.4.8. Any plans will need to be shared at an early stage with PROW team for consideration. Will these be permissive routes for the duration of the Site and removed on decommissioning or dedicated in perpetuity”.</p>	
Nottinghamshire County Council (6)	<p>“Underground cabling may affect PROW in the short term during the construction phase and it is requested that these closures, wherever practicable, are employed sensitively to optimise the connectivity of the wider PROW network and any works that affect the safe use of the PROW should be closed temporarily under a formal Traffic Regulation Orders (TRO), which is managed by Nottinghamshire County Council as Highway Authority”.</p>	<p>An Outline Public Right of Way Management Plan has been prepared and is shown at Appendix 14.3 [EN010132/APP/WB6.3.14.3].</p>
Canal and River Trust (1)	<p>“The River Trent is a commercial waterway, where the transport of equipment may be possible which</p>	<p>Use of the river will be considered where appropriate. However, in all cases, the ‘final leg’ of</p>

Consultee	Comments / Matters Raised	Response / Matters Addressed
	<p>could help to minimise the need to utilise the Highway Network. We advise that the use of the Trent should be included within the Transport and Access chapter, so as to ensure that every possibility to reduce the impact on highway is considered”.</p>	<p>deliveries will be undertaken by the roads set out in the study area.</p> <p>For example, larger equipment, such as transformers, will be transported to Immingham Docks. The final leg of the delivery will be via the strategic and local highway network. This is set out in the Outline CTMP at Appendix 14.2 [EN010132/APP/WB6.3.14.2].</p>
<p>Gringley on the Hill Parish Council (1)</p>	<p>“The report notes the presence of many footpaths and two regional footpaths, the Trent Valley Way and the Cuckoo Way, all of which are extensively accessed by local residents and increasingly also by tourists to our area. We cannot find any reference within the report what impact the construction phase will have upon access to these rights of way, how the development will affect their usage in the future or any acknowledgment as to the footfall that these footpaths currently attract”.</p>	<p>The effects of the development on walking and cycling as set out in Section 14.7.</p> <p>In addition, an Outline Public Right of Way Management Plan has been prepared and is shown at Appendix 14.3 [EN010132/APP/WB6.3.14.3].</p>
<p>Gringley on the Hill Parish Council (2)</p>	<p>“There is no apparent consideration of the potential significant effects associated with walking and cycling delay, in line with the Design Manual for Roads and Bridges (DMRB) and the Institute of Environmental Management and Assessment (IEMA) best practice in EIA. In particular, consideration of Public Rights of Way (PRoW) users as a key receptor during construction and operation. The proposed development area has a number of PRoW within it, including the Trent</p>	<p>The effects of the development on walking and cycling as set out in Section 14.7.</p> <p>In addition, an Outline Public Right of Way Management Plan has been prepared and is shown at Appendix 14.3 [EN010132/APP/WB6.3.14.3].</p>

Consultee	Comments / Matters Raised	Response / Matters Addressed
	<p>Valley Way. Consideration should be given to the potential for the proposed development to result in significant delay to users of PRow, with appropriate PRow surveys to be undertaken to substantiate this assessment. There is no apparent consideration to the potential effects associated with closure or diversion of any PRow nor indication that further surveys would be completed between Scoping and the Environmental Statement (ES). WB4 is heavily used by both recreational users of the PRow and tourists coming to enjoy this landscape and walk the Trent Valley Way”.</p>	
<p>Network Rail (1)</p>	<p>“With reference to the protection of the railway, the Environmental Statement should consider any impact of the scheme upon the railway infrastructure and upon operational railway safety. In particular, it should include a Glint and Glare study assessing the impact of the scheme upon train drivers (including distraction from glare and potential for conflict with railway signals). It should also include a Transport Assessment to identify any HGV traffic/haulage routes that may utilise railway assets such as bridges and level crossings during the construction and operation of the Site”.</p>	<p>Glint and Glare assessment [EN010132/APP/WB6.2.16] has been included as part of the ES. The Transport Assessment at Appendix 14.1 identifies the haulage route, including any rail infrastructure that will be used. A small number of vehicles will travel over the A1500 level crossing, and a under the Station Road railway bridge. All restrictions will be complied with.</p>
<p>Environment al Hazards and Emergencies Department (1)</p>	<p>“It is noted that the IEMA GEART guidelines are to be used and as such the operational phase is to be scoped out. The remainder of the traffic and transport assessment should consider impacts on pedestrians, cyclists and any horse-riding activities”.</p>	<p>The effects of the development in Transport and Access terms are set out in Section 14.7.</p>

Consultee	Comments / Matters Raised	Response / Matters Addressed
Lincolnshire County Council (1)	"The proposed scope for Transport and Access is acceptable to the Council as the Highway Authority".	Noted
West Lindsey District Council (1)	"Cumulative impacts (14.7.24) should include the Gate Burton Solar Project".	Cumulative assessment undertaken at Section 14.9 of this Chapter.
Transport Scoping Report and Meetings		
Lincolnshire County Council	<p>Meeting note (Email TPA to LCC – 22nd April 2022):</p> <p>"From your very initial review, it is understood that the construction vehicle routes and accesses that we are proposing are appropriate, and the construction vehicle trip generation is unlikely to cause any capacity issues. However, you would like the Construction Traffic Management Plan (CTMP) to include measures to prevent construction vehicle movements during the peak hours (08:00-09:00 and 17:00-18:00), which we will incorporate. You would also like to see a cumulative assessment that considers all proposals in the area. This is being undertaken, and will be included in the Environmental Statement and Transport Assessment".</p>	<p>Construction vehicle trips to be coordinated to avoid movement during the peak hours. This will be secured through the Outline CTMP, set out at Appendix 14.2 [EN010132/APP/WB6.3.14.2].</p> <p>Cumulative assessment undertaken at Section 14.9 of this Chapter.</p>
Section 42 Responses		
National Highways	"To understand which route(s) to the site will be the most utilised we would need to see evidence of how HGVs and non-HGV are likely to distribute on the SRN. To inform this, we would seek further clarification on where the construction materials for the site will be travelling from and therefore which part of the SRN will	Construction trip generation has been provided by the Applicant based on the equipment requirements and their experience. This is set out in detail in Table 14.13 and with the CTMP at Appendix 14.2 [EN010132/APP/WB6.3.14.2] .

Consultee	Comments / Matters Raised	Response / Matters Addressed
	<p>be most utilised. In addition, an understanding of where construction workers will be commuting from would inform which parts of the SRN will be most affected by construction worker traffic.</p> <p>We would recommend that the above-mentioned information is set out in the form of a Transport Assessment and we request that construction traffic trip generation and distribution is agreed with National Highways prior to any further transport analysis being undertaken. The information contained in the Transport Assessment can subsequently be used to inform the Construction Traffic Management Plan”.</p>	<p>Construction traffic will be spread out throughout the day, and will be coordinated, where possible, to avoid the network peak hours. Therefore, the effect of construction traffic on the Strategic Road Network (SRN) within the local proximity of the Site will be limited.</p> <p>Information and analysis of the trip generation on the highway network is discussed within the Transport Assessment, at Appendix 14.1 [EN010132/APP/WB6.3.14.1].</p>
Bassetlaw District Council	<p>“Like any proposal, appropriate consideration should be given to the potential impacts of the proposed development against the relevant policies in the development plan alongside relevant material planning considerations.”</p>	<p>Noted. The proposals have been developed in line with the relevant policies, as set out in Section 14.3.</p>
UK Health Security Agency	<p>“The ES should report HGV movements for each array area based on estimated construction periods and should also identify peak periods of HGV movements.</p> <p>This data should be used in accordance with GEART Rules 1 and 2 to form the assessment findings.”</p>	<p>Information and analysis of the trip generation on the highway network is discussed within the Transport Assessment, at Appendix 14.1 [EN010132/APP/WB6.3.14.1].</p>
Clayworth Parish Council	<p>“The scale of the West Burton 4 as currently proposed is incongruous both physically and economically to the well-being of our village. Clayworth is a designated conservation village, planning legislation requires proposals to</p>	<p>The Scheme no longer includes West Burton 4</p>

Consultee	Comments / Matters Raised	Response / Matters Addressed
	<p>preserve and enhance it. We cannot comprehend how these fundamental concerns could be mitigated to safeguard the amenities of our residential and farming community.”</p>	
Royal Mail	<p>“Whilst Royal Mail does not consider that the proposed Solar Park itself will impact upon its operational interests, the cumulative impact of this development and those in the vicinity that are of concern. Every day, in exercising its statutory duties Royal Mail vehicles use all of the main roads that may potentially be affected by the proposed West Burton Solar Park and surrounding developments. These include: • Cottam Solar Park, • Gate Burton Energy Park, • EDF West Burton C, • Decommissioning of West Burton A, • Saxilby Heights, • Development at Land off Sturton Road, • Blyton Driving Centre, • Wood Lane Solar Farm.”</p>	<p>A cumulative assessment has been undertaken as part of this ES Chapter at Section 14.9.</p>
Royal Mail	<p>“Royal Mail therefore requests that the forecasted traffic flows in the PEIR be updated to reflect up to date data of cumulative impacts of nearby developments. Royal Mail wishes to reserve its position to submit a consultation response/s later in the DCO consenting process when sufficient information is available.”</p>	<p>Traffic flows associated with the Scheme, as well as a cumulative assessment are included in this ES Chapter at Section 14.7 and Section 14.9.</p>
Lincolnshire County Council	<p>“The assessment included in this chapter is acceptable, it is based on reasonable assumptions of trip rates, construction duration and route assignment”.</p>	<p>Noted.</p>

Consultee	Comments / Matters Raised	Response / Matters Addressed
Lincolnshire County Council	"The results show that the predicted construction traffic would not cause capacity problems on the local highway network. A Construction Management Traffic Plan (CTMP) is proposed to provide further details. These details will need to include access arrangements, delivery timings and routing controls, swept paths, parking, storage and plant areas and a Travel Plan for construction staff".	An Outline CTMP is included at Appendix 14.2 [EN010132/APP/WB6.3.14.2] .
West Lindsey District Council	"The transitional provisions following the review of the National Policy Statements are noted, as set out in draft EN-1 (September 2021). Nonetheless, it is considered that the draft NPS, particularly draft EN-3, now contain provisions specific to solar projects and that these should be presumed to be important and relevant considerations, even if the project is accepted for examination prior to designation of the statements."	Draft National Policy Statements, including draft EN-3 had been considered as part of this ES Chapter.

14.3 Policy Context

14.3.1 This Chapter of the ES has been prepared with consideration to 'Guidance on Transport Assessments', prepared by the Department for Transport (DfT) in March 2007 (which is now archived but still considered relevant), 'Guidelines for the Environmental Assessment for Road Traffic', Institute of Environmental Management and Assessment (IEMA Guidelines) and the 'Design Manual for Roads and Bridges (DMRB)', National Highways.

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

- National Policy Statement EN-1 (adopted);
- National Policy Statement EN-1 (emerging);
- National Policy Statement EN-3 (adopted);
- National Policy Statement EN-3 (emerging);

- National Policy Statement EN-5 (adopted);
- National Policy Statement EN-5 (emerging);
- National Planning Policy Framework;
- Central Lincolnshire Local Plan (2017); and
- Draft Bassetlaw District Local Plan (2021).

[National Policy Statement EN-1, EN-3 and EN-5 \(Adopted\)](#)

- 14.3.3 National Planning Policy Statement (NPS) EN-1 is the overarching policy statement for Energy. NPS EN-3 is focused on Renewable Energy and NPS EN-5 is focused on Electricity Network Infrastructure.
- 14.3.4 Section 5.13.2 of NPS EN-1 states that *“the consideration and mitigation of transport impacts is an essential part of Government’s wider policy objectives for sustainable development”*.
- 14.3.5 Paragraph 5.13.3 of NPS EN-1 states that *“if a project is likely to have significant transport implications, the applicant’s ES should include a transport assessment”*.

