



Preliminary Environmental Information Report

Chapter 15: Transport and Access

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Future Energy Llanwern Limited

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15.0 Transport and Access

15.1 Introduction

15.1.1 This Chapter presents the preliminary results of the assessment of the likely significant effects of the Proposed Development with respect to transport and access.

15.1.2 **Figure 15-1** shows the location of the Proposed Development in the context of the wider highway network.

15.1.3 This Chapter describes:

- The legislation, policy and technical guidance that has informed the assessment (**Section 15.2**);
- Limitations and assumptions (**Section 15.3**);
- Stakeholder Engagement (**Section 15.4**);
- Description of the methodology underpinning the transport assessment (**Section 15.5**);
- Description of the Study Area (**Section 15.5**);
- Identification of the potential sensitive receptors within the vicinity of the Site (**Section 15.5**);
- Description of the EIA Significance Criteria (**Section 15.5**);
- Description of the baseline conditions (**Section 15.6**);
- Embedded Design Mitigation (**Section 15.7**);

- Preliminary assessment of likely impacts and effects (**Section 15.8**);
- Consideration for the potential mitigation and enhancement measures to reduce the impact of the Proposed Development (**Section 15.9**);
- A summary of significant residual effects (**Section 15.10**);
- A summary of significant cumulative effects (**Section 15.11**); and
- References (**Section 0**).

15.1.4 The appendices that accompany this Chapter are set out in **Table 15-1** below:

Table 15-1 Appendices associated with the Transport assessment

Drawing number / Document reference	Drawing description
Appendix 15A	Draft Travel Plan

15.1.5 The figures in **Table 15-2** below also accompany this assessment:

Table 15-2 Figures which has informed the Transport assessment

Drawing number / Document reference	Drawing description
Figure 15-1	Highway Links
Figure 15-2	Public Right of Ways
Figure 15-3	Traffic Survey Locations
Figure 15-4	Personal Injury Collision Locations

15.2 Legislation and Planning Policy

15.2.1 This section identifies the legislation, policy and other documentation that has informed the assessment of effects with respect to transport. Further information on policies relevant to the Environmental Impact Assessment (EIA) and their status is provided in **Chapter 4: Legislation and Policy** of this Preliminary Environmental

Information Report (PEIR).

15.2.2 The preliminary assessment has been undertaken in accordance with relevant transport related planning policy, legislation and guidance at the national, regional and local level. This helped identify any requirements which the Proposed Development needs to consider, aiding the process of defining the scope of assessment and informing the identification of local issues.

National planning policy

15.2.3 A summary of the relevant national and local planning policies on this topic is given in **Table 15-3**. The Policies summarised include overarching national policies and policies from Overarching National Policy Statement for Energy (NPS EN-1) (Ref 15-1), Planning Policy Wales (PPW) (Ref 15-4) and other relevant Technical Advice Notes, which form material considerations.

Table 15-3 Policy, legislation and guidance relevant to traffic and access

National Policy	Context
<p>NPS EN-1(Ref 15-1)</p>	<p>NPS EN-1 contains the generic requirements for the assessment of impacts arising from traffic associated with design, construction, operation and decommissioning of renewable energy infrastructure. Relevant paragraphs are set out below.</p> <p>Paragraph 5.14.4 confirms that:</p> <p><i>“The consideration and mitigation of transport impacts is an essential part of Government’s wider policy objectives for sustainable development as set out in Section 2.6 of this NPS.”</i></p> <p>Paragraph 5.14.5 states</p> <p><i>“If a project is likely to have significant transport implications, the applicant’s ES (see Section 4.3) should include a transport appraisal. The DfT’s Transport Analysis Guidance (TAG) and Welsh Governments WelTAG provides guidance on modelling and assessing the impacts of transport schemes”</i></p>

National Policy	Context
	<p>Paragraph 5.14.6 notes that:</p> <p><i>“National Highways and Highways Authorities are statutory consultees on NSIP applications including energy infrastructure where it is expected to affect the strategic road network and / or have an impact on the local road network. Applicants should consult with National Highways and Highways Authorities as appropriate on the assessment and mitigation to inform the application to be submitted.”</i></p>
	<p>Paragraph 5.14.7 states</p> <p><i>“The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to:</i></p> <ul style="list-style-type: none"> <i>• reduce the need for parking associated with the proposal</i> <i>• contribute to decarbonisation of the transport network</i> <i>• improve user travel options by offering genuine modal choice”</i>
	<p>Paragraph 5.14.8 explains that:</p> <p><i>“The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports).”</i></p>
	<p>Paragraph 5.14.9 states</p> <p><i>“If additional transport infrastructure is needed or proposed, it should always include good quality walking, wheeling and cycle routes, and associated facilities (changing/storage etc.) needed to enhance active transport provision.”</i></p>
	<p>Paragraph 5.14.11 sets out:</p> <ul style="list-style-type: none"> <i>• “Where mitigation is needed, possible demand management measures must be considered. This could include identifying opportunities to:</i>

National Policy	Context
	<ul style="list-style-type: none"> • <i>reduce the need to travel by consolidating trips</i> • <i>locate development in areas already accessible by active travel and public transport</i> • <i>provide opportunities for shared mobility</i> • <i>re-mode by shifting travel to a sustainable mode that is more beneficial to the network</i> • <i>retime travel outside of the known peak times</i> • <i>reroute to use parts of the network that are less busy.</i>”
	<p>Paragraph 5.14.12 states</p> <p><i>“If feasible and operationally reasonable, such mitigation should be required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts. All stages of the project should support and encourage a modal shift of freight from road to more environmentally sustainable alternatives, such as rail, cargo bike, maritime and inland waterways, as well as making appropriate provision for and infrastructure needed to support the use of alternative fuels including charging for electric vehicles.”</i></p>
	<p>Paragraph 5.14.13 notes that:</p> <p><i>“Regard should always be given to the needs of freight at all stages in the construction and operation of the development including the need to provide appropriate facilities for [Heavy Goods Vehicles (HGV)] drivers as appropriate.”</i></p>
15.2.14	<p>Paragraph 5.14.14 states</p> <p><i>“The Secretary of State may attach requirements to a consent where there is likely to be substantial HGV traffic that:</i></p> <ul style="list-style-type: none"> • <i>control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements</i>

National Policy	Context
	<ul style="list-style-type: none"> • <i>make sufficient provision for HGV parking, and associated high quality drive facilities either on the site or at dedicated facilities elsewhere, to support driver welfare, avoid ‘overspill’ parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions</i> • <i>ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force“</i> <p>Paragraph 5.14.15 sets out that:</p> <p><i>“The Secretary of State should have regard to the cost-effectiveness of demand management measures compared to new transport infrastructure, as well as the aim to secure more sustainable patterns of transport development when considering mitigation measures”</i></p> <p>Paragraph 5.14.18 states</p> <p><i>“A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the Secretary of State should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development and by enhancing active, public and shared transport provision and accessibility.”</i></p> <p>Paragraph 5.14.19 explained that:</p> <p><i>“Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the Secretary of State should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below.</i></p> <p>Paragraph 5.14.20 notes the following:</p>

National Policy	Context
	<p><i>“Development consent should not be withheld provided that the applicant is willing to enter into planning obligations for funding new infrastructure or requirements can be imposed to mitigate transport impacts. In this situation the Secretary of State should apply appropriately limited weight to residual effects on the surrounding transport infrastructure.</i></p> <p>Paragraph 5.14.21 states</p> <p><i>“The Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision.”</i></p>
<p>Llwybr Newydd: The Wales Transport Strategy 2021 (Ref 15-2)</p>	<p>The Wales Transport Strategy is centred around the principle of achieving an integrated approach to transport, which will ensure that transport can address key issues to deliver wider commitments. It aims to create ‘an accessible, sustainable and efficient transport system’ where 45% of journeys are undertaken by sustainable modes by 2040.</p>
<p>Wales National Transport Delivery Plan 2022 to 2027 (Ref 15-3)</p>	<p>Wales National Transport Delivery Plan sets out how Wales will deliver against the priorities and ambitions set out in Llwybr Newydd. As part of this, it provides a full list of programmes and interventions to be delivered.</p>
<p>PPW Edition 12 (Ref 15-4)</p>	<p>PPW sets out the land use planning policies of the Welsh Government. The document highlights that low carbon electricity must become the main source of energy in Wales and that in order to ensure that future demand can be met, significant investment will be needed in energy generation infrastructure. It also notes that the planning system should secure an appropriate</p>

National Policy	Context
	<p>mix of energy provision to maximise benefits to the economy and communities.</p>
<p>Technical Advice Note 18 (Ref 15--5)</p>	<p>Technical Advice Note 18 sets out the integration between land use planning and transport policies of the Welsh Government. On assessing impact and managing implementation, it is highlighted that transport assessments should be used to assess the suitability of an application in terms of travel demand and impact. On planning for transport infrastructure, TAN 18 highlights that smaller scale freight movements, particularly those serving developments near residential areas or in town centres, need to strike a balance between the need to protect the vitality of the local economy, and the overall quality of life for local residents. It advises that local authorities may wish to consider the potential for attaching conditions restricting hours of access when determining such applications.</p>
<p>The Active Travel (Wales) Act 2013 (Ref 15-6)</p>	<p>The Active Travel (Wales) Act requires the Welsh Government and Local Authorities in Wales to actively promote, provide, and develop walking and cycling routes. Although there are no proposed future routes within or bordering the Site, there are proposed future routes within the wider Study Area such as in Magor and Undy, and along the A4810.</p>
<p>The Well-being of Future Generations (Wales) Act 2015 (Ref 15-7)</p>	<p>The Well-being of Future Generations (Wales) Act 2015 requires public bodies in Wales to consider the well-being of future generations in decision-making and gives a legally-binding common purpose – the seven well-being goals – for national government, local government, local health boards and other public bodies. It details the ways in which these bodies must work, and work together, to improve the well-being of Wales.</p>

