

# Preliminary Environmental Information Report

Calderdale Energy Park

7 April 2026

Volume 2, Chapter 14 : Transport and Access

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# 14 Transport and Access

## 14.1 Introduction

14.1.1 This Chapter of the Preliminary Environmental Information Report (PEIR) has been prepared by Pell Frischmann on behalf of the Applicant, and it presents a preliminary assessment of the likely significant environmental effects resulting from the Proposed Development upon transport and access matters. It is based on the environmental information available to date (which is detailed in this Chapter), as well as the current description of the Proposed Development as set out in **Chapter 4: The Proposed Development**.

14.1.2 This Chapter reaches the preliminary conclusion that there are no likely significant environmental effects resulting from the Proposed Development on transport and access during the construction, operation (and maintenance) and decommissioning phases.

14.1.3 This Chapter is supported by:

- **Appendix 14-1: Transport Assessment;** and
- **Appendix 14-2: Outline Construction Traffic Management Plan (oCTMP).**

## 14.2 Legislation Policy and Guidance

14.2.1 Key policy, legislation and guidance relating to Transport and Access and of relevance to this assessment comprises the following, as shown in **Table 14-1**.

*Table 14-1: Legislation, Policy and Guidance*

Type	Name	Relevance to Assessment
National planning policy	Overarching National Policy Statement for Energy (EN-1) (2025) <sup>1</sup>	Section 5.14 details the general planning policy for transport and access matters.
	National Policy Statement for Electricity Networks	Paragraphs 2.12-108 – 2.12.113 provide details of traffic and transport considerations for onshore wind farms.

<sup>1</sup> Department for Energy Security & Net Zero (2025) *Overarching National Policy Statement for Energy (EN-1)*, Available: [Overarching National Policy Statement for Energy \(EN-1\) – December 2025](#).

Type	Name	Relevance to Assessment
	Infrastructure (EN-3) (2025) <sup>2</sup>	
	National Planning Policy Framework (NPPF) (2025) <sup>3</sup>	The Considering Development Proposals section (115) of the NPPF outlines the requirements for all developments that are anticipated to generate significant movements to prepare a transport assessment to assess the likely impacts of the Proposed Development. Section 9 requires a Transport Assessment and Travel Plan for developments with significant movements.
	Proposed Reforms to the National Planning Policy Framework (NPPF) (2024) <sup>4</sup>	Chapter 15 sets out the changes proposed, as detailed in the NPPF “ <i>much of the revised chapter is intended to restate existing transport policy in clearer terms while removing certain plan-making expectations where these matters can be addressed adequately through national decision-making policies. Changes have also been made to further embed a ‘vision-led’ approach to transport, in relation to both plan and</i>

<sup>2</sup> Department for Energy Security & Net Zero (2025) *National Policy Statement for Renewable Energy Infrastructure (EN-3)*, Available: [National Policy Statement for Renewable Energy Infrastructure \(EN-3\)](#).

<sup>3</sup> Ministry of Housing Communities & Local Government (2024) *National Planning Policy Framework (December 2024)* Updated online February 2025. Available: [https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF\\_December\\_2024.pdf](https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf).

<sup>4</sup> Ministry of Housing Communities & Local Government (2025) *National Planning Policy Framework Plan-making and national decision-making policies*. Available: [https://assets.publishing.service.gov.uk/media/697b71c52ff8d10a830d5d4a/Draft\\_NPPF\\_December\\_2025.pdf](https://assets.publishing.service.gov.uk/media/697b71c52ff8d10a830d5d4a/Draft_NPPF_December_2025.pdf).

Type	Name	Relevance to Assessment
		<i>decision-making</i> ". Policies TR6 and TR8 are of relevance.
Local planning policy	Strategic Transport Plan, "Transforming the North" (2024) <sup>5</sup>	Emphasises freight and port connectivity, including support for logistics and exports via the Port of Liverpool alongside improving strategic road and rail links.
	Lancashire County Council, "Lancashire Local Transport Plan" (2025 - 2045) <sup>6</sup>	Policies P1: Safety and Network Reliability, P2: Economic Growth & Connectivity, P3: Sustainable Travel and Decarbonisation and P4: Asset Management are relevant to the Proposed Development and require access proposals to ensure that road safety is not compromised and that proposals do not result in severe traffic impacts, that the highway network is used in an efficient manner, that measures to suppress construction traffic are used and that wear and tear style agreements are used alongside other relevant legal instruments, including Section 278 and Section 106 agreements are used;
	Calderdale Council, "Calderdale Transport	Promotes sustainable access and the use of Travel Plans, which are considered relevant to the Proposed Development;

<sup>5</sup> Transport for the North (2024) Strategic Transport Plan – Transforming the North. Available at: <https://www.transportforthenorth.com/publications/strategic-transport-plan-transforming-the-north-2024.pdf>.

<sup>6</sup> Lancashire County Council (2025) Lancashire Local Transport Plan 2025–2045 (Draft). Available at: [https://lancashire-cca.gov.uk/sites/default/files/2025-10/ACCESSIBILITY%20VERSION\\_Transport\\_Report\\_LCC8010%20newP\\_V2C.pdf](https://lancashire-cca.gov.uk/sites/default/files/2025-10/ACCESSIBILITY%20VERSION_Transport_Report_LCC8010%20newP_V2C.pdf).

Type	Name	Relevance to Assessment
	Strategy 2016 – 2031”, (2016) <sup>7</sup>	
	Bradford Council, “Local Plan for the Bradford District Core Strategy Development Plan Document”, (2017) <sup>8</sup>	Includes strategies to promote sustainable access and travel plans (Policy TR1) and requires no adverse impact on transport in areas of tourist, cultural and heritage significance (Policy TR4);
	West Yorkshire Combined Authority, “Transport Strategy 2040”, (2017) <sup>9</sup>	Policy aims include delivering safe roads across West Yorkshire and ensuring high quality infrastructure to provide reliable journey times;
	Pendle Council, “Pendle Local Plan”, (2011) <sup>10</sup>	Relevant policy aims require the promotion of sustainable transport for developments;
	Calderdale Council, “Calderdale Local Plan”, (2023) <sup>11</sup>	Policy CC6 requires careful consideration of traffic effects of renewable power projects, whilst Policy IM4 requires developments to consider sustainable access, Policy IM5 requires a hierarchical assessment of transport, the provision of a Transport

<sup>7</sup> Calderdale Council (October 2016) Currently under refresh (consultations ongoing October–November 2025). Available at: <https://new.calderdale.gov.uk/sites/default/files/2023-04/Calderdale-Transport-Strategy.pdf>.

<sup>8</sup> Bradford Council (2017) Core Strategy DPD. Available at: <https://www.bradford.gov.uk/planning-and-building-control/planning-policy/core-strategy-dpd/>.

<sup>9</sup> West Yorkshire Combined Authority, “Transport Strategy 2040” (2017). Available at: <https://www.westyorks-ca.gov.uk/media/2ssbjw3s/transport-strategy-2040.pdf>.

<sup>10</sup> Pendle Local Plan (Fourth Edition, 2021–2040). Available at: [https://www.pendle.gov.uk/info/20072/planning\\_policies/600/local\\_plan\\_fourth\\_edition/6](https://www.pendle.gov.uk/info/20072/planning_policies/600/local_plan_fourth_edition/6).

<sup>11</sup> Calderdale Council, “Local Plan” (2018–2032/33). Available at: [https://new.calderdale.gov.uk/sites/default/files/2023-06/Local\\_Plan\\_Adoption\\_Statement.pdf](https://new.calderdale.gov.uk/sites/default/files/2023-06/Local_Plan_Adoption_Statement.pdf).

Type	Name	Relevance to Assessment
		Assessment and to provide suitable mitigation measures.
National guidance	Planning Practice Guidance “Travel Plans, Transport Assessments and Statements” <sup>12</sup>	Provides national guidelines for preparing Transport Assessment and Travel Plans in England.
	Institute of Environmental Management and Assessment (IEMA) (now ISEP) (2023) “Environmental Assessment of Traffic and Movement” <sup>13, 14</sup>	Provides relevant guidelines for undertaking an EIA review of Transport and Access matters.
	Design Manual for Roads and Bridges <sup>15</sup>	LA 104: Environmental assessment and monitoring contains the relevant assessment information for undertaking EIA assessments.
Local guidance	Lancashire County Council, “Decide and Provide: Transport Assessments in Lancashire Guidance” (2025) <sup>16</sup>	Requires the provision of a detailed Transport Assessment, Travel Plans and appropriate mitigation.