[National Policy Statement EN-1 \(Emerging\)](#)

- 14.3.6 Section 5.14 of the emerging NPS EN-1 relates to the traffic and transport effects of Electricity Network Infrastructure. It states that, *“the transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion. Impacts may include economic, social and environmental effects. Environmental impacts may result particularly from increases in noise and emissions from road transport. Disturbance caused by traffic and abnormal loads generated during the construction phase will depend on the scale and type of the proposal”*.
- 14.3.7 For the Applicant’s Assessment, the emerging NPS EN-1 states that, *“if a project is likely to have significant transport implications, the applicant’s ES (see Section 4.2) should include a transport assessment, using the NATA/WebTAG127 methodology stipulated in Department for Transport DfT guidance, or any successor to such methodology. Applicants should consult the Highways England and Highways Authorities as appropriate on the assessment and mitigation”*.
- 14.3.8 With regards to decisions, the emerging NPS EN-1 states that, *“The Secretary of State should only consider preventing or refusing development on highways grounds if there would be an unacceptable impact on highway safety, or residual cumulative impacts on the road network would be severe”*.

[National Policy Statement EN-3 \(Emerging\)](#)

- 14.3.9 Section 2.54 of the emerging NPS EN-3 relates to construction traffic impacts in relation to solar photovoltaic developments. It states that, *“many solar farms will be sited in areas served by a minor road network. Modern solar farms are large sites that are mainly comprised of small structures that can be transported separately and constructed on-site. It is likely that applicants will designate a construction compound on-site for the delivery and assemblage of the necessary components. Traffic is likely to involve smaller vehicles than typical onshore energy infrastructure but may be more voluminous. It is important that all sections of roads and bridges on the proposed delivery route can accommodate the weight and volume of the loads”*.

14.3.10 For the Applicant's Assessment, the emerging NPS EN-3 states that, *"the applicant should assess whether the access roads are suitable for the transportation of components which will include whether they are sufficiently wide for the proposed vehicles, or bridges sufficiently strong for the heavier components to be transported to the site. It is unlikely that sections of the route will require modification to allow for the transportation of components to the site, given the nature of solar developments, but any potential modifications should be identified, and potential effects assessed as part of the ES... Where a cumulative impact is likely then a cumulative transport assessment should form part of the ES to consider the impacts of abnormal traffic movements relating to the project in question in combination with those from any other relevant development. Consultation with the relevant local highways authorities is likely to be necessary"*.

14.3.11 In terms of mitigation, the emerging NPS EN-3 sets out the following points:

- *"In some cases, the local highways authority may request that the Secretary of State impose controls on the number of vehicle movements to and from the solar farm site in a specified period during its construction and, possibly, on the routing of such movements particularly by heavy vehicles";*
- *"Where cumulative effects on the local road network or residential amenity are predicted from multiple solar farm developments, it may be appropriate for applicants for various projects to work together to ensure that the number of abnormal loads and deliveries are minimised";*
- *"Once consent for a scheme has been granted, applicants should liaise with the relevant local highway authority (or other coordinating body) regarding the start of construction and the broad timing of deliveries. It may be necessary for an applicant to agree a planning obligation to secure appropriate measures, including restoration of roads and verges".*

14.3.12 With regards to decisions, the emerging NPS EN-3 states that:

- *"the Secretary of State should be satisfied, taking into account the views of the relevant local highway authorities, that if there are abnormal loads proposed, they can be safely transported in a way that minimises inconvenience to other road users and that the environmental effects of this and other construction traffic, after mitigation, are acceptable";*
- *"Once solar farms are in operation, traffic movements to and from the site are generally very light, in some instances as little as a few visits each month by a light commercial vehicle or car... Therefore, it is very unlikely that traffic or transport impacts from the operational phase of a project would prevent it from being approved by the Secretary of State".*

[National Planning Policy Framework \(2021\)](#)

14.3.13 Paragraph 111 of the National Planning Policy Framework states that, *"Development should only be prevented or refused on highways grounds if there would be an*

unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe”.

- 14.3.14 Paragraph 113 of the NPPF states, *“All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed”.*

[Central Lincolnshire Local Plan \(2017\)](#)

- 14.3.15 Policy LP19 of the Central Lincolnshire Local Plan (2017) states that *“...Proposals for non-wind renewable technology will be assessed on their merits, with the impacts, both individual and cumulative, considered against the benefits of the scheme...”* The policy states that assessment should take account of *“safety, including ensuring no adverse highway impact”*

[Draft Bassetlaw District Local Plan 2020-2037 \(2021\)](#)

- 14.3.16 Policy ST51 of the draft Bassetlaw Local Plan (August 2021) states that, *“Development that generates, shares, transmits and/or stores renewable and low carbon energy, including community energy schemes, will be supported subject to the provision of details of expected power generation based upon yield or local self-consumption of electricity and by demonstrating the satisfactory resolution of all relevant wider impacts...”*. The impacts include, *“existing highway capacity and highway safety”*.

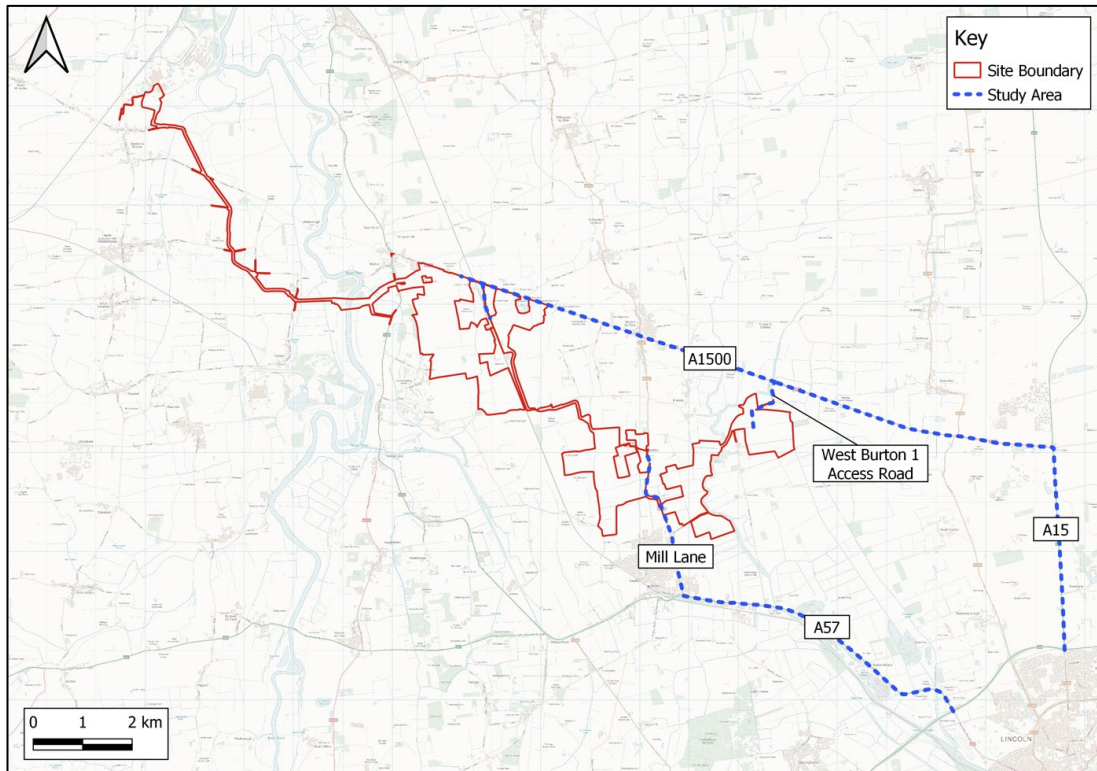
14.4 Assessment Methodology and Significance Criteria

- 14.4.1 This section sets out the assessment methodology. It sets out the study area, types of effects that will be assessed, the significance criteria and any limitations to the assessment.

[Study Area](#)

- 14.4.2 The study area has been identified to cover the local roads which make up the construction vehicle routes to the Site. This is the area whereby transport and access significant effects are likely to occur.
- 14.4.3 As stated the Transport and Access effects of the Cable Route Corridor are assessed separately within this Chapter. This is because use of each access on the Cable Route Corridor is expected to last just 90 days. Further information is set out at Section 14.7.
- 14.4.4 The study area is shown in **Figure 14.1**.

Figure 14.1: Study Area



14.4.5 The roads included within this study area are as follows:

- A15;
- Till Bridge Lane (A1500);
- Unclassified road to the south of the A1500 (West Burton 1 Access Road);
- A57 Saxilby Road; and
- B1241 Mill Lane/Sturton Road.

14.4.6 The local highway network surrounding the Cable Route Corridor is not included within the Study Area. The effects of the Cable Route Corridor are considered separately as the effects are more temporary in nature (just 90 working days per access). Further information is set out at Section 14.7.

Sources of Information

14.4.7 The following sources of information have been used in the assessment of transport and access effects:

- Automatic Traffic Count (ATC) Surveys;
- Department for Transport (DfT) 'Road Traffic Statistics' Database;
- Personal injury accident data, obtained from Lincolnshire County Council;
- Highway boundary information obtained from Lincolnshire County Council;

- OS Mapping; and
- Topographical surveys.

Types of Effect

14.4.8 In accordance with the IEMA Guidelines for assessment of the environmental effects of road traffic, the following criteria has been considered in this assessment:

- Accidents and Safety;
- Severance;
- Driver Delay;
- Pedestrian Delay;
- Pedestrian Amenity (including Fear and Intimidation); and
- Hazardous Loads.

14.4.9 A description of each impact is provided below.

Accidents and Safety

14.4.10 The IEMA Guidelines do not include any definition in relation to the assessment of effects on accidents and safety. They advise that professional judgement should be used to assess the implications of local circumstance, or factors which may increase or decrease the risk of accidents.

Severance

14.4.11 The IEMA Guidelines define severance as *“the perceived division that can occur within a community when it becomes separated by a major traffic artery”* (paragraph 4.27) that *‘separates people from places’*, for example, difficulties crossing existing roads or the physical barrier of the road itself.

14.4.12 There are no predictive formulae which give simple relationships between traffic factors and levels of significance. Nevertheless, there are a range of indicators for determining significance of the relief from severance. The IEMA Guidelines suggest that *“changes in traffic flow of 30%, 60% and 90% are regarded as producing slight, moderate and substantial changes in severance respectively”* (paragraph 4.31). The guidance also suggests that *“marginal changes in traffic flows are, by themselves, unlikely to create or remove severance”*.

Driver Delay

14.4.13 The IEMA Guidelines state that *“delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system”* (paragraph 4.34). As such, the impact of a proposed development on driver delay is typically considered in relation to background traffic. Junction assessment modelling can be used to estimate increased vehicle delays at junctions, if necessary.

Pedestrian Delay (to include cyclists)

- 14.4.14 The IEMA Guidelines state that “changes in the volume, composition or speed of traffic may affect the ability of people to cross roads. In general, increases in traffic levels are likely to lead to increases in delay” (paragraph 4.35). There are a range of local factors that affect pedestrian (and cyclist) delay, including the level of pedestrian (and cyclist) activity, visibility and general physical conditions of the site. However, the IEMA Guidelines do not set out thresholds for judging the significance of changes in levels of delay, and suggest that the assessor uses their judgement to determine whether pedestrian delay is a significant impact.

Pedestrian Amenity (Including Fear and Intimidation and amended to include cyclists)

- 14.4.15 Pedestrian (and cyclist) amenity is broadly described in the IEMA Guidelines as “the relative pleasantness of a journey” (paragraph 4.39) and can be affected by traffic flow, composition and footway widths. This definition includes pedestrian (and cyclist) fear and intimidation and can be considered a much broader category when considering the overall relationship between pedestrians (and cyclists) and traffic. The IEMA Guidelines suggest that a threshold for judging this would be “where the traffic flows (or its lorry component) is halved or doubled” (paragraph 4.39).

Hazardous Loads

- 14.4.16 The IEMA Guidelines state that some developments include hazardous loads, and that this should be recognised by the assessment.
- 14.4.17 Some deliveries to the Site during the construction phase will be regarded as ‘hazardous loads’. These include the deliveries of lithium-ion batteries, transformer oil and insulation gas. All applicable regulations for the movement of hazardous loads will be followed, and the appropriate documentation will be obtained.
- 14.4.18 Whilst not hazardous, there will be abnormal loads to transport the transformers for the substation. An abnormal load is one where the vehicle exceeds 44 tonnes, the width is over 2.9m or the length is more than 18.65m.