Local transport planning policy

- 15.2.4 A summary of the relevant local planning policies on this topic is given in **Table 15-4**. The Policies summarised include policies from local councils including Monmouthshire County Council and Newport City Council, which form material considerations. Policies relevant to renewable energy and transport described below:

Table 15-4 Local policy relevant to Transport and Access

Local Policy	Reference	Context
Monmouthshire County Council Adopted Local Development Plan (LDP) (Ref 15-8)	<p><i>Policy SD1 - Renewable Energy:</i></p> <p><i>Renewable energy schemes will be permitted where:</i></p> <p><i>(1) There are no unacceptable adverse impacts upon the landscape, townscape and historic features and there is compliance with Policy LC5, with regard to protection and enhancement of landscape character;</i></p> <p><i>(2) There are no unacceptable adverse impacts on biodiversity;</i></p> <p><i>(3) There are no unacceptable adverse impacts on the amenities of nearby residents by way of noise, dust, odour or increases in traffic;</i></p> <p><i>(4) The wider environmental, economic, social and community benefits directly related to the scheme outweigh any potentially adverse impacts; and</i></p> <p><i>(5) The distinct identity of Monmouthshire will not be compromised.</i></p>	<p>Monmouthshire County Council's LDP was adopted in 2014 and sets out the Council's vision and objectives for the development and use of land in Monmouthshire, together with the policies and proposals to implement them over a 10-year period to 2021. Providing increased opportunities for renewable energy is part of the 'Valuing our Environment' objective.</p> <p>With regard to Policy SD1, the Proposed Development has the potential for a change of composition and an increase in the volume of traffic on several highway links within the Study Area. The policy states that renewable energy schemes will</p>

Local Policy	Reference	Context
	<p><i>For all types of renewable energy, cumulative impacts will be an important consideration where there are other renewable energy schemes currently operating in the area.</i></p> <p><i>When the technology is no longer operational there is a requirement to decommission, remove the facility and complete a restoration of the site to its original condition.</i></p>	<p>be permitted where there are no unacceptable adverse impacts on the amenities of nearby residents by way of increases in traffic.</p>
	<p><i>Policy S16 - Transport</i></p> <p><i>Where appropriate, all development proposals shall promote sustainable, safe forms of transport which reduce the need to travel, increase provision for walking and cycling and improve public transport provision. This will be facilitated by:</i></p> <ul style="list-style-type: none"> <i>• Reducing the need to travel, especially by car;</i> <i>• Favouring development close to public transport</i> 	<p>With regards to Policy S16, the Proposed Development aligns with the above policy as it aims to reduce the number of workforce trips by car and shall encourage sustainable modes of transport to get to Site.</p>

Local Policy	Reference	Context
	<p><i>facilities;</i></p> <ul style="list-style-type: none"> • <i>Promoting public transport, walking and cycling;</i> • <i>Improving road safety;</i> • <i>Minimising the adverse effects of parking;</i> • <i>Improving public transport links between the County's main towns and other key settlements in the region, in line with the Wales Spatial Plan (WSP);</i> • <i>Developing the role of the key settlements of Abergavenny and Chepstow, as identified in the WSP, and Monmouth, around which high capacity sustainable transport links can be developed.</i> <p><i>The Regional Transport Plan identifies the following strategic transportation schemes:</i></p> <ul style="list-style-type: none"> • <i>Severn Tunnel Junction Interchange;</i> • <i>M48 Interchange – Rogiet;</i> • <i>Monmouth Links Connect 2 (walking and cycling</i> 	

Local Policy	Reference	Context
	<p><i>routes);</i></p> <ul style="list-style-type: none"> • <i>Abergavenny and Chepstow Rail Stations Park and Ride and bus access improvements;</i> • <i>Chepstow Park and Ride;</i> • <i>Monmouth Park and Ride.</i> 	
<p>Newport Local Development Plan (LDP) (Ref 15-9)</p>	<p><i>CE10 Renewable Energy</i></p> <p>Renewable energy schemes will be considered favourably, subject to there being no over-riding environmental and amenity considerations. Small scale micro-generation will be encouraged within the settlement boundary. Large scale proposals may be more appropriately located outside of the defined settlement boundary if no appropriate brownfield sites exist. The cumulative impacts of renewable energy schemes will be an important consideration.</p>	<p>Newport City Council's LDP was adopted in 2015 and intends to guide development in Newport up to 2026. Policies relevant to renewable energy and transport are set out below.</p> <p>With regards to Policy CE10, the Proposed Development is a large-scale proposal which is proposed to be located outside of defined settlement boundary.</p>
	<p><i>GP4 General Development Principles – Highways and Accessibility</i></p> <p><i>Development proposals should:</i></p>	

Local Policy	Reference	Context
	<ul style="list-style-type: none"> <i>i. provide appropriate access for pedestrians, cyclists and public transport in accordance with national guidance;</i> <i>i. be accessible by a choice of means of transport;</i> <i>i. be designed to avoid or reduce transport severance, noise and air pollution;</i> <i>i. make adequate provision for car parking and cycle storage;</i> <i>i. provide suitable and safe access arrangements;</i> <i>i. design and build new roads within private development in accordance with the highway authority's design guide and relevant national guidance;</i> <p><i>ensure that development would not be detrimental to highway or pedestrian safety or result in traffic generation exceeding the capacity of the highway network.</i></p>	

Local Policy	Reference	Context
	<p><i>T6 Public Rights of Way Improvement</i></p> <p><i>Proposals to improve and extend the public rights of way network are encouraged with an emphasis on sustainability and access for all.</i></p>	<p>With regards to policy T6, Public Rights of Way (PRoW) are located within the PEIR Assessment Boundary. PRoWs within the PEIR Assessment Boundary will be safeguarded and kept open during all phases of the development, see Section 0.</p> <p>PRoWs within the PEIR Assessment Boundary will be safeguarded and kept open during all phases of the development, although the Applicant will seek to divert footpaths 040/3/1 and 404/5/1 which currently cross through parts of fields, off the field onto the more accessible lanes which run around them.</p>



Other relevant information and guidance

15.2.5 A summary of the relevant guidance on this topic is given in **Table 15-5**. The guidance summarised include policies from Department of Transport (DfT) and Institute of Sustainability and Environmental Professionals (ISEP).

Table 15-5 Guidance relevant to Transport and Access

Guidance	Context
<p>DfT Circular 01/2022: Strategic Road Network and the Delivery of Sustainable Development Guidance (ref 15-10)</p>	<p>DfT Circular 01/2022 ‘Strategic Road Network and the Delivery of Sustainable Development’ outlines the methods in which National Highways (NH) will engage with developers and communities to deliver sustainable development and consequently economic growth, whilst safeguarding the primary function and purpose of the Strategic Road Network (SRN).</p> <p>Within the transport Study Area, the SRN managed by NH includes the M4 and Prince of Wales Bridge, M48 and Severn Bridge, M49 and M5.</p> <p>Paragraph 55 of Circular 01/2022 outlines under ‘Environmental assessments’:</p> <p>“...Environmental assessments must be comprehensive enough to establish the likely impacts on air quality, light pollution and noise arising from traffic generated by a development, along with the impacts from any proposed works to the SRN and identify measures to mitigate these impacts. Requirements and advice for undertaking environmental assessments in respect of transport impacts can be found in the Design Manual for Roads and Bridges (DMRB).”</p> <p>Paragraph 70 of Circular 01/2022 outlines access requirements relating to developments with solar reflection:</p> <p><i>“Some developments, notably solar farms, wind turbines and those with expansive glass facades, have the potential to create glint and glare which can be a distraction for drivers. Where these developments would</i></p>

Guidance	Context
	<p><i>be visible from the SRN, promoters must provide an appropriate assessment of the intensity of solar reflection likely to be produced, which satisfies the company that safety on the SRN is not compromised.”</i></p>
<p>Guidelines for the Environmental Assessment of Traffic and Movement 2023 (Ref 15-11)</p>	<p>Current guidance for assessing potentially significant environmental effects is produced by the Institute of Sustainability and Environmental Professionals (ISEP) Guidelines: Environmental Assessment of Traffic and Movement (hereafter referred to as the ‘ISEP Guidelines’). The ISEP Guidelines have informed the assessment in this Chapter.</p>

15.3 Assessment Assumptions and Limitations

15.3.1 At this stage, the design of the Proposed Development is still being developed and any assumptions or limitations associated with the EIA will be presented within the subsequent Environmental Statement (ES).