<sup>12</sup> Ministry of Housing, Communities & Local Government (2014; updated 2024). Available at:

<https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements>.

<sup>13</sup> IEMA (2023), Environmental Assessment of Traffic and Movement. Available at: <https://www.isepglobal.org/articles/updates-to-traffic-and-movement-assessment-advice/>.

<sup>14</sup> To note: the Institute of Environmental Management and Assessment (IEMA) has now changed name to The Institute of Sustainability and Environmental Professionals (ISEP).

<sup>15</sup> Design Manual for Roads and Bridges (DMRB), LA 104 Environmental Assessment and Monitoring (Revision 1: April 2025). Available at: <https://www.liestsussexhighways.com/downloads/file/210/4-4-10-design-manual-for-roads-and-bridges-update-30-april-2025>.

<sup>16</sup> Lancashire County Council, “Decide and Provide: Transport Assessments in Lancashire Guidance” (2025). Available at: <https://www.lancashire.gov.uk/council/strategies-policies-plans/roads-parking-and-travel/transport-assessment-guidance/>.

## 14.3 Scoping and Stakeholder Engagement

### 2025 Scoping Opinion

14.3.1 In September 2025, a request for a scoping opinion was submitted alongside a Scoping Report to the Planning Inspectorate (PINS) under the Planning Act 2008. The Scoping Opinion forms the primary statutory basis for defining the scope of the Environmental Impact Assessment. **Table 14-2** presents the details of the PINS Scoping Opinion relevant to Transport and Access and confirms how these have been addressed within the proposed scope of assessment.

*Table 14-2: Consideration of PINS Scoping Opinion*

Consultee	PINS ID	Summary of Scoping Opinion	Consideration within Proposed Scope of Assessment
PINS	3.7.1	The Scoping Report sets out the predicted trips expected during the operational phase of the Proposed Development. The Inspectorate notes agreement with relevant consultation bodies and agrees that providing operational traffic levels remain below the threshold for assessment, this matter can be scoped out.	Noted. The operational and maintenance phase of the Proposed Development is 'scoped out' of the assessment as traffic flows would not lead to significant effects.
	3.7.2	The Scoping Report notes that the decommissioning phase would result in fewer traffic movements than in the construction period. This is not evidenced and does not automatically enable the conclusion of no likely significant effects. The Environmental Statement (ES) should include an assessment of all likely significant effects during the decommissioning of the Proposed Development where IEMA guidance for Environmental Assessment of Traffic and Movement thresholds are reached. See comments at ID 2.1.6 regarding decommissioning.	Certain elements of the Proposed Development such as underground cabling, sections of access tracks and the access junction are anticipated to remain in place at the decommissioning stage, resulting in a lower level of traffic generation than the construction phase. Further details will be provided in the ES.  Given the anticipated 35-year operational lifespan of the

Consultee	PINS ID	Summary of Scoping Opinion	Consideration within Proposed Scope of Assessment
			<p>Proposed Development, at this stage, it is not feasible to undertake a decommissioning assessment with any meaningful degree of precision.</p> <p>To ensure that decommissioning impacts are appropriately managed and to ensure there are no likely significant effects, a Decommissioning Traffic Management Plan (DTMP) will be secured as a requirement of the Development Consent Order (DCO). The DTMP will set out the traffic levels at that appropriate time and what mitigation measures are required during the decommissioning phase. It will also include a cap on daily vehicle movements, ensuring they remain below the peak levels experienced during construction. This will be secured as part of the DTMP. This approach is consistent with other consented renewable DCO projects throughout England.</p>

Consultee	PINS ID	Summary of Scoping Opinion	Consideration within Proposed Scope of Assessment
	3.7.3	<p>The [Scoping Report] paragraph notes that “<i>The assessment will consider the effects on transport link users and residents within the study area during the construction phase only.</i>” The ES should explain why an assessment for operation or decommissioning is not proposed, noting comments at ID 2.1.6 regarding decommissioning. The EIA should ensure an assessment of all sensitive receptors and not just those who are users and residents.</p>	<p>The assessment in this Chapter includes all relevant receptors during the construction phase. Given that the decommissioning phase (see previous comments above) and operational and maintenance phases result in fewer traffic movements, the effects noted for construction will result in the highest category of effect, thus providing a robust preliminary assessment of likely effects and necessary mitigation.</p>
	3.7.4	<p>The Scoping Report identifies that construction traffic will include staff and material deliveries to and from the turbine area. There are a number of uncertainties surrounding this information. The Scoping Report does not explain how the impact of the construction of the access routes and cable routes will be assessed individually and cumulatively. An assessment should be provided of the traffic impacts of these in the ES.</p>	<p>The traffic impact review includes an assessment of all Proposed Development traffic. The delivery of the export cable (in the Bradford West Cable Corridor), however does not impact in terms of construction traffic volumes during the peak of construction effects. The traffic associated with the export cable is reported within the Transport Assessment (<b>Appendix 14-1</b>) separately so to ensure that all effects are reported.</p>

Consultee	PINS ID	Summary of Scoping Opinion	Consideration within Proposed Scope of Assessment
	3.7.5	The Applicant is encouraged to discuss travel survey methodologies with relevant highway authorities.	The data collection process has used standard data collection techniques to establish the baseline scenario. Consultation on the methodologies will be undertaken with relevant highway authorities.
	3.7.6	The EIA should ensure that [it] identifies sensitive receptors in line with IEMA’s Environmental Assessment of Traffic and Movement July 2023 or explain why the methodology has departed from this. This should include all users of Public Rights of Way (PRoWs) with consideration of horse riders if they are found to be users of the area.	The IEMA (now ISEP) guidelines have been used in this assessment. The effects on all PRoW users have been considered.
	3.7.7	The Scoping Report does not provide any information on the likely expected trips during construction, operation and decommissioning. This information should be clearly provided in the ES.	Traffic generation figures are provided in this assessment.

### Further Stakeholder Engagement

14.3.2 At the time of writing, no discussions have been undertaken with the relevant highway authorities due to agreements not yet being in place with all authorities. Consultation will be ongoing to confirm the methodology and review the PEIR results. This PEIR forms part of that consultation process.

## 14.4 Assessment Methodology

### Study Area

- 14.4.1 The Study Area has been based on those roads that are expected to experience increased traffic flows associated with the construction of the Proposed Development. The geographic scope was determined through a review of Ordnance Survey (OS) plans and an assessment of the potential origin locations of construction staff and supply locations for construction materials.
- 14.4.2 The access strategy for the Proposed Development is based on the majority of bulk material Heavy Goods Vehicles (HGV) accessing the Proposed Development from Junction 1 on the C682 Lancashire Moor Road / Two Laws Road. Staff, Light Goods Vehicles (LGV) and welfare rigid HGV deliveries will access the Proposed Development from both Junction 1 (Western Access Route) and Junction 2 (Eastern Access Route) as described in Figure 5 of **Technical Appendix 14-1**. A limited proportion of bulk materials will travel from Halifax to Junction 2.
- 14.4.3 Access Junction 1 is the principal construction access junction and is located on the C682 Lancashire Moor Road / Two Laws Road, providing HGV and Abnormal Indivisible Load (AIL) access to the Proposed Development. Access Junction 2 is the secondary construction access junction and is located on the A6033 Hebden Bridge Road, providing LGV, limited HGV, staff and maintenance access to the Proposed Development.
- 14.4.4 Provision for up to 10% of the total bulk material deliveries required on site will be made from the southeast, with a limited number of HGV trips accessing from Halifax via Pallon Lane, Moor End Road, Mount Tabor Road, Cold Edge Road, Nab Water Lane and the A6033.
- 14.4.5 The study area includes the road and transport links most likely to be impacted by the proposed movements associated with the Proposed Development. The road links that form the study area are:
- A6068 between Cross Hills and Colne;
  - M65 between Burnley and Colne;
  - C682 Lancashire Moor Road / Two Laws Road from Laneshawbridge to Access Junction 1;
  - A629 from Keighley to Haworth;
  - A6033 between Haworth and Hebden Bridge;
  - A646 between Eastwood and Mytholmroyd; and

- Moor End Road / Mount Tabor Road / Cold Edge Road / Nab Water Lane between Halifax and the A6033.

14.4.6 The study area is illustrated in Figure 6 of **Technical Appendix 14-1**.

### Sources

14.4.7 Data has been gathered from a number of sources to inform the baseline conditions within the study area. Sources comprise the following:

- OS data for the study area road network;
- Google Streetview to provide further details of the study road network;
- Sustrans (now the Walk Wheel Trust) National Cycle Network route maps;
- The PRow Plans of the local authorities that the Proposed Development and its associated road links sits within;
- Previous AIL access reviews for nearby projects;
- The Department for Transport (DfT) Road Traffic database to review and consider flows on the study area network;
- The online road accident source, [www.crashmap.co.uk](http://www.crashmap.co.uk) for details about reported road accidents on the study road network; and
- Site visit to review the study area network, undertaken in October 2025.