[Assessment of Significance](#)

- 14.4.19 The assessment of the Scheme’s potentially significant effects has taken into account the construction phase and operational phase. The effects for the decommissioning phase are likely to be equivalent to, and no worse than, the construction phase. This is due to best-practice changing over time. Whilst the precise decommissioning methodology is not currently known, it will accord with the requirements of the local authority and will be in line with the **Outline Decommissioning Plan [EN010132/APP/WB7.2]**. The significance level attributed to each effect (set out above) has been assessed based on the sensitivity of the affected receptor to change, and the magnitude of change as a result of the Scheme.

Sensitivity of Receptor and Magnitude of Change

14.4.20 **Table 14.2** provides definitions to determine the sensitivity of a receptor.

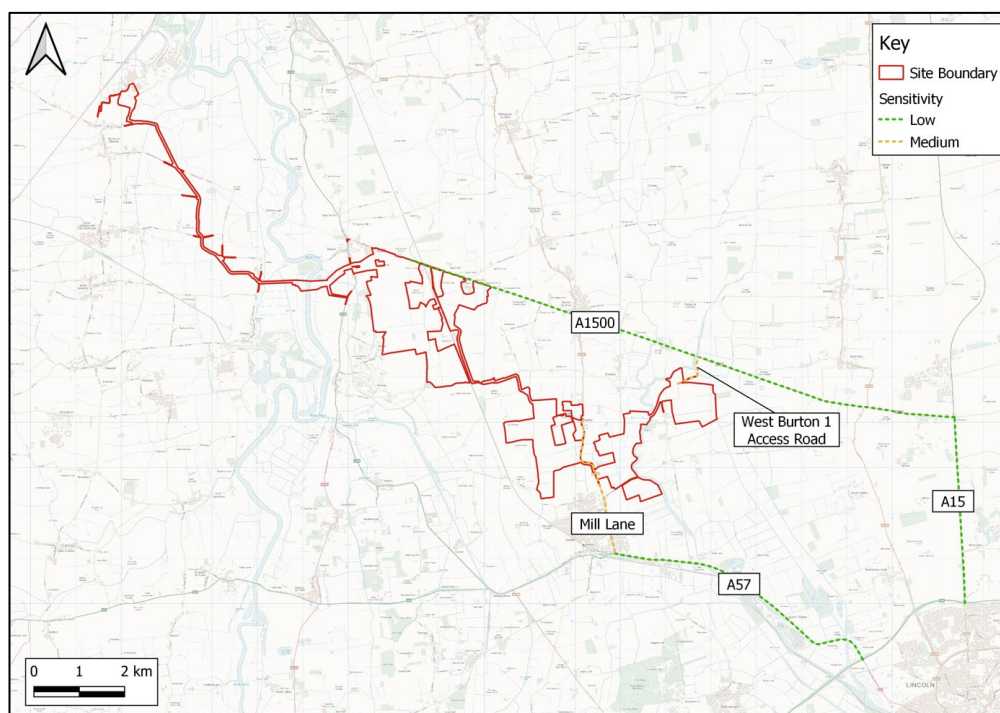
Table 14.2: Sensitivity/Importance of Identified Receptor

Sensitivity	Definition
High	Receptors of greatest sensitivity to traffic flows, such as schools, playgrounds, accident blackspots, retirement homes, areas with no footways with high pedestrian footfall, congested areas
Medium	Receptors with some sensitivity to traffic flow, such as conservation areas, listed buildings, tourist attractions, and residential areas
Low	Receptors with low sensitivity to traffic flows, and those distant from affected roads
Negligible	Receptors with no material sensitivity to traffic flows

14.4.21 The Study Area, as shown in **Figure 14.1** encompasses A- class roads (e.g. A15 and A1500) and more rural B roads (e.g. Mill Lane). There are few receptors on the A-class roads (such as schools, retirement homes, high pedestrian footfall), which are considered to have a high sensitivity to changes in traffic flows. The B class roads have more receptors through residential frontages. They are also more rural in nature and are therefore likely to have greater sensitivity to changes in traffic flow. Therefore, receptors in these locations are considered to have medium sensitivity.

14.4.22 The sensitivity of receptors along links within the study area are summarised **Figure 14.2**.

Figure 14.2: Sensitivity of Links/Receptors within Study Area



14.4.23 The IEMA Guidelines set out two rules which will be used as threshold impacts to define the scale and extent of the assessment, as follows:

- Rule 1: Include highway links where traffic flows will increase by more than 30% (or where the number of HGVs will increase by more than 30%); and
- Rule 2: Include any other specifically sensitive areas where traffic flows have increased by 10% or more.

14.4.24 It is notable that, on roads where baseline traffic flows are low, any increase in traffic flow may result in a predicted increase that would be higher than the two rules set out in the IEMA Guidelines. However, it is important to consider any overall increase in road traffic in relation to the capacity of the road.

14.4.25 The IEMA Guidelines state that *“For many effects there are no simple rules or formulae which define the thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed up by data or quantified information wherever possible”, and “those preparing the Environmental Statement will need to make it clear how they have defined whether a change is considered significant or not”* (paragraph 4.5).

14.4.26 The IEMA Guidelines identify general thresholds for traffic flow increases of 10% and 30%. Where the predicted increase in traffic / HGV flow is lower than these thresholds, then the significance of the effects should be considered to be low or not significant and further detailed assessment is not required. However, to ensure

a robust assessment of the increase in traffic flows in environmental terms, **Table 14.3** will be used to help determine the magnitude of change.

Table 14.3: Magnitude of Change

Magnitude	Definition
High	Changes to peak / 24hr traffic within the Study Area by 30% or more
Medium	Changes to peak / 24hr traffic within the Study Area by between 10% and 30%
Low	Changes to peak / 24hr traffic within the Study Area by between 5% and 10%
Negligible	Changes to peak / 24hr traffic within the Study Area up to 5%
Neutral	No Change (+/- daily Variation)

Significance of Effect

14.4.27 The magnitude of change and receptor sensitivity have been compared to determine the overall significance of effects. This is shown in **Table 14.4**.

14.4.28 There are four categories demonstrating the significance of the effect. These can be adverse or beneficial:

- Negligible – Very little change from baseline conditions;
- Minor – A minor shift away from baseline conditions;
- Moderate – A material shift away from the baseline conditions; and
- Major – Substantial alteration to baseline conditions.

Table 14.4: Significance of Potential Effects

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

14.4.29 Whilst this is a useful guideline, the effects do need to be reviewed in the context of baseline traffic flows. Within the study area, many roads are rural in nature with low baseline traffic flows. In these locations, the addition of any traffic could result in high percentage changes (over 100% in places). However, as the baseline traffic flows are low, the effects could still be considered minor or negligible.

- 14.4.30 Identified effects that are moderate or major in nature are considered to be 'significant' in EIA terms.
- 14.4.31 The effects can be temporary or permanent and short, medium or long term in duration. The duration of these effects are considered to be as follows:
- A short term effect – an effect that will be experienced for 0-5 years;
 - A medium term effect – an effect that will be experienced for 5-15 years; and
 - A long term effect – an effect that will be experienced for 15 years or longer.

Limitations and Assumptions

- 14.4.32 A number of assumptions are made when forecasting the traffic generation of the Scheme, both during construction and operation. These forecasts have been developed by the Applicant and their consultants based on professional judgement and derived from experience with other developments similar in scale and nature to the Scheme. Therefore, they are considered to represent a realistic estimation of traffic generation.
- 14.4.33 In addition, there are some limitations to the data used. The COVID-19 pandemic and associated restrictions disrupted normal traffic flows on the network, although surveys were undertaken outside of lockdown periods.
- 14.4.34 Notwithstanding the limitations and assumptions referenced, it is considered that the methodology and conclusions to this chapter are robust.

14.5 Baseline Conditions

The Scheme and Context

- 14.5.1 The Scheme comprises three Sites: West Burton 1, 2 and 3. A substation and BESS will be located within West Burton 3. Each area encompasses a number of separate fields. The Baseline Conditions focuses on the Study Area for West Burton 1, 2 and 3, as set out in **Figure 14.1**.
- 14.5.2 West Burton 1, 2 and 3 are all located to the south of the A1500 Till Bridge Lane, near Sturton by Stow.
- 14.5.3 West Burton 1 is the smallest of the three Sites. It is located to the south of the A1500, a single carriageway road running in an east to west alignment, whereby the national speed limit applies. Access to the land is via an unclassified road to the east of Broxholme, which connects to the A1500.
- 14.5.4 West Burton 2 is located to west of West Burton 1, and to the south of the A1500. The area is located between Sturton by Stow and Saxilby. The B1241 Mill Lane/Sturton Road, a single carriageway road, dissects the Site in a north to south alignment.
- 14.5.5 West Burton 3 is located to the north-west of West Burton 2, and to the south of the A1500. The area is situated between the villages of Marton and Sturton by Stow. The

Gainsborough to Lincoln Railway line dissects the Site in a south-east to north-west alignment.

- 14.5.6 Grid connection cables will connect the Sites to the main substation at West Burton 3 and subsequently to the grid connection at West Burton Power Station. In most places, a 50m wide corridor has been set out for this to facilitate the works. A full description of the Sites and the Scheme are provided in **ES Chapter 3: The Order Limits [EN010132/APP/WB6.2.3]**, and **ES Chapter 4 ‘Scheme Description’ [EN010132/APP/WB6.2.4]**.

[Walking and Cycling](#)

Walking

- 14.5.7 Due to the rural nature of many of the access roads that make up the study area, there are limited pedestrian specific facilities. The pedestrian features are summarised below:
- West Burton 1 – There are no footways present on either the A1500 Till Bridge Lane, or the unclassified access road through the Site;
 - West Burton 2 – A footway is present on the north side of the A57. Footways are also present on both sides of Mill Lane, through Saxilby. There are no footways to the north of Saxilby on the B1241;
 - West Burton 3 – There are no footways present on either the A1500 Till Bridge Lane, to the north of the Brampton Area, nor on Cowdale Lane to the south of the Brampton Area.

Public Rights of Way

- 14.5.8 There are several Public Rights of Way (PROWs) that run through or nearby each Site or within the vicinity of the Cable Route Corridor (or ‘Grid Connection Route’ as is used in this Chapter of the ES). These are summarised in **Table 14.5**.

Table 14.5: Public Rights of Way

Public Right of Way	Nearest Site	Route
Scmp 196/1	West Burton 1	A1500 south to a footbridge.
Brox 196/1	West Burton 1	Connects from Scmp 196/1 to Main Street
Brox 197/1	West Burton 1	Connects diagonally from Main Street to Main Street
Mton 68/1	West Burton 3	High Street to Stow Park Road
Bram 66/1	Cable Route	High Street to Mton 66/4
Mton 66/4	Cable Route	Connects from Bram 66/1 to Trent Port Road

Cottam FP1	Cable Route	Parallel to River Trent and connects onto North Leverton with Habbleshthorpe FP9
North Leverton with Habbleshthorpe FP9	Cable Route	Connects from Cottam FP1 continues north parallel to River Trent
North Leverton with Habbleshthorpe BOAT14	Cable Route	Coates Road to Northfield Road
North Leverton with Habbleshthorpe FP18	Cable Route	Northfield Road to Thornhill Lane
Sturton Le Steeple BW5	Cable Route	Fenton Lane to Thornhill Lane
Sturton Le Steeple FP38	Cable Route	Church Lane to Common Lane
Sturton Le Steeple RB32	Cable Route	Littleborough Lane to Common Lane
Sturton Le Steeple FP39	Cable Route	Common Lane to Ferry Lane
Sturton Le Steeple FP15	Cable Route	Common Lane towards Burton Round
Sturton Le Steeple FP17	Cable Route	Common Lane, near North Street Farm and connects to West Burton 1

Cycling

- 14.5.9 There is no dedicated cycling infrastructure surrounding the Sites and Study Area for West Burton 1, 2 and 3.
- 14.5.10 National Cycle Route Network Route 64 passes within 5km of the southern end of West Burton 2 on the former Lancashire, Derbyshire and East Coast Railway.
- 14.5.11 The National Byways cycle route passes within 1km of the West Burton connection point and interacts with the Cable Route Corridor at a number of locations between Coates (Nottinghamshire) and Sturton le Steeple.