15.4 Stakeholder Engagement

15.4.1 An EIA Scoping Report (**Appendix 1C**) and a request for an EIA Scoping Opinion from the Planning Inspectorate was submitted in December 2024 which detailed the scope and methodology for the proposed ES. A Scoping Opinion from the Planning Inspectorate was received on 29 January 2025 (**Appendix 1D**). **Table 15-6** presents a summary of comments provided by the Planning Inspectorate and consultees as part of the scoping process and the Applicant’s response, highlighting where relevant how these comments have been addressed within this Chapter.

Table 15-6 Main matters raised during Scoping Phase

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
Planning Inspectorate	Providing the ES confirms the vehicle types and numbers required for the operation of the Proposed Development, the Inspectorate agrees that the operation will be unlikely to have significant effects on highway network and its respective receptors and can be scoped out of the ES.	Operational phase included within the scope of the assessment.	Section 15.8
Planning Inspectorate	The ES should identify locations of traffic count survey and explain how these locations were selected, confirming precise details of when the counts were undertaken. The ES should include a justification to support the extent of the survey effort, including why the traffic data collected is considered to represent the typical (neutral) flow conditions on the network.	A Traffic Count Survey has been undertaken to inform the Baseline Conditions	Section 15.6
Planning Inspectorate	The ES should include an assessment of traffic impacts on the SRN (including the M4,	The Total Peak Construction Traffic Flows for	To be addressed in the ES

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
	Prince of Wales Bridge, M48 and Severn Bridge, M49 and M5) during construction and decommissioning. The Inspectorate added that regard should be given to comments from National Highways.	the ES are yet to be determined.	
Planning Inspectorate	<p>The assessment of impacts on users of PRow and recreational routes should be supported by pedestrian/user counts where possible.</p> <p>the ES should assess potential interactions between aspect assessments (for example traffic and transport, noise, dust, recreation and visual impact).</p> <p>The locations of any diversions or closures should be illustrated on suitable figures in the ES.</p>	<p>Pedestrian/user counts to be considered during EIA stage.</p> <p>Potential interactions to be addressed in the ES.</p>	Figure 15-3.
Planning Inspectorate	The ES should detail whether any AIL movements are required and assess any potential likely significant effects.	The Total Peak Construction Traffic Flows for the ES are yet to be determined.	To be addressed in the ES
National Highways	TA should consider the operational phase.	Operational phase included	Section 15.8

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
		within the scope of the assessment.	
	Assessment years should align with the requirements in Paragraph 50 of DfT Circular 01/2022	The operational opening year assessment shall include trips generated by the Proposed Development, forecasted growth and committed development.	To be addressed in the ES
	Impact of the Proposed Development on the operation of the SRN, specifically at the M4 and Prince of Wales Bridge, M48 and Severn Bridge, M49 and M5. Where the proposals would result in severe congestion or an unacceptable safety impact, necessary infrastructure/mitigation will be required in line with current policy.	The Peak Construction Traffic Assessment year for the ES is yet to be determined.	To be addressed in the ES

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
	Timing of works and potential diversion routes to ensure any impact upon the operation of the SRN is fully understood and managed. At the application submission stage, these issues will need to be addressed as part of a Construction Traffic Management Plan (CTMP).	An oCTMP will be provided with the ES.	An oCTMP will be provided with the ES.
Wales & West Utilities	Where existing roads cannot be used construction traffic should only cross the pipeline at previously agreed locations.	Traffic routing yet to be determined	To be addressed in the ES
Monmouthshire County Council	Requests a robust Transport Assessment and Construction Traffic Management Plan (CTMP) that thoroughly outlines what is required both during construction, operation and maintenance and decommissioning	This Chapter constitutes a robust assessment of the potential effects of the construction, operation and decommissioning of the Proposed Development on traffic receptors.	Section 15.8 An oCTMP will be provided with the ES.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
		An oCTMP will be provided with the ES.	
Newport City Council	Key Issues to be during construction/decommissioning phase, but Highways Officer would anticipate being addressed through a Construction Traffic Management Plan. Active Travel Links to be scoped in, including PROWs, and Wales Coast Path	The construction and decommissioning phases have been included within this assessment. An oCTMP will be provided with the ES. Active travel links have been included within this assessment.	Section 15.8 An oCTMP will be provided with the ES.

15.5 Assessment Methodology

15.5.1 This Section sets out the scope of the PEIR transport assessment. As outlined in the Planning Inspectorate's Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (Ref 15-14), information presented in the PEIR is preliminary, therefore this scope will be reviewed and may be refined as the Proposed Development continues to evolve and as a result of continued consultation.

Scope of the Assessment

15.5.2 The scope of this assessment has been established through an ongoing scoping process. Further information can be found in **Chapter 5: EIA Methodology**. **Table 15-7** refines the scope of the assessment, following consultation with the Planning Inspectorate, and provides the evidence base for scoping in and out elements of the assessment.

Table 15-7 Elements scoped in or out of the assessment

Element	Phase	Scoping In	Scoped Out	Justification
Highway Network and receptors	Construction and Decommissioning	✓		The A4810 is the closest A-road to the Site, located less than 700 metres (m) away at its nearest point to the PEIR Assessment Boundary. Increases in HGVs associated with the construction and decommissioning of the Proposed Development will impact residents and users of the highway network. This will be assessed as per ISEP Guidance for transport and movement.
Highway Network and receptors	Operation		✓	Transportation of loads to the Site will be minimal during the operational period and only required for replacement infrastructure and minor maintenance activities. It is not

Element	Phase	Scoping In	Scoped Out	Justification
				anticipated that these loads will result in significant impacts on the local highway network or the relevant receptors.
Active Travel Links	Construction, Operation and Decommissioning	✓		There are a number of PRowS across the Site which will be kept open where possible, however, may be required to be temporarily or permanently closed and/or diverted. The National Cycle Network (NCN) Route 4 runs adjacent to the PEIR Assessment Boundary therefore the impact on the NCN will need to be assessed and mitigation provided if necessary

Spatial Scope and Study Area

15.5.3 The spatial scope of the assessment is based on the most probable routes for traffic generated by the Proposed Development, for the movement of deliveries, equipment and of staff. Identification of appropriate routes takes into consideration the following:

- restrictions such as weight and height limits; and
- suitability of routes based on a review of road types and widths.

15.5.4 The Study Area is focused on the road network to be used by traffic for all construction activity which will comprise a range of routes due to the number of

potential access points across the Site. No definitive routes are certain at this stage; however, it is assumed that vehicles will originate from the SRN, continuing onto the A4810 and connect to the Site by local roads in the vicinity. There is also potential for workers to come from the local towns and villages. The Study Area is presented in **Figure 15-1**, which shows the highway sections, referred to as ‘highway links’, that are likely to be included in the assessment, as set out in **Table 15-8**Table 15-8.

Table 15-8 Highway links within the Study Area

Link number	Link name	Link number	Link name
1	M4 & the Prince of Wales Bridge	16	Nash Road
2	M48 & Severn Bridge	17	North Row
3	M49	18	Pill Street
4	M5	19	Porton Road
5	A4810	20	Queensway Meadows Road
6	A48 Spytty Road	21	Redwick Road
7	B4245 Newport Road	22	Sea Street Lane
8	Barecroft Common	23	South Row
9	Broad Street Common	24	Straits Lane
10	Goldcliff Road	25	The Causeway
11	Green Street	26	The Ramp
12	Half Acre Lane	27	Unnamed Road
13	Lay Down Access	28	Whitson Common Road
14	Mead Lane	29	Whitewall
15	Meadows Road		

15.5.5 ISEP Guidelines (Ref 15-11) identify the following environmental effects that can occur as a result of traffic associated with the Proposed Development:

- **severance**: the separation of people from places and other people, or the impediment of pedestrian access to essential facilities;
- **driver delay**: traffic delays as a result of the Proposed Development traffic;
- **non-motorised user amenity**: the effect on the relative pleasantness of a pedestrian journey as a result of changes in traffic flow, traffic composition and pavement width / separation from traffic;
- **non-motorised user delay**: the ability of people to cross roads as a result of changes in traffic volume, composition and speed, the level of pedestrian activity, visibility and general physical conditions of the Proposed Development. Consideration will also be given to the effects on Public Rights of Way (PRoW) users due to the closure and diversion of PRoWs;
- **fear and intimidation**: these may be experienced by people as a result of an increase in traffic volume and its proximity or the lack of protection caused by such factors as narrow pavement widths; and
- **accidents and safety**: the risk of accidents occurring where the Proposed Development is expected to produce a change in the character of traffic.

15.5.6 To assess the impact at its peak, the likely percentage increase in traffic is determined by comparing estimates of traffic generated by the Proposed Development with future predicted baseline traffic flows on the road links within the Study Area.

15.5.7 The ISEP Guidelines (Ref 15-11) provide the following criteria to assist in determining which highway links should be assessed as part of an EIA:

- *“Highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)”; and*
- *“Highway links of high sensitivity where traffic flows have increased by 10%”*

or more”.