14.4.8 The data collection has been supplemented by site visits to visually review the study area road network.

### Methodology

14.4.9 The IEMA (now ISEP) 'Guidelines for Environmental Impact Assessment' (2005) notes that the separate IEMA Guidelines should be used for characterising the environmental transport and access effects (offsite effects) and the assessment of significance of major new developments.

14.4.10 Recent guidance published by IEMA, now known as the ISEP, namely 'Environmental Assessment of Traffic and Movement' (2023) (the 'ISEP Guidelines') have been used to characterise the environmental traffic and transport effects (offsite effects) and the assessment of significance of major new developments. The guidelines intend to complement professional judgement and the experience of competent experts.

14.4.11 In terms of transport impacts, the receptors are the users of the roads within the study area and the locations through which those roads pass.

14.4.12 The ISEP Guidelines include guidance on how the sensitivity of receptors should be assessed. Using that as a base, professional judgement was used to develop a classification of sensitivity for users based on the characteristics of roads and locations.

### **Construction Phase**

14.4.13 The assessment during the construction phase has been based upon the estimated percentage increase in traffic flows that result from the addition of construction traffic to the future baseline traffic flows.

14.4.14 An assessment of the potential origin locations of construction staff and supply locations for construction materials has been undertaken and is presented in **Technical Appendix 14-1**.

14.4.15 A description of the Proposed Development is provided in **Chapter 4: The Proposed Development**. To construct the Proposed Development, a variety of vehicles will be required, these will include, but not be limited to:

- Cars, LGV and Vans;
- Articulated and rigid HGV, delivering plant, materials and electrical components;
- Rigid and articulated HGV delivering bulk materials such as aggregate, ready-mix concrete, etc for use on the Proposed Development;
- Specialist machinery, usually delivered using a low loader style articulated HGV, including loads that may include loads such as heavy plant; and
- AIL carrying special oversized loads such as the proposed turbine components.

14.4.16 All vehicle movements described in this Chapter, unless specifically stated otherwise, are classed as trips and include an inbound and outbound flow from the Proposed Development.

### **Operation and Maintenance**

14.4.17 During the operational and maintenance phase, up to four LGV trips per week are predicted to cover general maintenance of the turbines and associated infrastructure. Should there be a component failure, HGV trips in the form of cranes and AIL transporters will visit the Proposed Development to replace the faulty component. These situations do not result in traffic flows of more than 30 vehicles per day (15 inbound and 15 outbound). Ecological maintenance is not expected to be significant in terms of transport numbers.

- 14.4.18 The number of vehicle trips occurring during this phase will be well below the number of movements assessed for the construction phase and significantly below the overall ISEP Guidelines thresholds. As such, no further assessment is required.
- 14.4.19 Access infrastructure to enable maintenance, which includes the potential replacement of larger equipment onsite, will be retained to facilitate access, when required.
- 14.4.20 The traffic impact of the operational and maintenance phase is considered to be minimal and below the ISEP trigger for an assessment. The Planning Inspectorate in their scoping review of the Proposed Development, has also agreed that the operational and maintenance phase can be scoped out of the assessment.

### Decommissioning

- 14.4.21 Decommissioning will include the removal of all significant above ground infrastructure, with the exception of turbine foundations, hardstandings which are likely to remain in-situ. Permissive paths will also be removed, however access tracks may remain. Environmental enhancements planted or constructed as part of the Proposed Development are assumed to remain in situ when the land is returned to the landowners. Underground elements such as cabling is also likely to remain in situ. The traffic generation associated with the decommissioning phase is therefore expected to be less than that associated with the construction phase and would generally be undertaken over a longer timescale, so that daily flows are less than that associated with the construction phase.
- 14.4.22 It is therefore expected that the decommissioning phase will result in fewer trips on the road network than the construction phase.
- 14.4.23 The growth of background traffic created through wider development in the area, will increase the baseline traffic flows. With a larger baseline and smaller development traffic generation, the potential traffic impact is therefore considered to be significantly below that reported for the construction phase. As such, no further assessment has been undertaken.

### Sensitivity Criteria

- 14.4.24 The ISEP Guidelines include guidance on how the sensitivity of receptors should be assessed. Using that as a base, professional judgement was used to develop a classification of sensitivity for users based on the characteristics of roads and locations. This is summarised in **Table 14-3**.

Table 14-3: Sensitivity Descriptions

Sensitivity	Descriptions
High	<p>Where the road is a minor rural road, not constructed to accommodate frequent use by HGV. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.</p> <p>Where a location is a large rural settlement containing a high number of community and public services and facilities</p>
Medium	<p>Where the road is a local A or B class road, capable of regular use by HGV traffic. Includes roads where there is some traffic calming or traffic management measures.</p> <p>Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.</p>
Low	<p>Where the road is Trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.</p> <p>Where a location is a small rural settlement, few community or public facilities or services.</p>
Negligible	<p>Where roads have no adjacent settlements. Includes new or existing strategic trunk roads that would be little affected by additional traffic and suitable for Abnormal Loads, and new strategic trunk road junctions capable of accommodating Abnormal Loads.</p> <p>Where a location includes individual dwellings or scattered settlements with no facilities.</p>

14.4.25 Where a road / construction traffic flows pass through a location, users are considered subject to the highest level of sensitivity defined by either the road or the location characteristics.

**Magnitude of Impact**

14.4.26 The magnitude of impact has been assessed in accordance with the following rules which are outlined in the ISEP Guidelines, and are used to inform a screening exercise to determine which links within the study area are to be considered for detailed analysis in the assessment:

- Rule 1: Include highway links where traffic flows are predicted to increase by more than 30% (or where the number of HGV is predicted to increase by more than 30%); or

- Rule 2: Include any other specifically sensitive areas where total traffic flows are predicted to increase by 10% or more.

14.4.27 The ISEP Guidelines identify the key impacts when assessing the magnitude of impact for traffic effects from an individual development:

- Severance – the ISEP Guidelines advise that, *“The Department for Transport has historically set out a range of indicators for determining the significance of severance. Changes in traffic flow of 30%, 60% and 90% are regarded as producing ‘slight’, ‘moderate’ and ‘substantial’ changes in severance respectively. Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law. However, caution needs to be observed when applying these thresholds as very low baseline flows are unlikely to experience severance impacts even with high percentage changes in traffic.”* (Para 3.16). The ISEP Guidelines acknowledge that changes in traffic flows should be used cautiously, stating that *“the assessment of severance should pay full regard to specific local conditions, e.g. sensitivity of adjacent land uses, prevalence of vulnerable people, whether or not crossing facilities are provided, traffic signal settings, etc.”* (Para 3.17);
- Driver delay – the ISEP Guidelines note that these 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”* (Para 3.20);
- Pedestrian delay (incorporating delay to all non-motorised users) – the ISEP Guidelines advise that *“pedestrian delay and severance are closely related effects and can be grouped together. 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 greater increases in delay. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the development site.”* (Para 3.24). Furthermore, the guidance advises that *“...it is not considered wise to set down definitive thresholds. Instead, it is recommended that the competent traffic and movement expert use their judgement to determine whether pedestrian delay constitutes a significant effect.”* (Para 3.26);
- Non-motorised user amenity – the ISEP Guidelines advise that, *“The 1993 Guidelines suggest that a tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or HGV component) is halved or doubled. Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law.”* (Para 3.30);

- Fear and intimidation – there are no commonly agreed thresholds for estimating levels of fear and intimidation from known traffic and physical conditions. However, as the impact is considered to be sensitive to traffic flow, changes in traffic flow of 30%, 60% and 90% are regarded as producing minor, moderate and substantial changes, respectively, in the ISEP Guidelines. (Para 2.19). As such, this has been used to assess the potential impacts associated with construction activities around fear and intimidation of people near the Proposed Development;
- Road safety – professional judgement will be used to assess the implications of local circumstances, or factors which may elevate or lessen risks of accidents. In line with the ISEP Guidelines, areas of collision clusters will be subject to detailed review;
- Road safety audits – it is proposed to undertake any necessary Road Safety Audits (RSA) post-consent and it is considered that this can be secured via the highways technical approval process; and
- Hazardous Loads / Large loads –the movement of the AIL associated with the construction of the Proposed Development will be considered in full, within a separate Route Survey Report, which identifies physical mitigation measures required to accommodate the predicted loads within the final planning submission. Additional mitigation in terms of addressing potential impacts on sensitive receptors are included as standard within the mitigation section.