Recreational Routes

- 14.5.12 There are a number of long-distance recreational walking and cycling routes near to the Scheme, including passing through parts of the Order limits. These include: the county/regional Plogsland Round (500m to the south of West Burton 1, and crossing through West Burton 2 on Broxholme Lane), and the national Trent Valley Way, which crosses the Cable Route Corridor via the western bank of the River Trent and via its variant route on Fenton Lane, near Sturton le Steeple.

[Public Transport](#)

Bus

- 14.5.13 There are a number of bus services operating within the vicinity of West Burton 1, 2 and 3. A summary of the existing bus services are found in **Table 14.6** below.

Table 14.6: Summary of Existing Bus Services

Route Number	Nearest Bus Stop	Nearest Site	Route
100	St Botolph's Church	WB1/2	Lincoln - Gainsborough
105		WB1/2	Lincoln - Gainsborough
106		WB1/2	Gainsborough - Lincoln
107	Fosdyke Gardens	WB1/2	Lincoln - Gainsborough
	The Paddock	WB3	
777	St Botolph's Church	WB1	Lincoln - Saxilby
906	Manor Road	WB1/WB2	Welton - Saxilby
	Manor Farm Lane End	WB3	

Rail

- 14.5.14 The nearest railway stations are Saxilby Train Station and Gainsborough Train Station. Saxilby Train Station is located approximately six miles west of Lincoln and is managed by Northern Rail. The station has services running approximately every 30 minutes to destinations such as Leeds, Peterborough and Lincoln.
- 14.5.15 Gainsborough Train Station is located approximately 14 miles south of Scunthorpe and is also managed by Northern Rail. The station has services running approximately every 30-60 minutes to destinations such as Lincoln, Retford and Leeds.
- 14.5.16 A railway line intersects the West Burton 3 Site. A level crossing is situated on the A1500 Stow Park Road to the north of the West Burton 3 Site.

Local Highway Network

- 14.5.17 An overview of the local highway network is provided below.

A15

- 14.5.18 The A15 is a single carriageway two-way road subject to the national speed limit which connects the M180 to the north with the A46 to the south. The road has a predominantly straight alignment throughout.

A1500 Till Bridge Lane / Stow Park Road

- 14.5.19 The A1500 is a single carriageway two-way road, subject to the national speed limit. It connects the A15 to the east to the village of Marton to the west and generally has a straight alignment.

Unclassified Road south of A1500 (West Burton 1 Access Road)

- 14.5.20 The Unclassified Rural Road south of the A1500, is a single lane road that has no central markings and is subject to the national speed limit.

A57 Lincoln Road

- 14.5.21 The A57, is a single carriageway road that runs from Liverpool to Lincoln. Within the vicinity of the Site it is a wide single carriageway road that is subject to a 60mph speed limit.

B1241 Mill Lane

- 14.5.22 The B1241 is a single carriageway road that runs in a north-south orientation from the A57, through the village of Saxilby. The road has footways present on both sides of the road and is subject to a 30mph speed limit.

B1241 Sturton Road

- 14.5.23 To the north of Saxilby, Mill Lane becomes Sturton Road is a single carriageway and is subject to a 30mph speed limit as it leaves the village of Saxilby to the south. After approximately 170m from Saxilby, the national speed limit applies as the road travels north towards Ingleby.

[Traffic Flows](#)

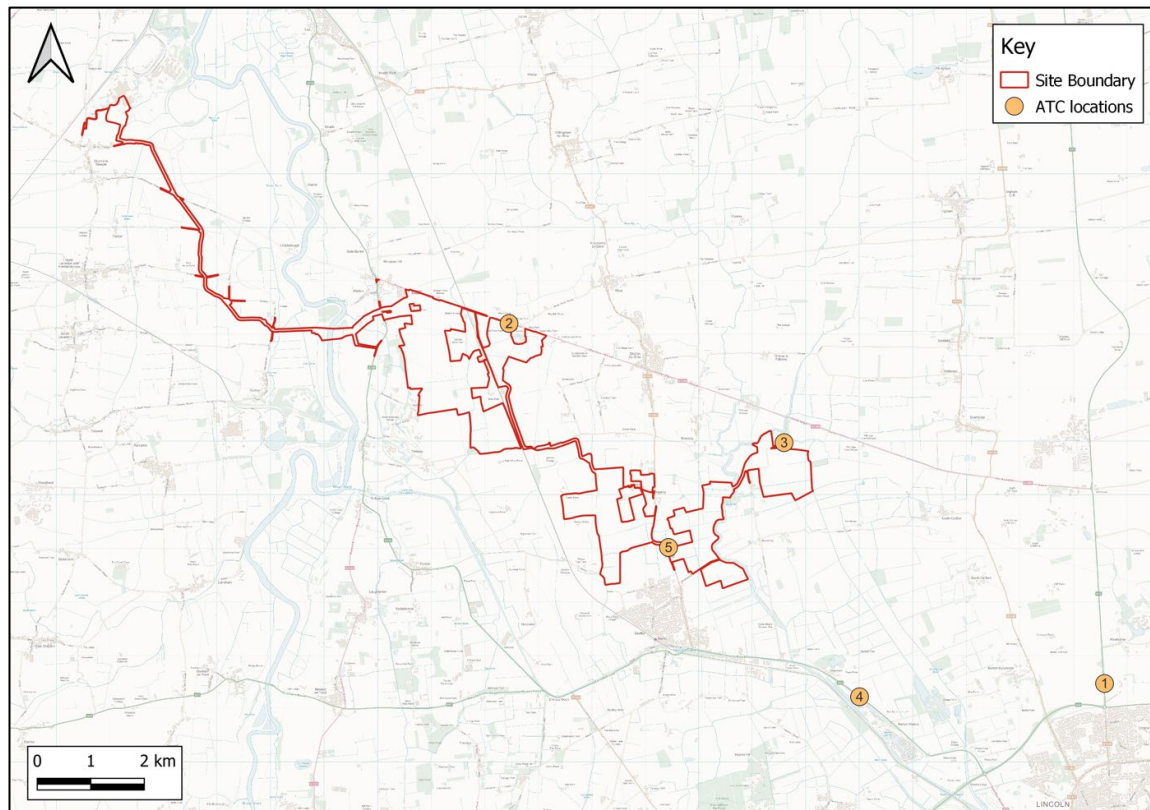
- 14.5.24 Automatic Traffic Count Surveys have been undertaken for all roads within the Study Area. These were undertaken between 2nd November 2021 and 8th November 2021. At the time, there were no Covid-19 restrictions in place. In addition, DfT data has been reviewed for the busier roads in the network, including the A15 and A57. Data from the DfT has been obtained for 2019, prior to the Covid-19 pandemic. The average weekday two-way traffic count for the main roads within the vicinity of the Site is set out in **Table 14.7**. A plan showing the location of the counting points is shown in **Figure 14.3**.

Table 14.7: Baseline Traffic Flows – Average Weekday (24HR), Two-Way

ATC Ref	Link	Sensitivity	Total Vehicles	%HGV*
West Burton 1 & 3				
1	A15	Low	12,661	17%
2	A1500 Till Bridge Lane	Low	4,521	17%
West Burton 1				
3	Unclassified Road south of A1500	Medium	183	14%
West Burton 2				
4	A57 Lincoln Road	Low	12,722	5%
5	B1241 Mill Lane/Sturton Road	Medium	3,852	18%

*HGV refers to vehicles above 3.5 tonnes split into Ordinary Goods Vehicle (OGV) 1 and 2

Figure 14.3: Traffic Count Locations



14.5.25 The traffic flows in **Table 14.7** show that HGVs¹ are already present on all local roads, which demonstrates a precedent for HGV use. Many of these vehicles are likely to be agricultural in nature.

[Road Safety](#)

14.5.26 Statistics showing Personal Injury Collisions (PIC) on the local road network have been obtained from Lincolnshire County Council for the most recent five-year period up to and including 2021.

14.5.27 A breakdown of the accidents is shown in **Table 14.8**.

Table 14.8: Personal Injury Collision Data (2016 – 2021)

Ref	Link	Slight	Serious	Fatal	Total
West Burton 1 & 3					
1	A15	2	0	0	2
2	A1500 Till Bridge Lane	14	4	0	18
West Burton 1					
3	Unclassified Road south of A1500	0	0	0	0
West Burton 2					
4	A57 Lincoln Road	3	1	0	4
5	B1241 Mill Lane/Sturton Road	4	0	0	4

14.5.28 **Table 14.8** indicates a total of 28 collisions within the Study Area. Of these, 23 resulted in slight injuries and five in serious injuries. No fatal injuries have occurred within the Study Area in the most recent five-year period.

14.5.29 Generally, collisions appear to be distributed throughout the Study Area and no specific highway safety issue is identified as a result.

[Future Baseline](#)

14.5.30 There are currently no planned highway works within the study area beyond routine maintenance.

14.5.31 Traffic flows may change slightly as a result of cumulative developments in the area. This is discussed further in the 'Cumulative Effects' section of this chapter.

14.5.32 To pick up background traffic growth, industry standard TEMPro growth factors, which have been adjusted in line with the National Traffic Model (NTM), have been

¹ An HGV refers to any Heavy Goods Vehicle that has a gross weight over 3.5 tonnes. 'A Simplified Guide to Lorry Types and Weights' Department for Transport, October 2003.

applied to the observed traffic flows. A baseline year of 2025 has been assumed, as a reasonable start date from construction.

- 14.5.33 The TEMPro growth factor for the West Lindsey District is shown in **Table 14.9**.

Table 14.9: TEMPro Growth Factors (2021-2025)

Year	Growth Factor
2021-2025	1.0555

- 14.5.34 The 2025 future baseline traffic flows are shown in **Table 14.10**.

Table 14.10: Future Baseline (2025) Traffic Flows – Average Weekday (24HR), Two-Way

Link	Sensitivity	Total Vehicles	%HGV*
West Burton 1 & 3			
A15	Low	13,364	17%
A1500 Till Bridge Lane	Low	4,772	17%
West Burton 1			
Unclassified Road south of A1500	Medium	193	14%
West Burton 2			
A57 Lincoln Road	Low	13,428	5%
B1241 Mill Lane/Sturton Road	Medium	4,066	18%

14.6 Embedded Mitigation

Construction Phase

- 14.6.1 Embedded mitigation measures will be implemented during the construction period.
- 14.6.2 An outline Construction Traffic Management Plan (CTMP) has been prepared and will be secured through the DCO. The outline CTMP is shown in **Appendix 14.2 [EN010132/APP/WB6.3.14.2]**.
- 14.6.3 The outline CTMP provides a framework for the management of construction vehicle movements to and from the Scheme, to ensure that the effects of the temporary construction phase on the local highway network are minimised. The outline CTMP sets out construction access arrangements, construction vehicle routing, construction vehicle trip generation, and the management/mitigation measures. It also summarises the requirements for vehicles to transport abnormal loads (for

elements such as transformers), based on a report undertaken by Wynns Limited, which is appended to the outline CTMP.

14.6.4 A number of embedded mitigation/management measures are set out within the outline CTMP for the control of vehicles associated with the construction phase. These will include, but will not be limited to the following:

- Signs to direct construction vehicles associated with the development will be installed along the agreed construction traffic route. Delivery drivers, contractors and visitors will be provided with a route plan in advance of delivering to Site to ensure that vehicles follow the identified route;
- Advisory signs informing contractors and visitors that parking is not permitted on-street in the vicinity of the Site or on the Site access road;
- All signage on the designated route will be inspected twice daily by the Site Manager (once in the morning and once at lunchtime), to ensure they are kept in a well maintained condition and located in safe and appropriate locations;
- A compound area for contractors will be set up on-Site including appropriate parking spaces. Contractors and visitors will be advised that parking facilities will be provided on-Site in advance of visiting the Site and that they should not park on-street;
- A wheel wash facility will be provided ahead of exiting the Site allowing vehicles to be hosed down so that no construction vehicles will take mud or debris onto the local highway network;
- A road sweeper will be provided for surrounding local roads along the designated route to alleviate any residual debris generated during the construction phase, as required;
- The Site will be secured at all times with Heras fencing;
- A requirement for engines to be switched off on-Site when not in use;
- Spraying of areas with water supplied as and when conditions dictate to prevent the spread of dust;
- Vehicles carrying waste material off-Site to be sheeted;
- Banksman will be provided at the Site access junctions to indicate to construction traffic when it is safe for them to enter and exit the Site;
- All residents in the vicinity of the Site along the designated route will be provided with contact details of the Site Manager, which will also be provided on a Site-board at the Site access and egress junctions;
- Agreement to a Road Condition Survey with the local highway authority; and
- Works to enable abnormal load deliveries.