Magnitude of Change

- 15.5.8 ISEP Guidelines (Ref 15-11) set out considerations, and in some cases thresholds, in respect to changes in the volume and composition of traffic.
- 15.5.9 The assessment methodology for defining the magnitude of traffic and transport impacts has been derived from ISEP Guidelines (Ref 15-11) and is set out below. Where no guidance is available, commonly agreed thresholds for judging the magnitude of traffic and transport impacts and professional judgement, backed-up by data / quantified information has been applied.
- 15.5.10 The assessment undertaken to determine the magnitude of impact of each assessment category is discussed below.

Severance of Communities

- 15.5.11 The ISEP Guidelines (Ref 15-11) set out a range of indicators for determining the magnitude of impact on pedestrian and cyclist severance. Changes in total traffic flow of 30% are regarded as producing ‘low’, 60% as ‘medium’ and 90% as ‘high’ changes.

Road Vehicle Driver and Passenger Delay

- 15.5.12 As there is no formal or published guidance for the assessment of driver delay, the ISEP Guidelines (Ref 15-11) recommend assessors use their professional judgement to determine the significance of effects.
- 15.5.13 To determine the potential traffic and transport impact on driver and passenger delay for this PEIR, junctions on the local and strategic highway network in the Study Area have been reviewed and qualitatively assessed.

Non-motorised User Amenity

15.5.14 Pedestrian amenity can be defined as the relative pleasantness of a journey which could be affected by traffic flow, traffic composition, pavement width / separation from traffic, and are specific to local conditions.

15.5.15 To determine the sensitivity of links for the assessment of non-motorised user amenity, several factors are considered and have been determined in **Section 15.5, paragraph 15.5.26**.

Non-motorised User Delay

15.5.16 The ISEP (Ref 15-11) Guidelines state 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”.

15.5.17 As there is no formal or published guidance for the assessment of pedestrian and cyclist delay, the ISEP Guidelines (Ref 15-11) recommend assessors use their professional judgement to determine the significance of effects.

15.5.18 However, the ISEP Guidelines (Ref 15-11) suggest the use of the Department for Transport TAG Unit A4-1 Social Impact Appraisal guidance (Ref 15-27) which sets out guidance on assessing the hindrance of pedestrian movements and Design Manual for Roads and Bridges (DMRB) LA 112 ‘Population and Human Health’ which contains sensitivity values for walkers, cyclists and horse riders based on traffic flow thresholds.

15.5.19 Table 3.11 of DMRB LA 112 sets out the following thresholds for total daily vehicle flow:

- Very Low: Change in delay <4000;

- Low: Change in delay >4000 and <=8000;
- Medium: Change in delay >8000 and <=16000; and
- High: Change in delay >16000.

15.5.20 The Department for Transport TAG Unit A4-1 Social Impact Appraisal (2021) guidance (Ref 15-27) on assessing severance provides a matrix for assessing the impact of developments on severance based on the difference in the level of severance for the Baseline and Proposed Development scenarios. These were classified according to the following four broad levels.

- None - Little or no hindrance to pedestrian movement.
- Slight - All people wishing to make pedestrian movements will be able to do so, but there will probably be some hindrance to movement.
- Moderate - Pedestrian journeys will be longer or less attractive; some people are likely to be dissuaded from making some journeys on foot.
- Severe - People are likely to be deterred from making pedestrian journeys to an extent sufficient to induce a reorganisation of their activities. In some cases, this could lead to a change in the location of centres of activity or to a permanent loss of access to certain facilities for a particular community. Those who do make journeys on foot will experience considerable hindrance.

Fear and Intimidation on and by road users

15.5.21 The ISEP Guidelines (Ref 15-11) set out in paragraph 3.33 that the extent of fear and intimidation is dependent on:

- *The total volume of traffic;*
- *The heavy vehicle composition of traffic;*
- *The speed at which vehicles are passing; and*

- *The proximity of traffic to people – and/or the feeling of the inherent lack of protection created by factors such as a narrow pavement median, a narrow path or a constraint (such as a wall or fence) preventing people stepping further away from moving vehicles.*

15.5.22 Professional judgement has been used to determine the magnitude of impact based on the elements set out above.

Road user and pedestrian safety

15.5.23 The 1993 IEMA Guidelines (Ref 15-15) advocated the calculation of road accident rates (collision rates in modern terminology) as an approximation of the potential for road safety impacts stating:

“From knowing the expected increase in vehicle-[kilometre (km)] on different classes of road, it will be possible to make an initial simple statistical assessment of the likely increase or decrease in the number of accidents resulting from changes in traffic flows and composition.”

15.5.24 The current 2023 ISEP Guidelines (Ref 15-11) advocate that the calculation of collision rates is still considered a relevant approach to scale a road safety assessment.

15.5.25 It is considered that changes in daily traffic flow may also provide an indication of how collision rates may change. On this basis, an estimate has been made of the changes in daily traffic flows based on the vehicle flow thresholds set out in Table 3.11 of DMRB LA 112 as set out below:

- Minor: Change in two-way traffic flow <4000;
- Moderate: Change in two-way traffic flow >4000 and <=8000; and
- High: Change in two-way traffic flow >8000.

15.5.26 A change in two-way traffic flow of less than 500 will be considered Negligible.

Sensitivity of Receptors

15.5.27 For motorised-user receptors that may be sensitive to changes in traffic conditions, sensitivity will vary. To assess the potential impact on driver delay, only junctions and highway links that are currently at (or over) capacity are likely to be impacted upon.

15.5.28 To assess the potential impact on accidents and safety, Personal Injury Collisions (PICs) on links and junctions will be reviewed and collision clusters and routes with road safety concerns will be qualitatively assessed.

15.5.29 Highway and PRow links within the Study Area have been assessed and a sensitivity scoring has been applied. These sensitivity ratings will be applied for the following assessment categories:

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

15.5.30 DMRB LA 112 'Population and Human Health' (Ref 15-26) which contains sensitivity values for walkers, cyclists and horse-riders (WCH), has been utilised in determining the sensitivity of PRowS, the Wales Coast Path and cycle routes, within the Study Area.

Significance

15.5.31 Overall the significance of the effects has been determined by combining the results

from the magnitude assessment and the receptor sensitivity using a scale set out in Table 3.8.1 Significance Matrix of LA 104 Environmental Assessment and Monitoring (Ref 15-25) and summarised in **Table 15-9** Matrix for Determining Effect Category. Where **Table 15-9** Matrix for Determining Effect Category includes two significance categories, evidence has been provided to support the reporting of a single significance category.

Table 15-9 Matrix for Determining Effect Category

		Magnitude of impact				
		Major	Moderate	Minor	Negligible	No change
Sensitivity	Very high	Very large	Very Large or large	Moderate or large	Slight	Neutral
	High	Large or very large	Moderate or large	Moderate or Slight	Slight	Neutral
	Medium	Moderate or large	Moderate	Slight	Slight or Neutral	Neutral
	Low	Moderate or Slight	Slight	Slight or Neutral	Slight or Neutral	Neutral
	Negligible	Slight	Neutral or slight	Slight or Neutral	Neutral	Neutral

15.5.32 In terms of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (Ref 15-16), effects are considered Significant where they are assessed to be Very large, Large or Moderate (shown as bold in **Table 15-9** Matrix for Determining Effect Category above).

15.5.33 However, professional judgement will be applied, including taking account of whether the effect is permanent or temporary, its duration / frequency, whether it is reversible, and / or its likelihood of occurrence.

15.6 Baseline Conditions

Desk Study

15.6.1 The desk study included a review of the overall transport network, public transport and PIC data. The data sources that have been collected and used to inform this review include:

- Historic traffic data from permanent count locations on the SRN (Ref 15-17);

- PIC data from STATS19 (Ref 15-18) covering 2019 to 2023;
- PRow information from NCC (Ref 15-19) and MCC (Ref 15-20);
- Active Travel Network Maps from DataMap Wales (Ref 15-21);
- National and local cycle routes from Walk Wheel Cycle Trust website, Newport City Council (REF 15-22) and Monmouthshire County Council (Ref 15-23);
- OS mapping (Ref 15-24);
- Google street view (Ref 15-25);
- National rail train stations (Ref 15-26); and
- Local and regional bus routes within the Study Area from Newport Bus (Ref 15-27).

Strategic Road Network

M4

15.6.2 The M4 is located approximately 4km to the north of the Site with the closest junction being 23A at Magor Interchange. The M4 comprises dual carriageways which are subject to the national speed limit.

M48

15.6.3 The M48 route is the major access route to the east of the Site. The M48 merges with the M4 at Junction 23, approximately 5km north-east of the Site. The M48 comprises dual carriageways subjected to a speed limit of 50 miles per hour (mph).

A4810

15.6.4 The A4810 is the closest A-road to the Site, located approximately 1km from the Site.

The A4810 runs between Queensway Meadows Roundabout and the Magor Interchange (Junction 23A). It is accessible from the M4 via the Magor Interchange to the east and Queensway Meadows Roundabout to the west. The majority of the route comprises dual carriageways and is subject to the national speed limit.

Local Highway Network

- 15.6.5 Surrounding the Site there are a number of unclassified, unnumbered and unnamed roads. These roads are single lane roads, farm tracks or other residential access routes. The majority of rural roads have a national speed limit restriction of 60mph.