14.4.28 While not specifically identified as more vulnerable road users, cyclists are considered in similar terms to pedestrians.

14.4.29 The four levels against which the magnitude of these impacts should be assessed – major, moderate, minor and negligible are discussed in **Table 14-4**.

*Table 14-4: Magnitude of Effect*

Sensitivity	Descriptions
Major	These effects are considered to be material in the decision-making process.
Moderate	These effects may be important but are not likely to be material factors in decision making. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a receptor.
Minor	These effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are important in improving the subsequent design of the project.

Sensitivity	Descriptions
Negligible	No effects or those that are imperceptible.

**Defining the Effect**

14.4.30 To determine the overall significance of effects, the results from the receptor sensitivity and magnitude of change assessments are correlated and classified using the scale illustrated in **Table 14-5**.

*Table 14-5: Significance of Effect*

Sensitivity	Magnitude of Impact			
	Major	Moderate	Minor	Negligible
High	Major	Major / Moderate	Moderate / Minor	Minor
Medium	Major / Moderate	Moderate	Minor	Minor / Negligible
Low	Moderate / Minor	Minor	Minor	Minor / Negligible
Negligible	Minor	Minor / Negligible	Minor / Negligible	Negligible

14.4.31 Significance is categorised as Major, Moderate, Minor or Negligible. Likely effects judged to be of Major or Moderate significance will be considered to be significant in accordance with the EIA Regulations whilst also considering the environmental mitigation measures that have been incorporated into the Proposed Development.

14.4.32 Where an effect could be one of Major / Moderate or Moderate / Minor significance, professional judgement will be used to determine which option should be applicable, as these effects can be classed as significant. Effects judged to be of Minor or Negligible significance will be considered not significant.

**Limitations and Assumptions**

14.4.33 The assessment is based upon average traffic flows in one-month periods. During any given month, activities at the Proposed Development may fluctuate between one day and another and, at this stage, it is not possible to fully develop a day-by-day traffic flow estimate. This would be confirmed once a Principal Contractor has been appointed. However, it should be noted that external factors can also impact upon activities on a day-by-day basis, weather conditions, availability of materials, time of year, etc.

- 14.4.34 The future baseline year being assessed as part of the traffic and Transport Assessment is 2031, as this is the anticipated year of peak construction activity, should the Proposed Development be granted consent.
- 14.4.35 It is considered that there is sufficient design and construction information to enable a robust assessment and an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on Transport and Access.

## 14.5 Baseline Conditions

### Existing Baseline: Active Travel Network

- 14.5.1 There are no dedicated pedestrian facilities such as roadside footways in the immediate vicinity of the Proposed Development, reflecting its rural setting.
- 14.5.2 A review of the PRow maps of Lancashire County Council, Calderdale Council, North Yorkshire Council and the Bradford Council has been undertaken to consider the PRow and Bridleways that could interact with construction traffic.
- 14.5.3 A plan illustrating the PRow and PEIR Boundary has been created using publicly available data and is displayed in Figure 7 of **Technical Appendix 14-1**.
- 14.5.4 There are a number of PRow originating from the C682 Lancashire Moor Road / Two Laws Road within Lancashire County Council's borders, however with the proposed bypass of the junction of the A6068 / C682 Lancashire Moor Road, construction traffic is not expected to cause any significant issue for these routes.
- 14.5.5 Within the Calderdale Council boundary, there are a number of PRow within the Turbine Area, including the Pennine Bridleway and Pennine Way. The access track from Access Junction 2 is close to PRow 01/25/3 and careful mitigation will be required to ensure that PRow access is not hindered by construction activities and traffic.
- 14.5.6 With regards to cycling, a review of Walk Wheel Cycle Trust's (formally Sustrans) National Cycle Network (NCN) map has been undertaken. National Route 68: The Pennine Cycleway is the closest route, however this is located to the west of the Proposed Development and crosses the A6068 at Laneshawbridge, using part of the northern portion of the C682 Lancashire Moor Road. As no construction traffic is using the northern section of the C682 Lancashire Moor Road, the only interaction will be cyclists crossing the road.

### Existing Baseline: Road Network

- 14.5.7 The study area road network is described in detail in **Technical Appendix 14-1**.

- 14.5.8 The M65 is the closest motorway to the Proposed Development, extending from the M6 and M61 interchange near Preston eastward towards Colne.
- 14.5.9 The motorway is subject to the standard national motorway speed limit of 70mph, though there are variable speed limits and sections controlled by Smart Motorway technology, such as near its western terminus at Access Junction 1, where limits may be reduced electronically during periods of congestion or maintenance. The M65 is generally maintained to a high standard typical of the strategic road network, showing good surface condition.
- 14.5.10 The M65 falls under the responsibility of National Highways (formerly Highways England), the government company that operates, maintains, and improves England's motorways and major A roads.
- 14.5.11 The A6068 is a principal single carriageway road connecting East Lancashire to West Yorkshire. The road is characterised by a variety of speed limits reflecting the change in environment from urban to semi-rural sections. While some stretches are typically subject to the national speed limit (60mph) for a single carriageway, substantial sections passing through built-up areas and approaching motorway junctions have lower restrictions.
- 14.5.12 The A6068 is operated by both Lancashire County Council and North Yorkshire Council within their respective areas.
- 14.5.13 The C682 (Lancashire Moor Road / Two Laws Road) connects the A6068 to West Yorkshire and eventually the wider A629 corridor.
- 14.5.14 Given its moorland and rural character, long sections of the C682 are subject to the national speed limit of 60mph for a single carriageway. Where the road passes through scattered settlements and approaches junctions, the limit will reduce, typically to 30mph in built-up areas. Road surface conditions do vary.
- 14.5.15 The road is maintained in the west by Lancashire County Council and by Bradford Council in the east. The proposed site access (Access Junction 1) lies within the boundaries of Lancashire County Council.
- 14.5.16 The A629 is a significant primary route spanning the counties of North, West, and South Yorkshire, running from Skipton in the north to Rotherham in the south, passing through major conurbations including Keighley, Halifax, and Huddersfield.
- 14.5.17 Between Keighley and Haworth, the road is single carriageway, with the speed limit varying between 40mph and 30mph as the road passes through urban areas. The road is subject to street lighting and on-street parking and is maintained in this section by Bradford Council.

- 14.5.18 The A6033 is a scenic single carriageway route that provides a cross-Pennine link between the villages of Haworth (near Cross Roads) and the town of Hebden Bridge. The road is particularly notable for its route across exposed moorland and through steep valleys.
- 14.5.19 In moorland sections, the road is typically subject to the national speed limit (60mph). In urban areas, speed limits are reduced as the road passes through villages like Oxenhope (to 30mph and even 20mph in parts).
- 14.5.20 The A6033 route between Haworth and Hebden Bridge crosses a local authority boundary, meaning maintenance responsibilities are divided between Calderdale Council and the Bradford Council.
- 14.5.21 The proposed second site access (Access Junction 2) is within the boundaries of Calderdale Council.
- 14.5.22 The A646 is a major single carriageway route connecting Halifax to Burnley. The road passes directly through the towns of Mytholmroyd, Hebden Bridge, and Todmorden, often running parallel to the Rochdale Canal.
- 14.5.23 The speed limit reduces to 30mph in the main settlements of Hebden Bridge and Todmorden, and in some areas, such as the town centre of Hebden Bridge, the limit is 20mph. Sections between towns, such as along Burnley Road towards Mytholmroyd, are often subject to a 40mph limit, though there are current proposals to reduce some of these to 30mph to improve safety and promote active travel.
- 14.5.24 The entire A646 route within this area is maintained by Calderdale Council.
- 14.5.25 Moor End Road and Mount Tabor Road provide connections from Halifax town centre to the wider suburbs of Halifax and onto settlements towards the moorland areas to the west of Halifax. Both provide on-street parking and the speed limit transitions from 30mph to 40mph. The roads are maintained by Calderdale Council.
- 14.5.26 Cold Edge Road and Nab Water Lane provide access across the moors to the west of Halifax. Both roads have been recently used as a bypass when works were undertaken on the A6033, although they are rural in nature and narrow with informal passing places. Cold Edge Road is maintained by Calderdale Council, up to the Council boundary (approximately halfway along Warley Moor Reservoir). The remainder of the road and all of Nab Water Lane are maintained by the City of Bradford Metropolitan District Council.