Operational Phase

14.6.5 The following embedded mitigation measures will be implemented during the operational phase:

- Maintaining access to all existing PRoW within the order limits, with no diversions or closures;
- Providing suitable points of access for operational vehicles;
- The planting of landscaping and screening to conceal any reflections from the panels, which could affect drivers on the local highway network and rail network.

Decommissioning Phase

14.6.6 A requirement for a Decommissioning Traffic Management Plan (DTMP) to be agreed with the local highway authority prior to Decommissioning will be secured through the DCO as part of the **Outline Decommissioning Plan [EN010132/APP/WB7.2]**. This will follow the principles of the outline CTMP. It is not anticipated that the effects associated with decommissioning will be worse than during the construction phase.

14.7 Identification and Evaluation of Likely Significant Effects

Temporary Construction Phase: West Burton 1, 2 and 3

14.7.1 This section summarises the likely effects associated with the movement of vehicles during the construction phase for the Sites (West Burton 1, 2 and 3). The assessment of the effects of the Cable Route Corridor is discussed later in this Section.

Construction Programme

14.7.2 The construction programme for the entire Scheme is anticipated to last 24 months. The anticipated construction programme (and the basis for the assessment of effects in this ES) is broken down for each Site below. More information can be found in Chapter 4 of the ES **[EN010132/APP/WB6.2.4]**.

- West Burton 1 – 238 working days (Month 14 - 24)
- West Burton 2 – 471 working days (Month 1 – 22)
- West Burton 3 – 520 working days (Month 1 – 24)

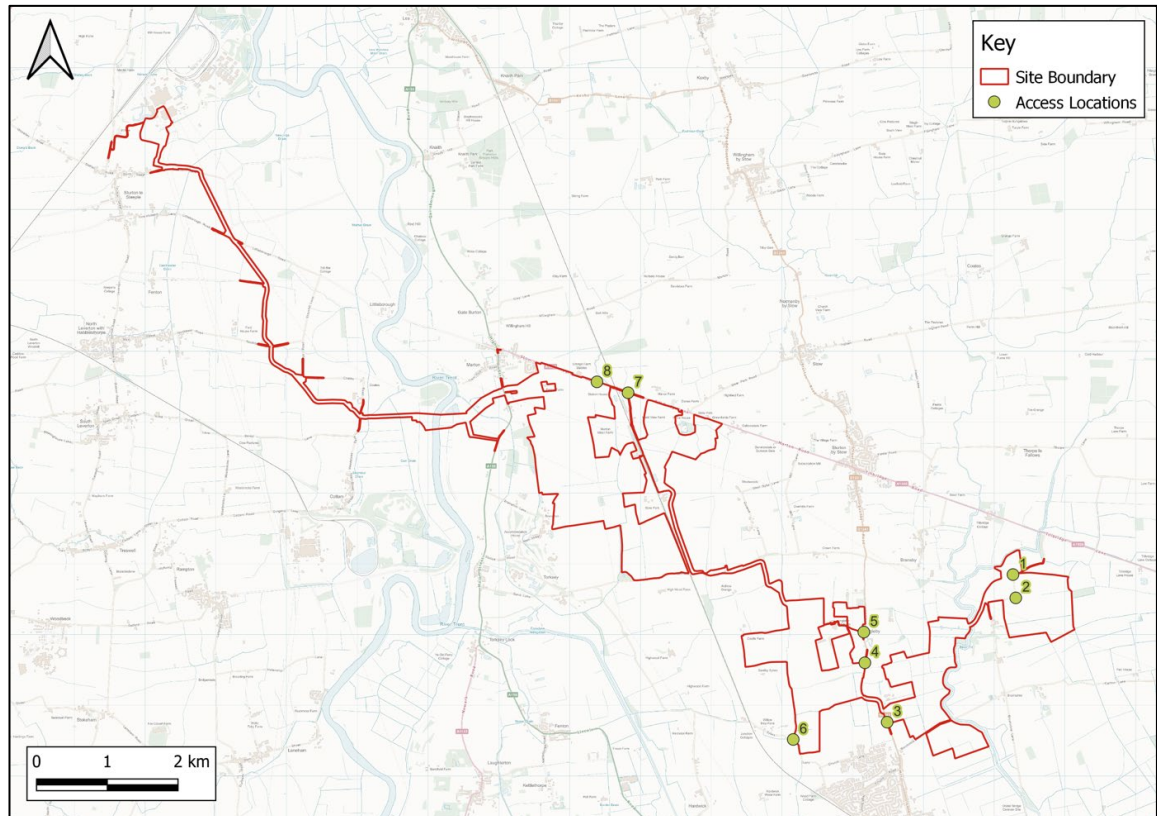
Construction Vehicle Accesses

14.7.3 There will be a total of eight access points across West Burton 1, 2, 3. All will be used for both the construction and operational phases. The access locations are summarised in **Table 14.11** and are shown in **Figure 14.4**. The majority of access points will be improved existing field accesses.

Table 14.11: Access Locations

Ref	Location	Description	Use
West Burton 1			
1	Unclassified Road, 880m south of A1500 junction	Improved existing access	Construction Operational
2	Unclassified Road, 1,200m south of A1500 junction	Improved existing access	Construction Operational
West Burton 2			
3	B1241 (Sturton Road), south of Levertons Caravan Storage	New access	Construction Operational
4	B1241 (Sturton Road), north of Levertons Caravan Storage	Existing agricultural access	Construction Operational
5	B1241 (Sturton Road), adj to Ingleby Hall Livery	Existing agricultural access	Construction Operational
6	Sykes Lane	Existing agricultural access	Operational
West Burton 3			
7	A1500, east of the train line	Improved existing access	Construction Operational
8	A1500, west of the train line	New access	Construction Operational

Figure 14.4: Construction and Operational Access Locations



Construction Traffic Flows: Heavy Goods Vehicles (HGVs)

14.7.4 The construction period will include the use of HGVs to bring the equipment onto the Site and this will be strictly managed to ensure that vehicle movement is controlled and kept to a minimum. On a day-to-day basis, the largest vehicle that will be used to deliver equipment to the Site will be a 16.5m articulated vehicle, although a significant proportion of movements will be by smaller vehicles. A summary of the construction activity that requires HGV movements is as follows:

- Delivery of solar modules and mounting structures – these make up the majority of deliveries. The largest vehicle used in these deliveries will be 16.5m articulated vehicles;
- Delivery of Inverters and Transformers;
- Delivery of Substation equipment;
- Delivery of material for the access track construction; and
- Other deliveries for items such as waste, fencing, sand and gravel.

14.7.5 There will be a small number of abnormal load movements to transport large transformers. Wynns, a specialist haulage company, has been appointed to coordinate the movement of these loads. Additional information on the movement

of abnormal loads is set out within the CTMP at **Appendix 14.2 [EN010132/APP/WB6.3.14.2]**.

- 14.7.6 Construction vehicles will avoid travel during the network peak hours where possible. Therefore, deliveries will be scheduled for between 09:30 and 16:30 where possible.
- 14.7.7 **Table 14.12** summarises the number of HGVs expected at each Site during the construction phase. It is expected that there will be a relatively flat profile of deliveries throughout the construction period. Therefore, an average number of deliveries per day has been calculated based on the length of the construction period.
- 14.7.8 Whilst an average day is presented, it is acknowledged that there will be small peaks throughout the construction period, especially during each Site set up. To account for this, a 50% uplift has been applied for the purposes of assessment to provide a reasonable worst-case scenario.

Table 14.12: Construction Traffic Flows/HGVs (One-Way)

Construction Activity	Vehicle Size (Max)	West Burton 1	West Burton 2	West Burton 3	Total
Construction Period (Working Days)		238	471	520	520
Ground Mounted PV Modules	16.5m Articulated	490	960	1,830	3,280
Conversion Units	16.5m Articulated	10	20	30	60
Access Track	10m Tipper	80	280	550	910
General (Fencing, Landscaping, etc.)	10m Rigid	280	950	1,250	2,480
Energy Storage Facility*	16.5m Articulated	-	-	200	200
Total		860	2,210	3,860	6,930
Total Movements (Arrivals + Departures)		1,720	4,420	7,720	13,860
Average Arrivals per Day		4	5	7	16
Average Movements per Day (Arrivals + Departures)		8	10	14	32
Average Arrivals per Day (Peak Period – Plus 50%)		5	7	11	23
Average Movements per Day (Peak Period – Plus 50%)		10	14	22	46

* sometimes referred to as 'BESS'

Average HGV Arrivals and Departures per Day – 16 (32 Trips)

Peak HGV Arrivals and Departures per Day – 23 (46 Trips)

Construction Traffic Flows: Car/Light Goods Vehicle (LGV) Movements

- 14.7.9 On an average day, there is expected to be 375 workers spread across the Sites. To account for peak periods at different Sites, 455 (including 440 for the solar array development and 15 at the BESS site) construction workers has been taken forward for assessment as a reasonable worst case. For assessment, construction workers have been spread across the Sites on a proportional basis.
- 14.7.10 Construction worker shifts will be scheduled so that workers are not traveling during the network peak hours of 08:00-09:00 and 17:00-18:00.
- 14.7.11 As part of the Outline CTMP at **Appendix 14.2 [EN010132/APP/WB6.3.14.2]** an Outline Construction Worker Travel Plan has been prepared. This includes a measure for the provision of shuttle buses to transport construction workers to and from the Sites. This is particularly important for non-local workers, who will stay in local accommodation and be transported to the Sites. It can also be utilised by other workers as appropriate. It is expected that a shuttle bus will be able to accommodate 20 workers. In addition, workers who drive will be encouraged to car share where possible.
- 14.7.12 With this in mind, it is assumed that 50% of workers will arrive by shuttle bus. This is a similar proportion to other DCO applications. For example Longfield Solar Farm (PINS reference EN010118) assumed that 55% of the workforce would arrive by shuttle bus based on the proportion of the workforce that would be non-local to the Site and would stay in local accommodation.
- 14.7.13 The remaining workers will arrive by car with an assumed 1.5 construction workers per car, based on the national car occupancy average.
- 14.7.14 Based on a total of 455 construction workers, the forecast number of cars/LGVs are set out in **Table 14.13**.

Table 14.13: Cars and LGVs

	West Burton 1, 2, 3 and BESS
Construction Workers	455
Shuttle Bus (20 Workers per Bus)	11
Cars (1.5 Workers per Car)	152
Total Car/LGV (Arrivals)	163
Total Car/LGV Movements (Arrivals + Departures)	326

Construction Traffic Flows: Total Peak Day

14.7.15 The total traffic flows, based on the information above, is set out in **Table 14.14**.

Table 14.14: Construction Phase Traffic Flows: Peak Day

	West Burton 1	West Burton 2	West Burton 3 (including BESS)	Total
HGVs	5	7	11	23
Cars/LGVs	24	46	93	163
Total	29	53	104	186
Total (Two-Way)	58	106	208	372

14.7.16 **Table 14.14** shows that there could be 186 arrivals and departures during a peak day during the construction phase. This is a reasonable worst case assessment, and on a typical day, traffic flows will be lower than this.

Construction Traffic Routes

14.7.17 The designated routes for all vehicles associated with the construction phase forms the basis for the study area for this ES Chapter. The routes are shown in **Figure 14.1**.

14.7.18 Delivery drivers, contractors and visitors will be advised of the route in advance of driving to the Site. The route has been designed to utilise the most appropriate roads available, avoid designated or protected areas, height and weight restrictions and residential area.