A48 Spytty Road

- 15.6.6 The section of the A48 within the Study Area includes between the Corporation Road junction in the west and the roundabout junction with Bafle Road in the east, comprising dual carriageways and subjected to speed limit of 50mph. The A48 forms the interchange with Nash Road roundabout and Spytty roundabout which further provides access to Nash Road and Queensway Meadows Road.

B4245 Newport Road

- 15.6.7 B4245 forms the junction with Magor Rd at the north-west of Magor, approximately 4km north-east of the Site. It traverses through the dense residential areas of Magor. The road comprises of single carriageways subjected to speed limit of 20mph.

Barecroft Common

- 15.6.8 Barecroft Common runs from its junction with the A4810 to the junction with Redwick Road and Whitewall Road. The route comprises a single-track carriageway and is subject to the national speed limit.

Broad Street Common

- 15.6.9 Broad Street Common runs between its junction with Nash Road and Whitson Road. The route comprises a combination of single carriageway and single-track sections

and is subject to a 40-mph speed limit between Meadows Road and near Straits Lane Junction, and the national speed limit specifically between the Chapel Road and Whitson Road junctions.

Broad Street Common (near North Row)

15.6.10 Broad Street Common runs from its junction with the A4810/Broad Street Common to the junction with North Row and the Unnamed Road. The route comprises a single-track carriageway and is subject to the national speed limit.

Goldcliff Road

15.6.11 Goldcliff Road runs between its junction with Nash Road/Straits Lane and Whitson Common Road. The route comprises a single-track carriageway and is subject to varying speed limits including; national speed limit from Nash Road/Straits Lane to the Saltmarsh Lane junction, 40mph from Saltmarsh Lane to the Boat Road junction, 20mph from Boat Road to Mireland Pill reen, and national speed limit from Mireland Pill reen to the Whitson Road junction.

Green Street

15.6.12 Green Street runs between its junctions with North Row and Pill Street. The route comprises a single-track carriageway and is subject to the national speed limit.

Meadows Road

15.6.13 Meadows Road runs from Queensway Meadows Roundabout to its junction with Nash Road. The route comprises a single carriageway and is subject to a 40mph speed limit.

Nash Road

15.6.14 Nash Road runs between its junctions with Meadows Road and Straits Lane. The route comprises a single carriageway and is subject to a 40mph speed limit.

North Row

15.6.15 North Row runs from its junctions with Broad Street Common and the Unnamed Road to its junction with Green Street/Mead Lane. The route comprises a single-track carriageway and is subject to the national speed limit up to near Brick House Country Guest House, reducing to 30mph thereafter.

Pill Street

15.6.16 Pill Street runs between its junctions with Green Street/South Row and Whitewall. The route comprises a single-track carriageway; the applicable speed limit is not specified.

Porton Road

15.6.17 Porton Road is a non-through rural road off Whitson Common Road in Whitson of less than 1 km. No footways are present. The road is subject to the national speed limit.

Redwick Road

15.6.18 Redwick Road runs from its junction with the B4245/Newport Road to the junction with Barecroft Common and Whitewall. The route comprises a single carriageway and is subject to a 30mph speed limit.

South Row

15.6.19 South Row runs between its junction with Mead Lane/Bryn Road and the junction with Green Street. The route comprises a single-track carriageway and is subject to a speed limit of 20mph in the vicinity of Redwick and the national speed limit eastwards.

Straits Lane

15.6.20 Straits Lane runs from its junction with Nash Road to Broadstreet Common. The route comprises a single-track carriageway and is subject to the national speed limit.

The Causeway

15.6.21 The Causeway runs between its junctions with Whitewall and The Ramp/West End/Church Road. The route comprises a single-track carriageway and is subject to the national speed limit.

Whitson Common Road

15.6.22 This route runs between its junction with Goldcliff Road and the Broad Street Common/Unnamed Road junction. The route comprises a single-track carriageway and is subject to the national speed limit.

Whitewall

15.6.23 This route runs from its junction with The Causeway to the junction with Redwick Road/Barecroft Common. The route comprises a single-track carriageway and is subject to a 30mph speed limit.

Rail Network

15.6.24 The nearest train station to the Site is Severn Tunnel Junction (circa 5km from the centre of the Site), while Caldicot Station is approximately 1km east of Severn Tunnel Junction. Both are located on the Cardiff to Cheltenham Spa Line, operated by Transport for Wales. Destinations accessible from these stations include Newport, Chepstow, Gloucester, Cheltenham Spa and Cardiff Central, which is a major interchange that connects to numerous destinations in Wales and England.

15.6.25 The operator Cross Country also stops at both Severn Tunnel Junction and Caldicot stations and includes destinations detailed above as well as cities further afield such as Bristol and Birmingham.

Bus Network

15.6.26 On Llanwern Road (circa 2.5km north of the Site) the Gwent Europark, Tesco Depot bus stop, is served by the number 5 and X74 bus services, both of which are run by Newport Bus. Service 5 extends from Newport City Centre to Magor and the Service

X74 extends from Newport City Centre to Chepstow via Newport Retail Park, Glan Llyn, Magor, Undy & Caldicot (as of October 2025). There are four services a day Monday to Friday and a reduced service on Saturdays. The X74 service from Newport City Centre to Chepstow runs hourly Monday-Friday and operates a reduced timetable on Saturdays and Sundays. However, at the Gwent Europark, Tesco Depot stop, the service is more limited.

15.6.27 The bus stops located along the B4245 through Magor (circa 4km from the Site) are served by the following services:

- 74: Newport to Chepstow – twice a day;
- 75: Sudbrook to Magor – once every two hours; and
- T7 (on behalf of Traws Cymru): Magor – Chepstow – Bristol Service – twice a day.

15.6.28 There are no bus stops or services serving Redwick or Summerleaze.

15.6.29 There are two bus stops located in Whitson along Whitson Common Road (immediately west of the Site) – Capel ar Lan y Mor and Porton Road. These are served by the SJ14 service, a school bus service which runs from Goldcliff to St Joseph's RC School Monday-Friday (on school days only). The service departs from these stops at approximately 07:59 and returns at approximately 15:55.

Public Rights of Way

15.6.30 A number of footpaths that are PRoW are located within the PEIR Assessment Boundary. Noting that the Proposed Development lies on the boundary between Monmouthshire and Newport, the PRoWs located within the Site are presented on **Figure 15-2** and are listed as follows:

- Newport: Footpaths 392/15A/1, 392/15/1, 392/14/1, 392/26/1, 392/27/1,

404/6/1, 404/7/1, 404/5/1, 404/2/1, 404/1/1, 404/3/1 and Green Lanes 392/GL2/1, 392/GL3/1, 392/GL4/1, 392/GL5/1 and 404/GL1/1.

- Monmouthshire: Footpaths 372/58/2, 372/58/7, 372/58/1, 372/58/3, 372/58/5, 372/54/1 and Restricted Byways 372/59/1, and 372/59A/1.

15.6.31 The Wales Coast Path is situated adjacent to the PEIR Assessment Boundary and runs alongside the southern extent of the Site.

National Cycle Route

15.6.32 The National Cycle Network (NCN) Route 4 is part of a long-distance cycle route known as the Celtic Trail East. Within the Study Area, the route is on-road along Broad Street Common, the Unnamed Road, North Row, part of Mead Lane, Church Row, South Row, Pill Street, along part of Green Street, a small section along Whitewall Road and The Causeway. Some sections of the route lie within the PEIR Assessment Boundary.

Traffic Data

Site surveys

15.6.33 An Automatic Traffic Count (ATC) survey was carried out at 19 locations over a period of seven days between 14 July and 20 July 2025. Sites one and two were surveyed by radar-based Automatic Traffic Counters (ATCs) and three to 19 were surveyed by pneumatic tube-based ATCs. The results for the Annual Average Daily Traffic (AADT) volumes, are presented in **Table 15-10**.

Table 15-10 Summary of AADT volumes

ATC Site No	Road Name	Traffic Flow Direction	7 Day Average	
			2025 AADT Total Motor Vehicles	2025 AADT Total Motor Vehicles
ATC 1	A4810	North-South	25139	13%
ATC 2	A4810	East-West	10229	13%
ATC 3	A4810	North-South	12728	21%
ATC 4	Broad Street Common	East-West	472	13%
ATC 5	Broad Street Common	East-West	312	15%
ATC 6	North Row	East-West	321	15%
ATC 7	North Row	North-South	654	15%
ATC 8	Mead Lane	East-West	5	41%
ATC 9	Sea Street Lane	North-South	2	0%
ATC 10	South Row	East-West	136	10%
ATC 11	Pill Street	East-West	557	13%
ATC 12	The Causeway	North-South	399	13%
ATC 13	Unnamed Road south of The Causeway	North-South	106	18%
ATC 14	The Ramp	North-South	1101	10%

ATC Site No	Road Name	Traffic Flow Direction	7 Day Average	
			2025 AADT Total Motor Vehicles	2025 AADT Total Motor Vehicles
ATC 15	B4245 Newport Rd/Main Road	East-West	11831	9%
ATC 16	Redwick Road	North-South	2148	10%
ATC 17	Redwick Road	North-South	830	11%
ATC 18	B4245 Newport Road	East-West	13529	8%
ATC 19	B4245 Newport Road	East-West	10196	8%

Permanent Traffic Counters

15.6.34 Traffic data for the SRN in the vicinity of the Study Area has been sourced from the Department of Transport (DfT) traffic count points. The AADT volumes are presented in **Table 15-11** below.