### **Existing Baseline: Road Accidents**

- 14.5.27 Personal Injury Accident (PIA) data for the five-year period covering 01 January 2020 to 31 December 2024 was obtained from the online resource CrashMap which

uses data collected by the police about road traffic crashes occurring on British roads, where someone is injured.

14.5.28 Transport Assessment guidance requires an analysis of the PIA data on the road network in the vicinity of any development to be undertaken for at least the most recent three-year period, or preferably a five-year period, particularly if the Proposed Development has been identified as being within a high accident area. Whilst the study area has not been identified as having a high accident rate, a five-year review has been undertaken to ensure a comprehensive assessment has been undertaken.

14.5.29 The PIA statistics are categorised into three categories, namely:

- A “Slight” PIA, examples include a sprain, bruise or cut which is not considered to be severe, or slight shock requiring roadside attention;
- A “Serious” PIA, examples include fractures, concussion, internal injuries, crushings, severe cuts and lacerations, severe general shock requiring treatment; and
- A “Fatal” PIA, for those accidents that result in a death.

14.5.30 A summary analysis of the incidents indicates that:

- A total of 43 accidents were recorded within the study area roads within the five-year period;
- Of those 43 accidents, 29 were classed as “slight”, 12 as “serious” and two resulted in fatalities;
- A total of nine accidents involved motorcycles. Three resulted in “slight” accidents and six resulted in “serious”;
- 11 accidents occurred in winter months. 16 accidents involved single vehicles, suggesting that loss of control was the significant factor in the accidents;
- A total of 10 accidents were recorded to involve HGV, of which two occurred on the C682. One of these were recorded a “slight” and one was recorded as “serious”. The majority of HGV accidents occurred on the A6068;
- Young drivers (those under 25 years old) were involved in eight accidents, including both fatal accidents;
- Three cyclist casualties and three pedestrian casualties were noted, with the accidents occurring in Hebden Bridge and Oxenhope; and

- No accidents occurred near to Access Junction 2. Four accidents occurred to the west of Access Junction 1 at the bend in the road (three of these were single vehicle accidents).

14.5.31 Based on the information available, it has been established that there are no specific road safety issues within the immediate vicinity of the Proposed Development or within the study area that currently require to be addressed or would be exacerbated by the construction of the Proposed Development.

### Existing Baseline: Road Traffic Levels

14.5.32 In order to assess the impact of construction traffic on the study area, Automatic Traffic Counts (ATCs) were undertaken throughout the study area in October 2025.

14.5.33 Traffic counts were collected as two-way flows and are summarised into cars and LGV, HGV, and Total Traffic flows.

14.5.34 The locations of the ATC sites are illustrated in Figure 8 of **Technical Appendix 14-1**. To complement the ATC surveys, existing traffic count data was obtained from the DfT database with 2024 data utilised, where available.

14.5.35 The surveyed traffic data for 2025 has been summarised in **Table 14-6**.

*Table 14-6: Baseline 2025 24-hour Average Daily Traffic Data*

No.	Survey Location	Car and LGV	HGV	Total
1	A6068 Keighley Road, Cowling	8,723	860	9,583
2	A6068 Access Junction	7,239	1,105	8,344
3	A6068 Laneshawbridge	10,162	1,277	11,439
4	A6068 Colne	12,358	1,368	13,726
5	C682 Lancashire Moor Rd / Two Laws Rd	2,063	362	2,425
6	A6033 Hebden Bridge Road	1,991	216	2,207
7	A6033 Hebden Bridge	3,632	293	3,925
8	A6033 Haworth	2,654	290	2,944
9	A646 Burnley Road, Hebden Bridge	12,254	1,049	13,303
10	A646 Bankfoot, Burnley	13,397	1,080	14,477
11	A629 at Rawlings Street, Keighley	16,139	576	16,715

No.	Survey Location	Car and LGV	HGV	Total
12	M65 at Burnley	62,870	2,133	65,002
13	A56 at Kelbrook	16,751	592	17,343
14	A56 northeast of Thornton in Craven	10,148	473	10,622
15	A59 West of Skipton	15,877	857	16,734
16	Moor End Road, Halifax	6,038	54	6,092
17	Mount Tabor Road	2,077	45	2,122
18	Cold Edge Road	308	3	311

### Future Baseline

- 14.5.36 Construction of the Proposed Development is assumed to commence in 2029 and the peak of construction is predicted to peak in 2031.
- 14.5.37 To assess the likely effects during the construction, base year traffic flows were determined by applying a National Road Traffic Forecast (NRTF) low growth factor to the surveyed traffic flows.
- 14.5.38 This growth factor has been applied to the survey data to estimate the 2031 Base traffic flows, as shown in **Table 14-7**. This will be used in the traffic impact assessment.

*Table 14-7: Baseline 2031 24-hour Average Daily Traffic Data*

No.	Survey Location	Car and LGV	HGV	Total
1	A6068 Keighley Road, Cowling	8,985	886	9,870
2	A6068 Access Junction	7,456	1,138	8,594
3	A6068 Laneshawbridge	10,467	1,315	11,782
4	A6068 Colne	12,729	1,409	14,138
5	C682 Lancashire Moor Rd / Two Laws Rd	2,125	373	2,498
6	A6033 Hebden Bridge Road	2,051	222	2,273
7	A6033 Hebden Bridge	3,741	302	4,043
8	A6033 Haworth	2,734	299	3,032
9	A646 Burnley Road, Hebden Bridge	12,622	1,080	13,702

No.	Survey Location	Car and LGV	HGV	Total
10	A646 Bankfoot, Burnley	13,799	1,112	14,911
11	A629 at Rawlings Street, Keighley	16,623	593	17,217
12	M65 at Burnley	64,756	2,197	66,952
13	A56 at Kelbrook	17,254	610	17,864
14	A56 northeast of Thornton in Craven	10,453	488	10,941
15	A59 West of Skipton	16,353	883	17,236
16	Moor End Road, Halifax	6,219	56	6,275
17	Mount Tabor Road	2,139	46	2,185
18	Cold Edge Road	318	3	321

*Please note minor variances due to rounding may occur.*

## 14.6 Environmental Measures

14.6.1 This section describes details of the transport environmental measures which have been included within the design of the Proposed Development (as presented in **Chapter 4: The Proposed Development**). These measures are an inherent part of the design of the Proposed Development and have been included to benefit road safety and achieve positive effects where possible, as well as avoid, reduce or compensate for the adverse environmental effects of the Proposed Development.

### Construction

14.6.2 The environmental measures included within the design of the Proposed Development, during the construction phase, include:

- Basic construction traffic management measures, including the provision of “Construction Access Ahead” and “Slow Ahead” signage at each access junction;
- Access Junctions 1 and 2 into the Proposed Development to be designed in accordance with Lancashire County Council and Calderdale Council standards, depending upon which local authority boundary they are located in;
- The use of a Travel Plan for construction staff, to be included within the contracts to be let for the construction of the Proposed Development;
- The use of police escorts in the transport of ALL components from the Port of Entry, through to the Proposed Development;

- ALL access improvements between the A6068 and the site access junction, including the provision of offline private access tracks to avoid ALL access over highly constrained sections of the C682 Lancashire Moor Road. These works provide both an environmental and road safety benefit. The final selection of the access track enhancement selected will be included in the finalised submission at ES; and
- Road cleaning, within 500m of the Proposed Development's access junctions (Junctions 1 and 2).

14.6.3 These measures are included in **Appendix 14-2** and will be secured by a requirement in the draft DCO.

### Operation and Maintenance

14.6.4 Whilst this phase has been scoped out of this assessment, general maintenance of the access junction surfaces and drainage features will be undertaken to ensure that the junction remains in a safe and serviceable condition throughout the lifetime of the Proposed Development.

### Decommissioning

14.6.5 The decommissioning phase will need to occur after a minimum of 35 years of the completion of the Proposed Development, expected to be circa 2066. As such, it is not possible or realistic to estimate the baseline or what advances in decommissioning are likely to be available at this point in time.

14.6.6 To ensure transport and access matters will be properly addressed at decommissioning, a requirement for a Decommissioning Traffic Management Plan (DTMP) will be secured in the draft DCO.

14.6.7 It is proposed that the DTMP is based upon the measures contained in the **Construction Traffic Management Plan (oCTMP) (Appendix 14-2)** at present.

14.6.8 This document can then be developed to capture the future baseline and best practice measures for recycling redundant solar farm sites at that time. A refreshed traffic impact and additional future mitigation plan can then be developed and implemented, following review by future stakeholders and highways authorities.