14.7.19 A summary of the construction vehicle route for each area is set out below:

- West Burton 1: A15 → A1500 Till Bridge Lane → Unclassified Road south of A1500 (West Burton 1 Access Road);
- West Burton 2: A46 → A57 → B1241; and
- West Burton 3: A15 → A1500 Till Bridge Lane;

14.7.20 Further information on the construction traffic routes is set out in the Transport Assessment, contained at **Appendix 14.1 [EN010132/APP/WB6.3.14.1]** and Outline CTMP, contained at **Appendix 14.2 [EN010132/APP/WB6.3.14.2]**.

Construction Traffic Flows

14.7.21 **Table 14.15** sets out the construction traffic flows for the links within the study area on a peak day.

Table 14.15: Construction Traffic Flows

Ref	Link	Sensitivity	Total Vehicles	HGV
West Burton 1 & 3				
1	A15	Low	266	33
2	A1500 Till Bridge Lane	Low	266	33
West Burton 1				
3	Unclassified Road south of A1500	Medium	58	11
West Burton 2				
4	A57 Lincoln Road	Low	107	14
5	B1241 Mill Lane/Sturton Road	Medium	107	14

2025 Base plus Construction Traffic Flows

14.7.22 The construction traffic flows set out in **Table 14.15** have been added to the Future Base 2025 traffic flows set out in **Table 14.10**. This is summarised in **Table 14.16** for all vehicles, and **Table 14.17** for HGVs.

Table 14.16: Future Baseline (2025) Traffic plus Construction Traffic (Total)

Ref	Link	Sensitivity	Base 2025	Base 2025 plus Dev	% Change
West Burton 1 & 3					
1	A15	Low	13,364	13,630	2%
2	A1500 Till Bridge Lane	Low	4,772	5,039	6%
West Burton 1					
3	Unclassified Road south of A1500	Medium	193	251	30%
West Burton 2					
4	A57 Lincoln Road	Low	13,428	13,535	1%
5	B1241 Mill Lane/Sturton Road	Medium	4,066	4,173	3%

Table 14.17: Future Baseline (2025) Traffic plus Construction Traffic (HGVs)

Ref	Link	Sensitivity	Base 2025	Base 2025 plus Dev	% Change
West Burton 1 & 3					
1	A15	Low	2,233	2,267	1%
2	A1500 Till Bridge Lane	Low	826	859	4%
West Burton 1					
3	Unclassified Road south of A1500	Medium	27	37	41%
West Burton 2					
4	A57 Lincoln Road	Low	717	731	2%
5	B1241 Mill Lane/Sturton Road	Medium	733	747	2%

Further Assessment

14.7.23 As set out earlier within this Chapter, the IEMA Guidelines set out two rules which will be used as threshold impacts to define the scale and extent of the assessment, as follows:

- Rule 1: Include highway links where traffic flows will increase by more than 30% (or where the number of HGVs will increase by more than 30%); and
- Rule 2: Include any other specifically sensitive areas where traffic flows have increased by 10% or more.

14.7.24 Based on these 'Rules', **Table 14.18** sets out which links will be taken forward for assessment, on the basis of the percentage change in traffic flows and HGVs. Low sensitive links will be assessed against Rule 1, medium sensitive links will be assessed against Rule 2.

Table 14.18: Percentage Change and Total Vehicles and HGVs – Further Assessment

Ref	Link	Sensitivity	Total Vehicles	HGVs	Further Assessment Required
West Burton 1 & 3					
1	A15	Low	2%	1%	No
2	A1500 Till Bridge Lane	Low	5%	4%	No
West Burton 1					
3	Unclassified Road south of A1500	Medium	30%	41%	Yes
West Burton 2					
4	A57 Lincoln Road	Low	1%	2%	No
5	B1241 Mill Lane/Sturton Road	Medium	3%	2%	No

14.7.25 **Table 14.18** shows that just one link has over a 30% increase in total vehicles or HGVs. This is on the unclassified road to the south of the A1500 (the West Burton 1 access road). It should be noted that high percentage changes are more to do with low baseline traffic flows rather than the intensity of the construction traffic flows. For example, on this link (Unclassified Road south of A1500), the baseline traffic flows consist of 193 vehicles per day, including 27 HGV. Any change in traffic flow on this link will result in a large percentage change.

14.7.26 Whilst the majority of the links set out in **Table 14.18** do not require further assessment, they have been commented on in the 'Likely Effects' section.

14.7.27 A review of the likely significant environmental effects in relation to transport and access during the Development's construction phase is set out below.

Likely Effects: Accidents and Safety

14.7.28 As set out in **Table 14.8**, there have been a total of 28 collisions within the Study Area during the most recent five-year period (up to and including 2021). Of these, 23 resulted in slight injuries and five in serious injuries. No fatalities were recorded.

14.7.29 The IEMA Guidelines states that professional judgement should be used to assess the implications of local circumstances, or factors which may increase or decrease the risk of accidents.

14.7.30 Generally, accidents appear to be spread throughout the study area. Whilst the addition of any amount of traffic can increase a risk of accidents, it is considered that low level of construction traffic associated with the Scheme is unlikely to

materially affect safety on the links in the study area, irrespective of percentage changes in traffic flows. Therefore, the effects on accidents and safety will be negligible.

- 14.7.31 In light of this, the likely effects on accidents and safety during the construction phase is set out in **Table 14.19**. All effects are temporary. In conclusion, the effects on accidents and safety are not considered to be significant.

Table 14.19: Effects on Accidents and Safety

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects - Accidents & Safety
West Burton 1 & 3				
1	A15	Low	Temporary	Negligible
2	A1500 Till Bridge Lane	Low	Temporary	Negligible
West Burton 1				
3	Unclassified Road south of A1500	Medium	Temporary	Negligible
West Burton 2				
4	A57 Lincoln Road	Low	Temporary	Negligible
5	B1241 Mill Lane/Sturton Road	Medium	Temporary	Negligible

Likely Effects: Severance

- 14.7.32 As stated, the IEMA Guidelines define severance as “*the perceived division that can occur within a community when it becomes separated by a major traffic artery*” (paragraph 4.27) that “*separates people from places*”, for example, difficulties crossing existing roads or the physical barrier of the road itself. The IEMA Guidelines go on to suggest that “*changes in traffic flow of 30%, 60% or 90% are regarded as producing slight, moderate and substantial changes in severance respectively*” (paragraph 4.31).
- 14.7.33 Whilst this is a useful guide, when baseline traffic flows are low, as is the case for many of the local roads within the study area, applying a percentage change in traffic to determine the effects for severance is not considered appropriate. For example, on the unclassified road (south of the A1500) to access West Burton 1, there is a 30% increase in traffic flows during construction. However, this only relates to 58 movements over a 24-hour period. This will result in just a negligible effect on severance. Therefore, professional judgement is also applied to judge the effects on severance.

- 14.7.34 None of the roads used are considered to act as a barrier that separates communities. The addition of construction traffic will not change this.
- 14.7.35 Where links within the study area connect to public rights of way, it could be argued that an increase in traffic as a result of the construction phase could make it more difficult to cross the road. Two public rights of way connect to the unclassified road to the south of the A1500, which provides the accesses to West Burton 1. A forecast of 58 two-way, daily vehicle movements (11 HGVs) are proposed during the construction phase. However, over the course of a 10-hour working day, this equates to approximately six vehicles an hour, which will not significantly impact the ability to cross this road to access these PROWs. Therefore, the effects on severance in these locations will be negligible.
- 14.7.36 Therefore, the likely effects on severance during the construction phase is set out in **Table 14.20**. The effects are considered to be negligible and temporary. In conclusion, the effects on severance are not considered to be significant.

Table 14.20: Likely Effects on Severance

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects - Severance
West Burton 1 & 3				
1	A15	Low	Temporary	Negligible
2	A1500 Till Bridge Lane	Low	Temporary	Negligible
West Burton 1				
3	Unclassified Road south of A1500	Medium	Temporary	Negligible
West Burton 2				
4	A57 Lincoln Road	Low	Temporary	Negligible
5	B1241 Mill Lane/Sturton Road	Medium	Temporary	Negligible

Likely Effects: Driver Delay

- 14.7.37 The IEMA Guidelines state that 'delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system'.
- 14.7.38 Capacity assessments on local junctions have not been undertaken for the assessment. As stated, through the CTMP, construction vehicles will be coordinated to avoid peak hour travel, the period where capacity constraints may occur, and, where possible, there will be no construction traffic on roads within the study area between 08:00-09:00 or 17:00-18:00.

14.7.39 As with severance, applying a percentage change in traffic to determine the effects for driver delay is not considered appropriate when the baseline traffic flows are low. Whilst many of the rural links in the network have high percentage changes in traffic flows during the construction phase, they start from a low baseline. For example, on the unclassified road (south of the A1500) to access West Burton 1, there is a 30% increase in traffic flows during the construction phase. However, 2025 baseline flows are 193 two-way movements per day. This will increase to 251 two-way movements. In this instance, whilst the percentage change in traffic flows is high there, will not be any significant driver delay associated with 251 two-way movements per day.

14.7.40 As such, the likely effect of construction traffic on driver delay within the study area is considered to be negligible and temporary, which is not significant.

Likely Effects: Pedestrian Delay (to include Cyclists)

14.7.41 The IEMA Guidelines do not set out thresholds for judging the significance of changes in levels of pedestrian delay, and suggest that the assessor uses their judgement to determine whether pedestrian delay is a significant impact.

14.7.42 The intention is for public rights of way to remain open during the construction phase. There may be some slight delay to pedestrian and cyclist movement if a construction vehicle is crossing the public right of way, but this is not likely to be material, an only in isolated locations. If temporary stopping up and diversions of public rights of way are required, they will be appropriately managed.

14.7.43 The likely effects on pedestrian delay during the construction phase are set out in **Table 14.21**. As stated, two public rights of way connect to the unclassified road to the south of the A1500, which provides the accesses to West Burton 1. In this location, the effects on pedestrian delay are considered to be minor and temporary. In the rest of the study area, the effects are considered to be negligible and temporary. In conclusion, the effects on pedestrian and cyclist delay are not considered to be significant.

Table 14.21: Effects on Pedestrian Delay (to include Cyclists)

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects - Pedestrian and Cyclist Delay
West Burton 1 & 3				
1	A15	Low	Temporary	Negligible
2	A1500 Till Bridge Lane	Low	Temporary	Negligible
West Burton 1				
3	Unclassified Road south of A1500	Medium	Temporary	Minor
West Burton 2				
4	A57 Lincoln Road	Low	Temporary	Negligible
5	B1241 Mill Lane/Sturton Road	Medium	Temporary	Negligible

Likely Effects: Pedestrian Amenity (including Fear and Intimidation and to include Cyclists)

- 14.7.44 The IEMA Guidelines suggest that a threshold for judging Pedestrian Amenity would be “*where the traffic flows (or its lorry component) is halved or doubled*” (paragraph 4.39). As with other categories, applying a percentage change in traffic to determine the effects is not considered appropriate when the baseline traffic flows are low.
- 14.7.45 As stated, the level of pedestrian and cyclist activity on the roads surrounding the Site is very low meaning that the sensitivity receptor is low. However, it is acknowledged that two public rights of way connect to the unclassified road to the south of the A1500, which provides the accesses to West Burton 1. There will be some effect on the relevant pleasantness of pedestrian journeys in these locations.
- 14.7.46 The likely effects on pedestrian (and cyclist) amenity during the construction phase is set out in **Table 14.22**. Where the West Burton 1 access road connects to Public Rights of Way, the effects are considered to be minor and temporary. Elsewhere in the study area, the effects are considered to be negligible and temporary. In conclusion, the effects on pedestrian amenity (to include cyclists) are not considered to be significant.