Table 15-11 Baseline Traffic Data (2024) – Annual Average Daily Traffic (AADT)

Count Point Ref	Point Numbers	Location	Road Name	Year	(Both Ways)	(Both Ways)	
						Count	Percentage
CP 1	90329	Wales	Newport	A4810	2024	9067	10%
CP 2	84014	Wales	Monmouthshire	A4810	2024	10654	16%

Count	Point	Location	Road Name	Year	(Both	(Both Ways)	
Point	Numbers				Ways)		
Ref							
CP 3	74081	Wales	Monmouthshire	M4	2024	95222	9%
CP 4	99172	Wales	Monmouthshire	M4	2024	97168	10%
CP 5	99169	Wales	Monmouthshire	M4	2024	72427	13%
CP 6	99173	Wales	Monmouthshire	M48	2024	14558	11%
CP 7	73549	Wales	Monmouthshire	M48	2024	22376	7%
CP8	91263	Wales	Monmouthshire	M48	2024	28998	7%
CP9	73955	England	South Gloucestershire	M4	2024	72426	13%
CP10	99171	England	South Gloucestershire	M48	2024	28998	7%
CP11	73548	England	South Gloucestershire	M48	2024	28998	7%
CP12	16020	England	South Gloucestershire	M5	2024	110163	7%
CP13	99619	England	South Gloucestershire	M5	2024	120493	9%
CP14	99170	England	South Gloucestershire	M49	2024	27541	12%
CP15	73296	England	Bristol	M5	2024	105937	9%
CP16	73297	England	Bristol	M49	2024	27541	12%

15.6.35 **Figure 15-3** presents the survey location permanent traffic counters

Personal Injury Collision (PIC) data

15.6.36 The Personal Injury Collision (PIC) analysis has been undertaken for the most recent five-year period (2019–2023) within the Study Area. Collision records were sourced from the DfT STATS19 database (Ref 15-18). **Table 15-12** and

15.6.37

15.6.38

15.6.39 Table 15-13 present the PICs along highway links and junctions, respectively and the locations along with the severity rating is present in **Figure 15-4**.

Table 15-12 PICs relevant to the Study Area – Highway Links

PIC Link No	Highway Link	Link Length (kms)	Accident Severity (2019-2023)		
			Slight	Seriou s	Fatal
1	A4810	7.8	2	4	1
2	B4245	3.3	5	-	-
3	Goldcliff Road	3.4	1	-	-
4	Meadows Road	1.3	-	1	-
5	Nash Road	1.1	1	-	-
6	Pill Street	0.9	1	-	-
7	Redwick Rd	0.6	-	1	-
8	A48 Spytty Road	2.2	4	5	-
9	B4245 Caldicot Road	0.7	-	-	1
10	M4	4.4	8	6	-
11	M48	3.1	2	1	-
12	Nash Road	1.2	3	1	-
13	Queensway Meadows Rd	0.7	2	1	-
Total			29	20	2

Table 15-13 PICs relevant to the Study Area - Junctions

PIC Junction No	Highway Junctions	Accident Severity (2019-2023)		
		Slight	Serious	Fatal
1	Goldcliff Road / Henton Road Priority Junction	1	-	-
2	A4810 Queens' Way / Kings Wall Drive Signalised Junction	4	-	-
3	M4 / Magor Interchange	4	-	-
4	B4245 Main Road / Dancing Hill Priority Junction	1	-	-
5	A4810 Queen's Way / Queen's Way Roundabout	-	1	-
6	B4245 Newport Road / Magor Rd Junction	-	1	-
7	Newport Road / Main Road Junction	-	1	-
8	North Row / Broad Street Common / Rush Wall Crossroads	1	-	-
9	A4810 Queensway Meadows Roundabout	4	-	-
10	A4810 Queen's Baldwin Drive Roundabout	2	-	-
11	A4810 Queen's Way / Bishton Road / Broad Street Common Crossroads	1	-	-
12	West End / Church Road / The Ramp / The Causeway Crossroads	1	-	-
13	Withy Walk / Redwick Road Priority Junction	1	-	-

PIC Junction No	Highway Junctions	Accident Severity (2019- 2023)		
14	A48 Southern Distributer Road / Corporation Road Signalised Junction	4	-	-
15	A48 Southern Distributer Road / Balfe Road Roundabout	1	-	-
Total		25	3	0

15.7 Embedded Design Mitigation

15.7.1 Embedded design mitigation relevant to this Chapter includes the following:

- A crossing schedule has been prepared as part of the PEIR (**Appendix 2C**) which includes crossing methodology for each crossing of road, and watercourse. A crossing schedule which includes the crossing methodology of PRowS within the PEIR Assessment Boundary will be provided at ES;
- PRowS within the PEIR Assessment Boundary will be safeguarded and kept open during all phases of the development, although the Applicant will seek to divert footpaths 040/3/1 and 404/5/1 which currently cross through parts of fields, off the field onto the more accessible lanes which run around them;
- All aspects of the construction work will be in accordance with the Construction (Design and Management) Regulations 2015;
- Following the construction phase, construction compounds will be returned to previous conditions as far as reasonably possible;
- Signage and/or temporary PRow / footpath diversions will be provided during construction;

- Core working hours for construction will be 0700 to 1900 Monday to Friday, and 0800 to 1300 on Saturdays, apart from specific circumstances as set out within the Outline Construction Environmental Management Plan (oCEMP) (**Appendix 2A**);
- An Outline Decommissioning Plan (oDEMP) has been developed for the Proposed Development as part of the PEIR (**Appendix 2B**) detailing sensitive methods of decommissioning;
- Liaison with PRoW officers from Newport City Council and Monmouthshire County Council will ensure that any requirements for diversions and/or temporary closures of PRoW routes are supported and compliant; and
- A draft Travel Plan has been included as part of the PEIR (**Appendix 15A**), and will support the ES, which will encourage car sharing and alternatives to arriving by private car, including encouraging the adoption of mini buses for staff, as per the Commitment Register (**Appendix 19A**).

15.7.2 An oCTMP will be prepared for the ES which shall present the embedded mitigation measures along with proposed routing of vehicles for the Construction Phase, with the aim of minimising any potential effects on Transport and Access receptors.

15.8 Preliminary Assessment of Likely Impacts and Effects

15.8.1 Details relating to the construction, operation and decommissioning of the Proposed Development, including working hours, are provided in **Chapter 2: Description of the Proposed Development**.

Proposed Development Access

15.8.2 Delivery trips and workforce trips, during the construction and decommissioning phase, are likely to utilise the same route to the Site. Workforce trips during the operational phase could potentially use a number of routes, however, the volume of trips during the operational phase is expected to be much less than the construction and decommissioning phases.

- 15.8.3 Vehicle trips are expected to arrive / depart the Site utilising North Row and Broad Street Common which connect to the A4810, linking to the M4 and the A48.
- 15.8.4 It is proposed to have three main Site entrances. A number of secondary points of access to the Site are also proposed. Access points are defined further in **Chapter 2: Description of the Proposed Development**, paragraph 2.4.45 to paragraph 2.4.47 and depicted on **Figure 2-26**. Further details relating to the secondary points of access will be confirmed once the general arrangement and layout of the Proposed Development is further developed, however it is anticipated that the main point of entrances identified will be predominantly used and the secondary access points used when required. The access strategy to the secondary points of access is currently still evolving and could potentially change as the design develops.

Construction and Decommissioning Phases

- 15.8.5 The Proposed Development requires temporary and permanent access roads to be installed to support the construction and operational phases of the Proposed Development and are depicted on **Figure 2-26** supporting **Chapter 2: Description of the Proposed Development**.
- 15.8.6 With regard to construction compounds, Construction Compounds 1 and 2 will form part of Phase 1. Following completion of Phase 1 of construction the compounds will be decommissioned, infrastructure relocated, and the area panelled. Phase 2 (Temporary Construction Compounds 3, 4, 5, and 6) and Phase 3 (Temporary Construction Compounds 7) will follow the same process.

Delivery Trips

- 15.8.7 Trip generation for deliveries will include various types of vehicles such as Heavy Goods Vehicles (HGVs), Light Goods Vehicles (LGVs) and Abnormal Indivisible Loads (AILs).
- 15.8.8 Materials will be delivered via HGVs at regular intervals to the construction

compounds and transported directly to where it is required within the Site using smaller LGVs.

15.8.9 All delivery vehicles will be able to enter the Site, unload within the compound areas, and exit the Site. In the case of road construction, stone materials will be directly deposited to the area of construction. The Site will operate with a JIT (just in time) delivery protocol, which signifies only accepting a delivery of material soon before said material is to be used in the construction.

15.8.10 Total vehicle movements related to the delivery of construction plant are presented within **Table 15-14**. Movements associated with peak construction periods will be reported (by vehicle type and access) and assessed within the subsequent ES.