### Potential Effects Scoped Out

14.6.9 This section lists the effects which are scoped out of the transport and access assessment as they are not considered likely to be significant. This includes the evidence that justifies this approach, as shown in **Table Table 14-8**.

Table 14-8: Potential Effects Scoped Out

Effects Scoped Out	Justification
Operational and Maintenance Phase	The traffic numbers are anticipated to be up to 4 LGV per week, far below the thresholds for an assessment.
Decommissioning Phase	Elements of the infrastructure of the Proposed Development are predicted to be retained on site (see <b>Chapter 4: The Proposed Development</b> ), resulting in a lower number of vehicle movements than the peak of construction activities. As such, there is no need for a further assessment as the effects will be similar to those reported for the construction phase. A DTMP will be secured either as a separate report or as part of a wider Decommissioning Environment Management Plan (DEMP) under the draft DCO.

14.6.10 Where impacts have likely significant effects and are therefore scoped in, refer to the scoped in effects section in the Preliminary Environmental Assessment below.

## 14.7 Preliminary Environmental Assessment

14.7.1 The Preliminary Environmental Assessment details the effects that are considered to be likely significant, including providing details of how and why such a conclusion has been reached based on the information available at this stage.

14.7.2 This is a preliminary assessment of likely significant effects with the environmental measures in place, but without additional mitigation.

### Construction Phase

#### Transport-related Effects

##### Receptors and Receptor Sensitivity

14.7.3 A review of sensitive receptors has been undertaken within the study area. **Table 14-9** details the receptors and their sensitivities for use within the following assessment. A justification for the sensitivity has been provided, based upon the details contained in **Table 14-3**.

Table 14-9: Receptor Sensitivity

Receptor	Sensitivity	Reason
Users of the PRow network passing through the Proposed	High	Minor paths used by walkers, cyclists and horse riders, not constructed to accommodate HGV traffic flows.

Receptor	Sensitivity	Reason
Development (including Pennine Bridleway)		
Users of the Pennine Way passing through the Proposed Development	High	Minor paths used by walkers, cyclists and horse riders, not constructed to accommodate HGV traffic flows.
Users of the A6068	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Users of the C682 Lancashire Moor Rd / Two Laws Rd	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGV.
Users of the A6033	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Users of the A646	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Users of the A629	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Users of the M65	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Users of the A56	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Users of the A59	Low	Where the road is Trunk or A-class, constructed to accommodate significant HGV composition.
Users of Moor End Road	Medium	Where the road capable of regular use by HGV traffic. Includes roads where there is some traffic calming or traffic management measures.
Users of Mount Tabor Road	Medium	Where the road capable of regular use by HGV traffic. Includes roads where there is some traffic calming or traffic management measures.

Receptor	Sensitivity	Reason
Users of Cold Edge Road / Nab Water Lane	High	Where the road is a minor rural road, not constructed to accommodate frequent use by HGV.
Residents of Colne	High	Where a location is a large settlement containing a high number of community and public services and facilities.
Residents of Laneshawbridge	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents of properties alongside the C682 Lancashire Moor Road / Two Laws Road	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents of Cowling and Cross Hills	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents of Keighley	High	Where a location is a large settlement containing a high number of community and public services and facilities.
Residents of Haworth	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents of Oxenhope	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents of Hebden Bridge	High	Where a location is a large settlement containing a high number of community and public services and facilities.
Residents of Pecket Well	Low	Where a location is a small rural settlement, few community or public facilities or services.

Receptor	Sensitivity	Reason
Residents living alongside the A6068	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents living alongside the A6033	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents of Earby	Medium	Where a location is an intermediate sized rural settlement, containing some community or public facilities and services.
Residents living alongside the A56	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents living alongside the A59	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Residents of Moor End Road	High	Where a location is a large settlement containing a high number of community and public services and facilities.
Residents of Mount Tabor	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents living along Mount Tabor Road	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents living along Cold Edge Road / Nab Water Lane	Low	Where a location is a small rural settlement, few community or public facilities or services.
Residents living alongside the Bradford West Cable Corridor	Negligible	Where a location includes individual dwellings or scattered settlements with no facilities.
Users of roads crossed by the Bradford West Cable Corridor	Low	The majority of works will be small scale land closures with minor delays or trenchless crossing points that avoid interactions with other road traffic.
School users of Christ Church Primary School, Colne	High	Sensitive community asset with immediate frontage onto the primary delivery route.

14.7.4 Based on the ISEP Guidelines, the following are all classed as a sensitive receptors and would be subject to 'Rule 2' which requires a full assessment of effects if the traffic count locations are anticipated to be subject to an increase in 10% of total traffic:

- Users of the PRow network passing through the Proposed Development (including the Pennine Bridleway);
- Users of the Pennine Way passing through the Proposed Development;
- Users of the C682 Lancashire Moor road/ Two Laws Road;
- Residents of Colne;
- Residents of Keighley;
- Residents of Hebden Bridge;
- School users of Christ Church Primary Scholl, Colne;
- Residents of Moor End Road; and
- Users of Cold Edge Road / Nab Water Lane.

14.7.5 All other locations within the study area are subject to 'Rule 1' and are assessed if traffic flows (or HGV flows) on highway links are anticipated to increase by more than 30% as a result of the construction phase of the Proposed Development.

14.7.6 The percentage impact that triggers either of the ISEP Guidelines rules is based upon the increase in traffic on a road link, once the peak construction traffic for that road is included.

### Preliminary Assessment

14.7.7 **Technical Appendix 14-1** details the traffic generation associated with the peak of construction associated with the Proposed Development. The resulting traffic flows are summarised in **Table 14-10**.

*Table 14-10: Peak Construction Traffic*

No.	Survey Location	Car and LGV	HGV	Total
1	A6068 Keighley Road, Cowling	8	0	8
2	A6068 Access Junction	47	201	247
3	A6068 Laneshawbridge	47	201	247

No.	Survey Location	Car and LGV	HGV	Total
4	A6068 Colne	39	201	239
5	C682 Lancashire Moor Rd / Two Laws Rd	47	201	247
6	A6033 Hebden Bridge Road	40	34	74
7	A6033 Hebden Bridge	20	2	22
8	A6033 Howarth	20	12	32
9	A646 Burnley Road, Hebden Bridge	16	2	18
10	A646 Bankfoot, Burnley	4	0	4
11	A629 at Rawlings Street, Keighley	20	12	32
12	M65 at Burnley	26	74	100
13	A56 at Kelbrook	0	148	148
14	A56 northeast of Thornton in Craven	0	148	148
15	A59 West of Skipton	0	148	148
16	Moor End Road, Halifax	0	22	22
17	Mount Tabor Road	0	22	22
18	Cold Edge Road	0	22	22

Please note that rounding errors can occur.

- 14.7.8 The peak of construction occurs in Month 21 with 234 HGV movements per day (117 inbound and 117 outbound) and 86 Car / LGV movements (43 inbound trips and 43 outbound trips).
- 14.7.9 The peak month traffic data was combined with the future year (2031) traffic data to allow a comparison between the baseline results to be made. The increase in traffic volumes is illustrated in percentage increases for each class of vehicle. This is summarised in **Table 14-11**.

Table 14-11: 2031 Peak Month Daily Traffic Flows and Impact Summary

Survey Location	Car and LGV	HGV	Total	Cars and LGV % Increase	HGV% Increase	Total Traffic % Increase
A6068 Keighley Road, Cowling	8,993	886	9,878	0.1%	0.0%	0.1%
A6068 Access Junction	7,503	1,361	8,864	0.6%	17.6%	2.9%
A6068 Laneshawbridge	10,514	1,538	12,052	0.4%	15.2%	2.1%
A6068 Colne	12,767	1,632	14,399	0.3%	14.2%	1.7%
C682 Lancashire Moor Rd / Two Laws Rd	2,172	596	2,767	2.2%	53.8%	9.9%
A6033 Hebden Bridge Road	2,091	234	2,325	2.0%	15.3%	3.3%
A6033 Hebden Bridge	3,761	304	4,065	0.5%	0.7%	0.5%
A6033 Howarth	2,754	310	3,064	0.7%	3.9%	1.0%
A646 Burnley Road, Hebden Bridge	12,638	1,082	13,720	0.1%	0.2%	0.1%
A646 Bankfoot, Burnley	13,803	1,112	14,915	0.0%	0.0%	0.0%
A629 at Rawlings Street, Keighley	16,643	605	17,248	0.1%	2.0%	0.2%
M65 at Burnley	64,782	2,271	67,053	0.0%	3.4%	0.1%
A56 at Kelbrook	17,254	758	18,012	0.0%	24.3%	0.8%
A56 northeast of Thornton in Craven	10,453	636	11,089	0.0%	30.4%	1.4%
A59 West of Skipton	16,353	1,031	17,385	0.0%	16.8%	0.9%

Survey Location	Car and LGV	HGV	Total	Cars and LGV % Increase	HGV% Increase	Total Traffic % Increase
Moor End Road, Halifax	6,219	78	6,297	0.0%	39.9%	0.4%
Mount Tabor Road	2,139	68	2,208	0.0%	48.5%	1.0%
Cold Edge Road	318	25	343	0.0%	694.6%	6.9%

Please note that rounding errors can occur.