Table 14.22: Effects on Pedestrian Amenity (to include Cyclists)

Ref	Link	Sensitivity	Nature of Effect	Significance of Effects - Pedestrian Amenity
West Burton 1 & 3				
1	A15	Low	Temporary	Negligible
2	A1500 Till Bridge Lane	Low	Temporary	Negligible
West Burton 1				
3	Unclassified Road south of A1500	Medium	Temporary	Minor
West Burton 2				
4	A57 Lincoln Road	Low	Temporary	Negligible
5	B1241 Mill Lane/Sturton Road	Medium	Temporary	Negligible

Likely Effects: Hazardous Loads

- 14.7.47 Some deliveries to the Site during the construction phase will be regarded as 'hazardous loads'. These include the deliveries of lithium-ion batteries and transformer oil. All regulations for the movement of hazardous loads will be followed, and the appropriate documentation will be obtained.
- 14.7.48 There will be some abnormal loads to transport the transformers for the 132kV and 400kV substations. An abnormal load is one where the vehicle exceeds 44 tonnes, the width is over 2.9m or the length is more than 18.65m. These movements will be managed so that the potential effects are mitigated appropriately. Additional details are set out in the CTMP at **Appendix 14.2**.
- 14.7.49 Overall, it is considered that the likely effects of the construction traffic on hazardous loads will be negligible and temporary and therefore not significant.

[Temporary Construction Phase: Cable Route Corridor / Grid Connection Route](#)

- 14.7.50 This section summarises the likely effects associated with the movement of vehicles during the construction phase for the Grid Connection Route.
- 14.7.51 The Grid Connection Route will be approximately 21.3km in length, and is directed across open countryside. It will require crossings of railways, watercourses, various utilities, Public Rights of Way (PRoW) and roads. The Cable Route Corridor as indicated on the Works Plans is at least 50m in width in order to accommodate working areas, construction laydown areas, haul roads, open cut digging of trenches and horizontal directional drilling (HDD) where it may be required.

14.7.52 The final Grid Connection Route within the Cable Route Corridor, is subject to an iterative design process and detail design. For assessment purposes, the placing of the cable anywhere within the Cable Route Corridor has been considered, including the avoidance of environmentally sensitive locations.

14.7.53 The construction of the Grid Connection Route includes the following elements:

- Construction of Haul Road and Laydown Areas;
- Open Cut Excavation;
- Construction of Joint Bays; and
- Cabling/Jointing.

Construction Programme: Cable Route Corridor / Grid Connection Route

14.7.54 The construction programme for the Scheme is set out in Chapter 4 of the ES [EN010132/APP/WB6.2.4]. This forecasts that the construction period for the Grid Connection Route will be approximately 20-months. The Route will be constructed in sections of approximately 4km at a time. Each section will take approximately 90 working days.

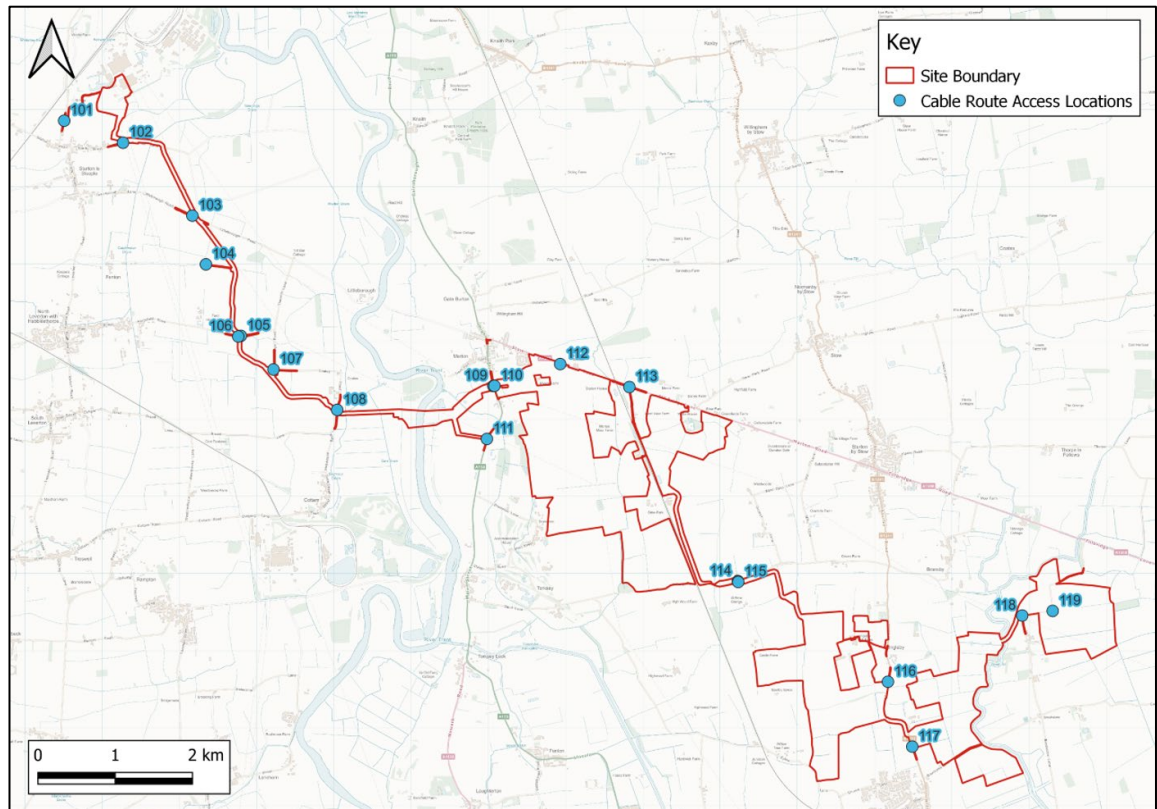
Construction Vehicle Access: Cable Route Corridor / Grid Connection Route

14.7.55 For the construction of the Grid Connection Route, 19 temporary accesses are required, approximately one every kilometre. The locations of these accesses are shown in **Figure 14.5**, and are on the following roads:

- Access 101 – Gainsborough Road;
- Access 102 – Common Lane;
- Access 103 – Littleborough Road;
- Access 104 – Three Leys Lane/Fenton Lane;
- Access 105 – Northfield Road (north);
- Access 106 – Northfield Road (south);
- Access 107 – Coates Road;
- Access 108 – Headstead Bank/Coates Road;
- Access 109 – A156;
- Access 110 – A156;
- Access 111 – A156;
- Access 112 – A1500 Stow Park Road;
- Access 113 – A1500 Stow Park Road;
- Access 114 – Cowdale Lane (north);
- Access 115 – Cowdale Lane (south);

- Access 116 – Sturton Road;
- Access 117 – Sturton Road;
- Access 118 – Unclassified road south of the A1500; and
- Access 119 – Unclassified road south of the A1500.

Figure 14.5: Cable Route Corridor Access Locations



14.7.56 As stated, the Grid Connection Route will be built out in phases. Each access will be used for approximately 90 days during the construction phase. It is likely that around four or five accesses will be in use concurrently.

Construction Traffic Flows: Cable Route Corridor / Grid Connection Route

14.7.57 It is forecast that each access will generate up to eight arrivals and eight departures per day for the delivery of material and equipment. Around half of these will be HGV trips and half LGV trips. There will also be around 10 construction workers per access, arriving by car and shuttle bus.

14.7.58 HGV trips will largely consist of 10m tipper trucks. However, there will be a small number of abnormal load movements associated with cable drum deliveries as noted in the Outline CTMP.

14.7.59 As mentioned, each access will only be used for approximately 90 days during the construction phase.

Construction Traffic Routes: Cable Route Corridor / Grid Connection Route

14.7.60 A summary of the construction vehicle route for each access is set out below:

- **Grid Connection Access 101** – A614 → A631 → Sturton Road/Gainsborough Road
- **Grid Connection Access 102** – A614 → A631 → Sturton Road/Gainsborough Road → Station Road → North Street → Common Lane
- **Grid Connection Access 103** – A614 → A631 → Sturton Road/Gainsborough Road → Station Road → Cross Street → Church Street → Littleborough Road
- **Grid Connection Access 104** – A614 → A631 → Sturton Road/Gainsborough Road → Station Road → Cross Street → Sturton Road → Three Leys Lane/Fenton Lane
- **Grid Connection Access 105** – A614 → A631 → Sturton Road/Gainsborough Road → Station Road → Cross Street → Church Street → Littleborough Road → Thornhill Lane → Northfield Road (north)
- **Grid Connection Access 106** – A614 → A631 → Sturton Road/Gainsborough Road → Station Road → Cross Street → Church Street → Littleborough Road → Thornhill Lane → Northfield Road (south)
- **Grid Connection Access 107** – A614 → A631 → Sturton Road/Gainsborough Road → Station Road → Cross Street → Sturton Road → Main Street → North Leys Road → Coates Road
- **Grid Connection Access 108** – A46 → A57 → Laneham Road → Cocking Lane → Town Street → Leverton Road → Town Street → Cottam Road → Broad Lane → Headstead Bank
- **Grid Connection Access 109** – A15 → A1500 Till Bridge Lane → A156 Main Street
- **Grid Connection Access 110** – A15 → A1500 Till Bridge Lane → A156 Main Street
- **Grid Connection Access 111** – A15 → A1500 Till Bridge Lane → A156 Main Street
- **Grid Connection Access 112** – A15 → A1500 Till Bridge Lane
- **Grid Connection Access 113** – A15 → A1500 Till Bridge Lane → Stow Park Road
- **Grid Connection Access 114** – A15 → A1500 Till Bridge Lane → B1241 Sturton Road → Cowdale Lane (north)

- **Grid Connection Access 115** – A15 → A1500 Till Bridge Lane → B1241 Sturton Road → Cowdale Lane (south)
- **Grid Connection Access 116** – A46 → A57 → B1241 Sturton Road
- **Grid Connection Access 117** – A46 → A57 → B1241 Sturton Road
- **Grid Connection Access 118** – A15 → A1500 Till Bridge Lane → Unclassified road south of A1500
- **Grid Connection Access 119** – A15 → A1500 Till Bridge Lane → Unclassified road south of A1500

14.7.61 Further information on the construction traffic routes is set out in the Outline CTMP, contained at **Appendix 14.2**.

Further Assessment: Cable Route Corridor / Grid Connection Route

14.7.62 As there will only be around 18 arrivals and departures per access per day over a short, 90-day period, a detailed assessment has not been undertaken. It is unlikely that the addition of these trips will trigger the need for further assessment in line with the IEMA guidelines (10% change in traffic flows on sensitive road or a 30% on non-sensitive road). If the thresholds are breached, it would mean that baseline traffic flows are very low. This, in itself, would mean that the effects of traffic flows in relation to the construction of the Grid Connection Route would not be significant.

14.7.63 Notwithstanding this, a summary of the likely effects is described below.

- **Accidents and Safety** – the low number of additional vehicle movements on the network associated with the construction of the Grid Connection Route will not result in any material effect on accidents and safety. Therefore, the likely effect of the construction traffic associated with the Grid Connection Route on accidents and safety will be negligible and temporary and not significant;
- **Severance** – the low number of additional vehicle movements on the network associated with the construction of the Grid Connection Route will not result in any material effect on severance. Therefore, the likely effect of the construction traffic associated with the Grid Connection Route on severance will be negligible and temporary and not significant;
- **Driver Delay** – for the most part, the low number of additional vehicle movements on the network associated with the construction of the Grid Connection Route will not result in any material effect on driver delay. However, where the Route crosses roads, there will be traffic management and temporary road closures which could result in some minor driver delay. Therefore, the likely effect of the construction traffic associated with the Grid Connection Route on driver delay will be minor and temporary and not significant;
- **Pedestrian (and Cyclist) Delay** – for the most part, the low number of additional vehicle movements on the network associated with the construction

of the Grid Connection Route will not result in any material effect on pedestrian delay. However, where the Route crosses public rights of way, pedestrian movement will have to be managed (and potentially diverted) for a short period. Therefore, the likely effect of the construction traffic associated with the Grid Connection Route on pedestrian (and cyclist) delay will be minor and temporary and not significant;

- **Pedestrian (and Cyclist) Amenity** – for the most part, the low number of additional vehicle movements on the network associated with the construction of the Grid Connection Route will not result in any material effect on pedestrian amenity. However, where the Route crosses public rights of way, pedestrian movement will have to be managed (and potentially diverted) for a short period. Therefore, the likely effect of the construction traffic associated with the Grid Connection Route on pedestrian (and cyclist) amenity will be minor and temporary and not significant;
- **Hazardous Loads** – Whilst not hazardous, there will be abnormal loads to transport the cable drums to the Grid Connection Route construction areas. An abnormal load is one where the vehicle exceeds 44 tonnes, the width is over 2.9m or the length is more than 18.65m. These movements will be managed so that the potential effects are mitigated appropriately. Additional details are set out in the CTMP at **Appendix 14.2**. Therefore, the likely effect of the construction traffic associated with the Grid Connection Route on hazardous loads will be negligible and temporary and not significant.