Table 15-14 Construction vehicle movements

Purpose	Type of vehicle	Two Way Movement
Delivery of Solar Modules & Mounting Structures	16.5m Articulated HGVS	1810
Inverters	10m Rigid HGVS	156
DNO Cabinet	12m Rigid HGVS	22
Customer Switchgear	10m Rigid HGVS	22
Access Tracks – Temporary Ground Re-enforcement Works	10m Rigid HGVS /Tipper Truck	1050
Storage Compound	10m Rigid HGVS	22
Other (Cabling, Construction Material, Waste)	12m Rigid HGVS	714
General Front End JCB by low loader	Low Loader HGVS	22
Erection of the Substation	16.5m Articulated HGVS	68
Construction Crane	Crane	1
16 Circuit Breaker Units	Low Loaders HGVS	16

15.8.11 At the current time the volume of delivery LGVs and AILs are still uncertain and has not yet been quantified. Therefore, a maximum or average construction vehicle flow per day within a peak construction month for each of the 3 construction phases has not yet been determined. The construction vehicle distribution is also yet to be determined due to uncertainty on the proportion of total construction vehicle trips that are assigned to each of the site accesses.

Workforce Trips

15.8.12 During the peak of construction, the workforce is anticipated to be an average of 265 individuals per day. Workforce trips are likely to be by a variety of modes, depending on where the workforce originates, and has the potential to use a variety of routes to Site. A temporary car park area is proposed south of Site Entrance 2 on North Row.

15.8.13 Distribution of workforce trips will be derived using 2011 Census 'Journey to Work' data. A selection of Middle Super Output Areas will be taken as representative of the Site location from which origin data for journeys to work will be extracted and analysed to provide trip distribution.

15.8.14 The mode share of 'driving to work by car or van' was 70% for the Site destination. This was applied to the total of 265 individuals per day which equated to 186 individuals potentially choosing to drive. A factor of 1.2 people per vehicle is a typical average occupancy for commuting and business travel and has been applied to 186 individuals, which provides a value of 155 construction worker vehicles arriving and departing to Site per day.

15.8.15 **Plate 15-1** presents a workforce vehicle distribution based on 97% of the UK's MSOAs. The majority of trips are associated with using the SRN. As a temporary car park area is proposed to be situated south of Site Entrance 2 on North Row, it is therefore expected that 0% of workforce vehicles will utilise minor roads south of North Row.

Plate 15-1: Workforce Vehicle Distribution



Public Rights of Way Re-routing

15.8.16 The Applicant is seeking the permanent diversion of two PRoWs, within the PEIR Assessment Boundary, as depicted in **Figure 15-2**:

- A section of Footpath 404/3/1, approximately 1.2 km in length, will be diverted at X:339500, Y:183654 to adjoin Green Lane 392/GL5/1 (Mead Lane); and
- a section of Footpath 404/5/1, approximately 400m in length, will be diverted between X:341060, Y:183591 and X:341152 and Y:183916.

Sensitivity Assessment

15.8.17 A sensitivity assessment has been undertaken and has been based on publicly available sources.

15.8.18 For the following categories: Severance; Non-motorised user (NMU) amenity; Non-motorised user delay; and Fear and intimidation, the sensitivity assessment of highway links, PRoW links and cycle routes within the Study Area has determined:

- two links that could potentially be very highly sensitive (close to Newport and Magor);
- one link that could potentially be highly sensitive (within Magor);
- seven links that could potentially be of medium sensitivity;
- sixteen links that could potentially be of low sensitivity; and
- eight links that could potentially be of negligible sensitivity.

15.8.19 **Table 15-15** presents the sensitivity scoring for highway, PRoW and cycle links considered within the Study Area.

Table 15-15 Receptor Sensitivity

Link Number	Highway / PRoW Link	Sensitivity Scoring	Justification
1	M4 & the Prince of Wales Bridge	Negligible	Motorway link. No NMUs likely to be present.
2	M48 & Severn Bridge	Negligible	Motorway link. No NMUs likely to be present.
3	M49	Negligible	Motorway link. No NMUs likely to be present.
4	M5	Negligible	Motorway link. No NMUs likely to be present.
5	A4810	Negligible	Industrial environment. Limited footways. Very low number of NMUs anticipated.
6	A48 Spytty Road	Low	Shared footway/cycleway, Bus stops, retail park environment. Low number of NMUs anticipated.

Link Number	Highway / PRow Link	Sensitivity Scoring	Justification
7.1	B4245 Newport Road 1	Very high	Footways present. Signalised crossings present. High concentration of dwellings/facilities/amenities adjacent to carriageways. Bus stops. High number of NMUs anticipated.
7.2	B4245 Newport Road 2	Negligible	Character of area rural with no footways. No dwellings. Very low number of NMUs anticipated.
7.3	B4245 Newport Road 3	Negligible	Limited footways. Bus stops. Very low number of NMUs anticipated.
8	Barecroft Common	Low	Character of area rural with no footways. Very low concentration of dwellings. Low number of NMUs anticipated.
9.1	Broad Street Common 1	Medium	Character of area rural with no footways. Low concentration of dwellings. On-road national cycle route. Medium number of NMUs anticipated.
9.1	Broad Street Common 2	Low	Character of area rural with no footways. No dwellings. On-road national cycle route. Low number of NMUs anticipated
10	Goldcliff Road	Medium	Character of area rural with no footways. Low concentration of dwellings. On-road national cycle route. Medium number of NMUs anticipated.

Link Number	Highway / PRow Link	Sensitivity Scoring	Justification
11	Green Street	Low	Character of area rural with no footways. No dwellings. Low number of NMUs anticipated.
12	Half Acre Lane	Low	Part of Green Lane connecting Whitson Road and North Row. Walkers and cyclists anticipated.
13	Lay Down Access	Low / Negligible	Private access to existing solar farm. Unlikely to have public access. Confirmations needed.
14	Mead Lane	Low	Part of Greenway which leads to Redwick village. Walkers and cyclists anticipated.
15	Meadows Road	Low	Light industrial character of area. Vehicle dominated environment. Low number of NMUs anticipated.
16.1	Nash Road 1	Low	Character of area rural with no footways. Low concentration of dwellings. Low number of NMUs anticipated
16.2	Nash Road 2	Low	Light industrial character of area. No footways. Low number of NMUs anticipated
16.3	Nash Road 3	Very high	Shared footway/cycleway present. Signalised and zebra crossings present. Traffic calming measures on road. Area of high concentration of dwellings/facilities/amenities adjacent to carriageways. High School and

Link Number	Highway / PRow Link	Sensitivity Scoring	Justification
			College present. Bus stops. High number of NMUs anticipated.
17	North Row	Low	Character of area rural with no footway. Very low concentration of dwellings/facilities/amenities. Low number of NMUs anticipated.
18	Pill Street	Low	Character of area rural with no footways. Low concentration of dwellings. Low number of NMUs anticipated.
19	Porton Road	Low	Character of area rural with no footways. Low concentration of dwellings. Low number of NMUs anticipated.
20	Queensway Meadows Road	Negligible	Retail park character of area. Vehicle dominated environment. Low number of NMUs anticipated
21	Redwick Road	High	Footways present. Crossings present. High concentration of dwellings/facilities/amenities adjacent to carriageways. High number of NMUs anticipated.
22	Sea Street Lane	Low	Character of area rural track. Low number of NMUs anticipated.
23	South Row	Medium	Character of area rural with no footways. Low concentration of dwellings. On-road national cycle

Link Number	Highway / PRow Link	Sensitivity Scoring	Justification
			route. Medium number of NMUs anticipated.
24	Straits Lane	Low	Character of area rural with no footways. Low concentration of dwellings. Low number of NMUs anticipated.
25	The Causeway	Medium	Character of area rural with no footways. Medium concentration of dwellings. Medium number of NMUs anticipated.
26	The Ramp	Medium	Medium concentration of dwellings. Medium number of NMUs anticipated.
27	Unnamed Road	Medium	Character of area rural with no footways. Low concentration of dwellings. On-road national cycle route. Medium number of NMUs anticipated.
28	Whitson Common Road	Low	Character of area rural with no footways. Low number of NMUs anticipated.
29	Whitewall	Medium	Character of area rural with no footways. Medium concentration of dwellings. Medium number of NMUs anticipated.
30	Public Rights of Way Footpaths within Study Area	Low	1) routes which are scarcely used because they do not currently offer a

Link Number	Highway / PRow Link	Sensitivity Scoring	Justification
31	Public Rights of Way Restricted Byway within Study Area	Low	meaningful route for either utility or recreational purposes, and/or 2) rights of way for Walking Cycling and Horse-riding (WCH) crossing roads at grade with <4000 vehicles per day.
32	Public Rights of Way Green Lanes within Study Area	Low	
33	Wales Coast Path within Study Area	Low	
34	National Cycle Network Route 4 within Study Area	Low	Low number of cyclists anticipated.

Severance of Communities

15.8.20 Severance has been assessed for various types of receptors of varying sensitivity and is presented in **Table 15-16**. All links are anticipated to have a **Neutral** effect that is **Not Significant**.