14.7.10 The introduction of traffic flows in the Turbine Area will increase interactions between PRow users and construction traffic. As a result of this, the impact of this potential interaction is considered to be in excess of 100%.

14.7.11 **Table 14-11** shows that total traffic movements are not predicted to increase by more than 9.9% across all of the study area. The total HGV traffic movements will increase by 53.8% on the C682 Lancashire Moor Rd / Two Laws Road and by 694.6% on Cold Edge Road.

14.7.12 In line with the ISEP Guidelines, the following receptors are considered to trigger the requirement for a detailed assessment of likely significant effects. These are:

- Users of the PRow network passing through the Proposed Development (total traffic flows in excess of 100%);
- Users of the Pennine Way passing through the Proposed Development (total traffic flows in excess of 100%);
- Users of the C682 Lancashire Moor Rd / Two Laws Rd (HGV increases in excess of 10%);
- Residents of Moor End Road (HGV increases on excess of 10%); and
- Users of Cold Edge Road / Nab Water Lane (HGV increases in excess of 10%).

14.7.13 It should be noted that the construction phase is transitory in nature and the peak of construction activities is short lived, occurring over a relatively short timeframe when taking account of the whole construction programme.

14.7.14 The significance of the likely effects on the above receptors has been determined using the rules and thresholds previously outlined in the Assessing Significance section (see **Table 14-5**). **Table 14-12** summarises the significance on the

receptors for the construction phase prior to additional mitigation measures being applied, but with the environmental measures (**Section 14.6** included).

*Table 14-12: Construction Phase Effects Summary (Pre-Additional Mitigation)*

Receptors	Potential Effect	Magnitude of Effect	Significance of Effect	Comment
PRoW users	Severance	Major	Major (Significant)	The presence of construction traffic where there was previously no traffic will lead to severance of some of the PRoW network.
	Driver delay	Negligible	Negligible (Not Significant)	Negligible.
	Pedestrian delay	Moderate	Major / Moderate (Significant)	Pedestrians could experience delays if their movements interact with construction traffic along the PRoW network, which would not be experienced prior to the construction period.
	Non-motorised user (NMU) amenity	Moderate	Major / Moderate (Significant)	NMU could experience delays if their movements interact with construction traffic along the PRoW network, which would not be experienced prior to the construction period.
	Fear and intimidation	Major	Major (Significant)	The presence of traffic flows along a location, where there would have

Receptors	Potential Effect	Magnitude of Effect	Significance of Effect	Comment
				been no traffic prior to the construction phase could cause fear and intimidation for users of the PRow network.
	Road safety	Moderate	Major / Moderate (Significant)	There is potential to impact the safety of the PRow users interacting with construction delivery vehicles.
	Large loads	Major	Major / Moderate (Significant)	There is some potential to impact the safety of the PRow users interacting with ALL delivery vehicles during turbine delivery periods.
Pennine Way users	Severance	Major	Major (Significant)	The presence of construction traffic where there was previously no traffic will lead to severance of some of the PRow network.
	Driver delay	Negligible	Negligible (Not Significant)	Negligible.
	Pedestrian delay	Moderate	Major / Moderate (Significant)	Pedestrians could experience delays if their movements interact with construction traffic along the PRow network, which would not be experienced prior

Receptors	Potential Effect	Magnitude of Effect	Significance of Effect	Comment
				to the construction period.
	Non-motorised user (NMU) amenity	Moderate	Major / Moderate (Significant)	NMU could experience delays if their movements interact with construction traffic along the PRow network, which would not be experienced prior to the construction period.
	Fear and intimidation	Major	Major (Significant)	The presence of traffic flows along a location, where there would have been no traffic prior to the construction phase could cause fear and intimidation for users of the PRow network.
	Road safety	Moderate	Major / Moderate (Significant)	There is potential to impact the safety of the PRow users interacting with construction delivery vehicles.
	Large loads	Major	Major / Moderate (Significant)	There is some potential to impact the safety of the PRow users interacting with ALL delivery vehicles during turbine delivery periods.
Users of the C682 Lancashire	Severance	Negligible	Negligible (Not Significant)	The road is minor and the proposed traffic volume

Receptors	Potential Effect	Magnitude of Effect	Significance of Effect	Comment
Moor Road / Two Laws Road				would not sever links.
	Driver delay	Minor	Minor (Not Significant)	There is spare capacity along the existing link road and therefore the effect on driver delay is considered minor.
	Pedestrian delay	Minor	Minor (Not Significant)	There are no pedestrian facilities located along the road within the study area and therefore the effect on pedestrian delay is considered minor.
	Non-motorised user (NMU) amenity	Minor	Moderate (Significant)	The total increase in traffic flow is minor, however an increase in HGV traffic is predicted, which can be intimidating for NMU.
	Fear and intimidation	Moderate	Moderate (Significant)	The total increase in traffic flow is minor, however an increase in HGV traffic is predicted.
	Road safety	Minor	Moderate (Significant)	There is potential to impact the safety of the users of the NCN interacting with construction delivery vehicles. The effect is therefore considered moderate.

Receptors	Potential Effect	Magnitude of Effect	Significance of Effect	Comment
	Large loads	Major	Major / Moderate (Significant)	Interactions with ALL traffic will occur as this is the principal ALL Access Route.
Residents of Moor End Road	Severance	Negligible	Negligible (Not Significant)	The proposed traffic volume would not sever links.
	Driver delay	Minor	Minor (Not Significant)	There is spare capacity along the road and therefore the effect on driver delay is considered minor.
	Pedestrian delay	Minor	Minor (Not Significant)	The proposed traffic volume would not lead to significant delays.
	Non-motorised user (NMU) amenity	Minor	Minor (Not Significant)	The total increase in traffic flow is minor.
	Fear and intimidation	Moderate	Minor (Not Significant)	The total increase in traffic flow is minor.
	Road safety	Minor	Minor (Not Significant)	The total increase in traffic flow is minor.
	Large loads	Minor	Minor (Not Significant)	No ALL traffic is proposed on this road.
Users of Cold Edge Road / Nab Water Lane	Severance	Negligible	Negligible (Not Significant)	The road is minor and the proposed traffic volume would not sever links.
	Driver delay	Minor	Minor (Not Significant)	There is spare capacity along the

Receptors	Potential Effect	Magnitude of Effect	Significance of Effect	Comment
				existing link road and therefore the effect on driver delay is considered minor.
	Pedestrian delay	Minor	Minor (Not Significant)	There are no pedestrian facilities located along the road within the study area and therefore the effect on pedestrian delay is considered minor.
	Non-motorised user (NMU) amenity	Minor	Moderate (Significant)	The total increase in traffic flow is minor, however an increase in HGV traffic is predicted, which can be intimidating for NMU.
	Fear and intimidation	Moderate	Moderate (Significant)	The total increase in traffic flow is minor, however an increase in HGV traffic is predicted.
	Road safety	Minor	Moderate (Significant)	There is potential to impact the safety of the users of the NCN interacting with construction delivery vehicles. The effect is therefore considered moderate.
	Large loads	Minor	Minor (Not Significant)	No AIL traffic is proposed on this road.

- 14.7.15 The effects have been undertaken on the basis that the environmental measures (as described above) have been included.
- 14.7.16 Significant effects are predicted for PRow users, users of the Pennine Way, users of the C682 Lancashire Moor Road / Two Laws Road and Users of Cold Edge Road / Nab Water Lane. Additional mitigation will therefore be required and for the avoidance of doubt, these measures will also apply to the wider study area to provide betterment to all users and residents affected by construction traffic.
- 14.7.17 Works required for the export cable, to allow the Proposed Development access to the electrical grid network are described in **Appendix 14-1**. The traffic generation with the cabling works does not generate large traffic flows as noted in **Appendix 14-1**, with flows of up to 10 movements per day predicted on average. The likely traffic impact of these vehicles is not likely to be significant.
- 14.7.18 The greater impact will be the short delays associated with the lane closures associated with the cable trenching works. These works will occur in sections, and as such, it is considered likely that only one set of road works would be encountered in any one road at any point in time. The likely delay will therefore be limited to circa 2-4 minutes, depending upon the temporary traffic signal settings.
- 14.7.19 The level of delay is considered similar to those encountered from normal road maintenance works, albeit over a marginally longer period. The anticipated traffic impact is therefore not considered significant, subject to appropriate traffic management measures being implemented.