Summary of Effects during Construction

- 14.7.64 The likely effects of the Scheme during the construction phase, are summarised in **Table 14.23**.

Table 14.23: Summary of Effects during Construction

Ref	Link	Sensitivity	Nature of Effect	Accidents	Severance	Driver Delay	Pedestrian Delay	Pedestrian Amenity	Hazardous Loads
West Burton 1 & 3									
1	A15	Low	Temporary	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
2	A1500 Till Bridge Lane	Low	Temporary	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
West Burton 1									
3	Unclassified Road south of A1500	Medium	Temporary	Negligible	Negligible	Negligible	Minor	Minor	Negligible
West Burton 2									
4	A57 Lincoln Road	Low	Temporary	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
5	B1241 Mill Lane/Sturton Road	Medium	Temporary	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Grid Connection Route		Low	Temporary	Negligible	Negligible	Minor	Minor	Minor	Negligible

Operational Phase

- 14.7.65 During the Scheme's operational phase, there are anticipated to be around five visits to each Site per month for maintenance purposes (less than one trip per day on average). These would typically be made by light van or 4x4 type vehicles. Whilst each Site construction compound will have been removed at the end of the construction phase, space will remain within each Site on the access tracks for such a vehicle to turn around to ensure that reversing will not occur onto the highway. The access locations are set out in **Table 14.12** and shown in **Figure 14.4**.
- 14.7.66 There will be no transport operational effects associated with the installed grid connection cables (within the Cable Route Corridor) as they will be located underground. Access may be required for maintenance, but this is only likely once or twice a year.
- 14.7.67 In light of this, effects on accidents and safety, severance, driver delay, pedestrian delay and amenity and hazardous loads during the operational phase of the Development are considered to be negligible or not significant. The effects will be long-term, as the design life of the Scheme is anticipated to be 40 years.

Decommissioning Phase

- 14.7.68 The Scheme is anticipated to have a design life of approximately 40 years. At the end of the Scheme's operational life, it will be decommissioned. The number of vehicles associated with the decommissioning phase are not anticipated to exceed the number set out for the construction phase, as set out in **Table 14.15**. An Outline Decommissioning Plan will be submitted to the local planning authority for approval prior to decommissioning. This will be secured by a requirement of the DCO.
- 14.7.69 In light of this, effects on accidents and safety, severance, driver delay, pedestrian delay and amenity and hazardous loads are considered to be the same as shown in **Table 14.23**, as a reasonable worst-case assessment. The effects will also be short term and temporary.

Mitigation Measures

Construction and Decommissioning Phases

- 14.7.70 Whilst no significant effects have been identified within this chapter, the following additional measures will be implemented:
- Public Right of Way Management Plan for the construction phase;
 - Traffic Management Measures, including signage. This will warn drivers of the presence of construction traffic during the construction phase. Traffic marshals could also be utilised to ensure the safe passage of construction vehicles at access junctions; and
 - Conduct a Stage 1 Road Safety Audit at all access junctions to recommend additional safety measures at the access points.

Operational Phase

- 14.7.71 No additional mitigation measures are proposed for the operation phase, above the embedded mitigation measures already set out in this chapter and given that there are not expected to be any significant effects as a result of the Scheme.

14.8 Residual Effects

- 14.8.1 This section summarises the residual effects of the Scheme on the Transport and Access after management and mitigation measures have been applied.

Construction Phase

- 14.8.2 The likely significant effects of the Development during the construction phase, are summarised in **Table 14.24**. **Table 14.24** shows that there are not expected to be any significant residual effects in relation to Transport and Access as a result of the construction of the Scheme.

Table 14.24: Summary of Residual Effects during Construction

Ref	Link	Sensitivity	Nature of Effect	Accidents	Severance	Driver Delay	Pedestrian Delay	Pedestrian Amenity	Hazardous Loads
West Burton 1 & 3									
1	A15	Low	Temporary	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
2	A1500 Till Bridge Lane	Low	Temporary	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
West Burton 1									
3	Unclassified Road south of A1500	Medium	Temporary	Negligible	Negligible	Negligible	Minor	Minor	Negligible
West Burton 2									
4	A57 Lincoln Road	Low	Temporary	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
5	B1241 Mill Lane/Sturton Road	Medium	Temporary	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Grid Connection Route		Low	Temporary	Negligible	Negligible	Minor	Minor	Minor	Negligible

Operational Phase

- 14.8.3 During the operational phase, the residual effects on accidents and safety, severance, driver delay, pedestrian delay and amenity and hazardous loads will remain negligible. Therefore, there are not expected to be any significant residual effects in relation to Transport and Access as a result of the operation of the Scheme.

Decommissioning Phase

- 14.8.4 The Scheme is anticipated to have a design life of approximately 40 years. At the end of the Scheme's operational life it will be decommissioned. The number of vehicles associated with the decommissioning phase are not anticipated to exceed the number set out for the construction phase, as set out in **Table 14.15**. An **Outline Decommissioning Plan [EN010132/APP/WB7.2]** has been prepared and a final Decommissioning Plan will be submitted to the local planning authority for approval prior to decommissioning. This will be secured by a requirement of the DCO.
- 14.8.5 In light of this, effects on accidents and safety, severance, driver delay, pedestrian delay and amenity and hazardous loads for the decommissioning phase are considered to be the same as shown in **Table 14.24**, as a reasonable worst-case assessment. Therefore, there are not expected to be any significant residual effects in relation to Transport and Access as a result of the decommissioning of the Scheme.

14.9 Cumulative Effects

Construction Phase

- 14.9.1 A number of cumulative schemes are proposed in the local area. These have been identified through reviewing planning applications from the host authorities, and Nationally Significant Infrastructure Projects (NSIP). The following developments are considered to potentially have a transport and access effect on the Study Area in combination with the Scheme:
- Cottam Solar Project;
 - Gate Burton Energy Park;
 - EDF West Burton C;
 - Decommissioning of West Burton A;
 - Saxilby Heights;
 - Development at Land off Sturton Road;
 - Blyton Driving Centre;
 - Wood Lane Solar Farm; and
 - Tillbridge Solar.

- 14.9.2 Having reviewed any information within in the public domain in relation to these schemes, it is considered that the following Schemes will have an effect on the Study Area. These are:
- **Cottam Solar Project** – A solar NSIP broken down into four areas. Vehicles will access the Project via the A15. From the A15 Cottam 1 will route via either the A1500 Till Bridge Lane or Ingham Lane. Cottam 2 will route via the A631 and Cottam 3, via the B1205. It is assumed vehicles to Cottam 3a and 3b will not interfere with construction traffic associated with the West Burton Solar Project except on the A15;
 - **Gate Burton Energy Park** – A solar NSIP scheme on land near Gate Burton. Accesses are located on the A156, away from the West Burton Site. However, 24% of construction traffic is expected to use the A1500 Till Bridge Lane;
 - **Saxilby Heights** – A 230 dwelling development in the village of Saxilby;
 - **Land off Sturton Road Development** – A 133 dwelling development in the village of Saxilby;
 - **Tillbridge Solar** – A solar NSIP scheme on land to the south, east and south east of Gainsborough.
- 14.9.3 Other applications reviewed but considered not to affect the West Burton Study Area include EDF West Burton C, and Wood Lane Solar Farm.
- 14.9.4 **Table 14.25** sets out the additional traffic flows associated with these schemes.

Table 14.25: Traffic Flows Associated with Cumulative Schemes

Link	Cottam Solar Project ¹	Gate Burton ²	Saxilby Heights ³	Land off Sturton ⁴	Tillbridge Solar ⁵	Total
West Burton 1 and 3						
A15	581	124	0	0	578	1,283
A1500 Till Bridge Lane	96	124	0	0	0	220
West Burton 1						
Unclassified Road south of A1500	0	0	0	0	0	0
West Burton 2						
A57 Lincoln Road	0	0	855	670	0	1,525
B1241 Mill Lane/Sturton Road	0	0	980	735	0	1,715

1. Taken from Cottam ES. Only flows on the A15 and A1500 follow the same route as the West Burton Scheme;
2. Taken from Gate Burton TA Traffic Flow Diagrams
3. Taken from Figures 10 and 11 of Land at Church Lane, Saxilby Transport Assessment – peak hour traffic flows factored up to estimate daily traffic flows;
4. Taken from Appendix 9 of Land off Sturton Road Transport Assessment – peak hour traffic flows factored up to estimate daily traffic flows;
5. Taken from Tillbridge Solar ES Scoping Opinion – Peak of 64 HGVs stated (128 total). No information on construction worker vehicles. Considered that construction traffic will not interfere with West Burton construction traffic except for potentially on the A15.

14.9.5 **Table 14.26** sets out the development flows within the study including the cumulative schemes.

Table 14.26: Future Baseline (2025) Traffic plus Cumulative Schemes

Ref	Link	Sensitivity	Base	Base plus Dev	Base plus Dev plus Cumulative	% Change*
West Burton 1 & 3						
1	A15	Low	13,364	13,630	14,913	9%
2	A1500 Till Bridge Lane	Low	4,772	5,039	5,259	4%
West Burton 1						
3	Unclassified Road south of A1500	Medium	193	251	251	0%
West Burton 2						
4	A57 Lincoln Road	Low	13,428	13,535	15,060	11%
5	B1241 Mill Lane/Sturton Road	Medium	4,066	4,173	5,888	41%

*Compared to Base plus Development

14.9.6 **Table 14.26** shows that traffic flows associated with the cumulative schemes have the largest effect on Mill Lane and the A57. This is due to the introduction of two residential developments. As the number of traffic flows on these links associated with the construction phase of the Scheme are low, it is unlikely that the cumulative effects will be any different to the residual effects set out in **Table 14.24**.

14.9.7 The cumulative effects on the local highway network surrounding the Grid Connection Route will also be low, as the cumulative Schemes will not use the same routes. It should be noted that sections of the Grid Connection Route for the Scheme will be shared with Gate Burton and Cottam Solar Project, although the residual effects will not change as a result of this.

14.9.8 There is an extant planning permission for Sturton le Steeple quarry, to be accessed via Access 101. The planning permission (ref 1/46/06/00014) restricts HGV movements to a maximum of 192 movements per day associated with the quarry (96 in and 96 out). The addition of eight arrivals and departures associated with cable route corridor, over a 90-day period, will not result in a significant cumulative impact at this location.

14.9.9 Therefore, the cumulative effects will not change compared to the residual effects, that are set out in **Table 14.25**.

Operational Phase

- 14.9.10 During the operational phase, the cumulative effects on accidents and safety, severance, driver delay, pedestrian delay and amenity and hazardous loads will remain negligible. Therefore, there are not expected to be any significant cumulative effects in relation to Transport and Access as a result of the operation of the Scheme.

Decommissioning Phase

- 14.9.11 The cumulative effects on accidents and safety, severance, driver delay, pedestrian delay and amenity and hazardous loads for the decommissioning phase are considered to be the same as shown in **Table 14.24**, as a worst-case assessment. Therefore, there are not expected to be any significant cumulative effects in relation to Transport and Access as a result of the decommissioning of the Scheme.

14.10 Conclusions

- 14.10.1 This Chapter has set out and assessed the likely effects of the Scheme in relation to transport and access. Likely effects have been assessed for the construction, operation and decommissioning phases of the Scheme. The Scheme is not likely to result in any significant Transport and Access effects during the construction, operational and decommissioning phases. An Outline Construction Traffic Management Plan has been prepared to manage construction vehicle movement during the construction phase. This is shown in **Appendix 14.2 [EN010132/APP/WB6.3.14.2]**.