### **Additional Mitigation**

- 14.7.20 To address the potential impacts outlined above, potential mitigation is proposed. These measures are detailed in the outline CTMP (**Appendix 14-2**) (a finalised version of the CTMP will be agreed with all highway authority stakeholders prior to works commencing on site and secured through the DCO, to ensure compliance).
- 14.7.21 The oCTMP (**Appendix 14-2**) includes a number of mitigation and management measures, including:
- Approved construction access routes;
  - Routes barred for construction traffic;
  - The creation of a Traffic Management Group to act as a liaison between the developer and local community;
  - Contractor Selection including the requirements to adhere to the Considerate Constructors Scheme (CCS) and Construction Logistics and Community Safety (CLOCS) best practice guidance;

- Enhanced road signage measures, including signage for AIL deliveries;
- HGV vehicle requirements including identify requirements and data logging;
- A Wear and Tear Agreement with all relevant local highway authorities;
- AIL Traffic Management Plan;
- Onsite Access Management Plan;
- CTMP management protocol and complaints process, including response times and commitments;
- A liaison process with other future consented projects that may share the access routes; and
- Potential road improvements such as enhanced passing places and corner widening on Cold Edge Road and Nab Water Lane.

14.7.22 A framework Onsite Access Management Plan (OAMP) is also proposed and would be included in the oCTMP (**Appendix 14-2**) and will be secured through the DCO. During construction it will be necessary to temporarily divert PRowS. Within the OAMP, consideration will be given to pedestrians, cyclists and horse riders alike due to potential interactions between construction traffic and users of the PRow, bridleway and path network during the construction phase. Appropriate measures will be formulated into an Onsite Access Management Plan, incorporated into the oCTMP. A separate outline PRow Management Plan (oPRowMP) will also be prepared for the ES.

14.7.23 The Principal Contractor will ensure that speed limits are adhered to by their drivers and associated subcontractors. This is particularly important at crossing points. Advisory speed limit signage will also be installed on approaches to areas where path users may interact with construction traffic.

14.7.24 Signage will be installed across the PEIR Boundary that makes drivers aware of local speed limits and reminding drivers of the potential presence of pedestrians, cyclists and equestrians. This will also be emphasised in weekly toolbox talks for construction staff and delivery drivers.

14.7.25 Users of the PRowS will be separated from construction traffic using barriers (where permitted and appropriate) which will ensure that safe access to the PEIR Boundary for recreational purposes will be maintained. Crossing points will be provided where required, with path users having right of way and diversions will be provided where necessary.

14.7.26 Appropriate and compliant temporary road signage would be provided to assist at these crossings for the benefit of all users.

14.7.27 The British Horse Society generally recommends that in the interactions between HGV traffic and horses state that horses are normally nervous of large vehicles, particularly when they do not often meet them. Horses are flighty animals and will run away in panic if really frightened. Riders will do all they can to prevent this, but should it happen, it could cause a serious accident for other road users, as well as for the horse and rider.

14.7.28 The main factors causing fear in horses in this situation are:

- Something approaching them which is unfamiliar and intimidating;
- A large moving object, especially if it is noisy;
- Lack of space between the horse and the vehicle;
- The sound of air brakes; and
- Anxiety on the part of the rider.

14.7.29 The British Horse Society generally notes that the following actions that will be included in the oCTMP training for all HGV staff:

- On seeing riders approaching, drivers must slow down and stop, minimising the sound of air brakes, if possible.
- If the horse still shows signs of nervousness while approaching the vehicle, the engine should be shut down (if it is safe to do so).
- The vehicle should not move off until the riders are well clear of the back of the HGV.
- If drivers are wishing to overtake riders, they should approach slowly or even stop to give riders time to find a gateway or lay by where they can take refuge and create sufficient space between the horse and the vehicle. Because of the position of their eyes, horses are very aware of things coming up behind them.
- All drivers delivering to the construction site must be patient. Riders will be doing their best to reassure their horses while often feeling a high degree of anxiety themselves.

14.7.30 Discussions with local equestrian groups can be held during the construction period to keep riders informed of works and activities. These discussions will also allow the contractors to tailor their toolbox talks to specific equestrian issues.

14.7.31 For decommissioning, a DTMP will be developed. This document will be similar to the finalised CTMP but will cater for the future road network conditions.

14.7.32 Upon the application of the proposed mitigation (environmental and additional measures) measures described above, it is predicted that the transport effects associated during the construction phase would be as noted in **Table 14-13**.

*Table 14-13: Effects Summary following Construction Phase Additional Mitigation*

Receptor	Effects Prior to Mitigation	Residual Significance	Effect Duration
PRoW users	Significant: NMU amenity and fear and intimidation	Negligible, not significant	Temporary during construction
Users of the Pennine Way	Significant: NMU amenity and fear and intimidation	Negligible, not significant	Temporary during construction
Users of the C682 Lancashire Moor Road / Two Laws Road	Significant: NMU amenity, fear and intimidation, road safety and large loads	Negligible, not significant	Temporary during construction
Users of Cold Edge Road / Nab Water Lane	Significant: NMU amenity, fear and intimidation and road safety	Negligible, not significant	Temporary during construction

14.7.33 No significant effects are predicted following the use of additional mitigation.

### **Residual Effects**

14.7.34 There are no significant residual effects associated with construction traffic activity associated with the Proposed Development. The oCTMP (**Appendix 14-2**) will review the effectiveness of the proposed mitigation during construction.

14.7.35 All transport effects are temporary and associated with the temporary construction phase.

## Next Steps

14.7.36 A further review of the transport effects will be undertaken following the confirmation of the Proposed Development proposals to be detailed in the ES. This will include discussions with relevant stakeholders regarding the network and AIL details, consideration visibility splays, incorporation of committed developments, and any other environmental measures to reduce likely significant effects. The Transport Assessment (**Appendix 14-1**) and the oCTMP (**Appendix 14-2**) will also be updated.

## 14.8 Conclusions

- 14.8.1 Baseline traffic data has been collected to establish a base point for determining the impact during the construction phase of the Proposed Development and has been factored to future levels to help determine the effect of construction traffic on the local road network.
- 14.8.2 The construction traffic would result in a temporary increase in traffic flows on the road network surrounding the Proposed Development. The peak of construction occurs in Month 21 with 234 HGV movements per day (117 inbound and 117 outbound) and 86 Car / LGV movements (43 inbound trips and 43 outbound trips). The assessment assumes the full import of all bulk materials to site. As such, the impact assessment undertaken and presented in the Transport Assessment (**Appendix 14-1**) is overly robust.
- 14.8.3 A series of additional mitigation measures and management plans have been proposed to help mitigate and offset the impacts of the construction, operational and maintenance and decommissioning phase traffic flows. It is proposed that these will be set out in management plans which will in turn be secured by way of DCO requirement.
- 14.8.4 No long-term or residual significant effects issues are expected on any of the roads or associated receptors assessed. The effects of construction traffic are temporary in nature and are transitory.
- 14.8.5 **Table 14-14** presents a summary of the preliminary assessment of likely significant effects, with further information. It also includes the next steps to be undertaken as part of the EIA.

Table 14-14: Summary of Preliminary Assessment Significant Effects

Element	Preliminary assessment of Likely Significant Effect	Additional Mitigation	Residual Effect	Further Information	Review following PEIR Consultation
PRoW users	Significant: NMU amenity and fear and intimidation	oCTMP & OAMP to be secured through the DCO	<b>Not Significant</b>	-	Review following PEIR Consultation
Users of the Pennine Way	Significant: NMU amenity and fear and intimidation	oCTMP & OAMP	<b>Not Significant</b>	-	Review following PEIR Consultation
Users of the C682 Lancashire Moor Road / Two Laws Road	Significant: NMU amenity, fear and intimidation, road safety and large loads	oCTMP & OAMP	<b>Not Significant</b>	-	Review following PEIR Consultation
Users of Cold Edge Road / Nab water Lane	Significant: NMU amenity, fear and intimidation and road safety	oCTMP	<b>Not Significant</b>	-	Review following PEIR Consultation