Table 15-16 Summary of Magnitude of Impact and Significance of Effect (Construction and Decommissioning Phases, Severance)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local highway network	Negligible to Very High	Additional vehicles on the local highway network during construction and decommissioning phases	No change	Neutral for all links	No
Users of local PRow Footpaths within Study Area	Low				
Users of local PRow Restricted Byway within Study Area	Low				
Users of local Wales Coast Path within Study Area	Low				
Users of local National Cycle Network Route 4 within Study Area	Low				

Road Vehicle Driver and Passenger Delay

15.8.21 At this stage, it is not known which junctions and highway links within the Study Area are sensitive i.e. that are at or over capacity. Additional vehicles associated with the construction and decommissioning phases could potentially originate and utilise the M49, M5, M4 and Prince of Wales Bridge, M48 and Severn Bridge, before connecting onto the A4810, Broad Street Common and Norh Road to get to the Site. However, at this stage the peak construction month has yet to be determined along with the trip distribution, and therefore an assessment on road vehicle driver and passenger delay cannot be undertaken at PEIR stage and will be assessed within the ES.

Non-motorised User Amenity and Delay

15.8.22 Non-motorised user amenity and delay have been assessed for various types of receptors of varying sensitivity and is presented in

15.8.23

15.8.24

15.8.25 Table 15-17. The effect on local highway links have yet to be determined at PEIR stage and will be assessed within the EIA. Users of local PRow footpaths and restricted byways, the Wales Coast Path and the NCN Route 4 Cycle Route within the Study Area have been assessed. Two PRow's are proposed to be diverted slightly due to the Proposed Development. These diversions along with the potential change in the local environment due to additional HGV's accessing the Study Area may have a minor impact on user delay or amenity. These effects are anticipated to have a **Slight Adverse or Neutral** effect that is **Not Significant**.

Table 15-17 Summary of Magnitude of Impact and Significance of Effect (Construction and Decommissioning Phases, Non-motorised User Amenity and Delay)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local highway network where HGV component could be halved or doubled	Negligible to Very High	Additional vehicles on the local highway network during construction and decommissioning phases	Minor	Yet to be determined	Yet to be determined
Users of local PRow Footpaths within Study Area	Low		Minor	Slight Adverse or Neutral	No
Users of local PRow	Low				

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Restricted Byway within Study Area	Low				
Users of Wales Coast Path within Study Area	Low				
Users of National Cycle Network Route 4 within Study Area	Low				

Fear and Intimidation on and by Road Users

15.8.26 Fear and Intimidation on and by Road Users has been assessed for various types of receptors of varying sensitivity and is presented in **Table 15-18**. The effect on local highway links is yet to be determined at PEIR stage and will be assessed within the ES. Users of local PRow footpaths and restricted byways, the Wales Coast Path and the National Cycle Network (NCN) Route 4 Cycle Route within the Study Area have been assessed. Due to the potential change in the local environment due to additional HGV's accessing the Study Area the Proposed Development may have a minor impact on users of local PRow footpaths and restricted byways, the Wales

Coast Path and the NCN Route 4 Cycle Route. These effects are, are anticipated to have a **Slight Adverse or Neutral** effect that is **Not Significant**.

Table 15-18 Summary of Magnitude of Impact and Significance of Effect (Construction and Decommissioning Phase, Fear and Intimidation on and by Road Users)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local highway network where HGV component could be halved or doubled	Negligible to Very High	Additional vehicles on the local highway network during construction and decommissioning	Minor	Yet to be determined	Yet to be determined
Users of local PRow Footpaths within Study Area	Low	phases	Minor	Slight Adverse or Neutral	No
Users of local PRow Restricted Byway within Study Area	Low				

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local Wales Coast Path within Study Area	Low				
Users of National Cycle Network Route 4 within Study Area	Low				

Road user and Pedestrian Safety

Road User and Pedestrian Safety has been assessed for various types of receptors of varying sensitivity and is presented in **Table 15-19**. The effect on local highway links have yet to be determined at PEIR stage and will be assessed within the ES. Users of local PRoW footpaths and restricted byways, the Wales Coast Path and the NCN Route 4 Cycle Route within the Study Area have been assessed. Due to the potential change in the local environment due to additional HGV's accessing the Study Area the Proposed Development may have a minor impact on users of local PRoW footpaths and restricted byways, the Wales Coast Path and the NCN Route 4 Cycle Route. These effects are anticipated to have a **Neutral** effect that is **Not Significant**.

Table 15-19 Summary of Magnitude of Impact and Significance of Effect (Construction and Decommissioning Phases, Accidents and Safety)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant
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					effect (Yes / No)
Users of local highway network where HGV component could be halved or doubled	Negligible to Very High	Additional vehicles on the local highway network during construction and decommissioning	Minor	Yet to be determined	Yet to be determined
Users of local PRow Footpaths within Study Area	Low	phases	Minor	Slight Adverse to Neutral	No
Users of local PRow Restricted Byway within Study Area	Low				
Users of local Wales Coast Path within Study Area	Low				
Users of local National Cycle Network Route 4 within Study Area	Low				

Operational Phase

Workforce Trips

15.8.27 During the operational phase, the workforce is anticipated to be between 11 and 22 full or part-time operation and maintenance staff. Workforce trips are likely to be by a variety of modes, depending on where the workforce originates, and has the potential to use a variety of routes to Site and via several operational Site accesses. Activities will include vegetation management, routine maintenance and the replacement of any equipment along with overall monitoring of the Solar Farm.

Severance of Communities

15.8.28 Severance has been assessed for various types of receptors of varying sensitivity and is presented in **Table 15-20**. All links are anticipated to have a **Neutral** effect that is **Not Significant**.

Table 15-20 Summary of Magnitude of Impact and Significance of Effect (Operational Phase, Severance)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local highway network	Negligible to Very High	Additional vehicles on the local highway network during the operational phase	No change	Neutral for all links	No
Users of local PRoW Footpaths within Study Area	Low				
Users of local PRoW Restricted Byway within Study Area	Low				
Users of local Wales Coast Path within Study Area	Low				

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local National Cycle Network Route 4 within Study Area	Low				

Road Vehicle Driver and Passenger Delay

15.8.29 At this stage, it is not known which junctions and highway links within the Study Area are sensitive i.e. that are at or over capacity as well as the likely trip distribution of workers. However, it is anticipated that the level of vehicles associated with the operational phase will be much lower than the construction and decommissioning phases. All links are anticipated to have a **Slight or Neutral** effect that is **Not Significant as presented in Table 15-21.**

Table 15-21 Summary of Magnitude of Impact and Significance of Effect Operational Phase, Road Vehicle Driver and Passenger Delay)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local highway network where HGV component could be halved or doubled	Negligible to Very High	Additional vehicles on the local highway network during the	Minor	Slight Adverse or Neutral	No

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local PRow Footpaths within Study Area	Low	operational phase			
Users of local PRow Restricted Byway within Study Area	Low				
Users of local Wales Coast Path within Study Area	Low				
Users of local National Cycle Network Route 4 within Study Area	Low				

Non-motorised User Amenity and Delay

15.8.30 Non-motorised user amenity and delay have been assessed for various types of receptors of varying sensitivity and is presented in **Table 15-22**. At this stage, it is not known what the likely trip distribution of workers will be. However, it is anticipated that the level of vehicles associated with the operational phase will be much lower than the construction and decommissioning phases. Users of local PRow footpaths and restricted byways, the Wales Coast Path and the NCN Route 4 Cycle Route within the Study Area, are anticipated to have a **Slight Adverse or Neutral** effect that is **Not Significant**.

Table 15-22 Summary of Magnitude of Impact and Significance of Effect (Operational Phase, Non-motorised User Amenity and Delay)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)	
Users of local highway network where HGV component could be halved or doubled	Negligible to Very High	Additional vehicles on the local highway network during construction and decommissioning phases	Minor	Yet to be determined	Yet to be determined	
Users of local PRow Footpaths within Study Area	Low		Negligible	Slight or Neutral	No	
Users of local PRow Restricted Byway within Study Area	Low					
Users of local Wales Coast Path within Study Area	Low					
Users of local National Cycle Network Route 4 within Study Area	Low					

Fear and Intimidation on and by Road Users

15.8.31 Fear and Intimidation on and by Road Users has been assessed for various types of receptors of varying sensitivity and is presented in **Table 15-23**. At this stage, it is not known what the likely trip distribution of workers will be. However, it is anticipated that the level of vehicles associated with the operational phase will be much lower than the construction and decommissioning phases. All links are anticipated to have a **Slight or Neutral** effect that is **Not Significant**.

Table 15-23 Summary of Magnitude of Impact and Significance of Effect (Operational Phase, Fear and Intimidation on and by Road Users)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local highway network where HGV component could be halved or doubled	Negligible to Very High	Additional vehicles on the local highway network during the operational phase	Negligible	Slight or Neutral	No
Users of local PRow Footpaths within Study Area	Low				
Users of local PRow Restricted Byway within Study Area	Low				
Users of local Wales Coast Path within Study Area	Low				
Users of local National Cycle	Low				

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Network Route 4 within Study Area					

Road user and Pedestrian Safety

15.8.32 Road User and Pedestrian Safety has been assessed for various types of receptors of varying sensitivity and is presented in **Table 15-24**. At this stage, it is not known what the likely trip distribution of workers will be. However, it is anticipated that the level of vehicles associated with the operational phase will be much lower than the construction and decommissioning phases. Users of local PRow footpaths and restricted byways, the Wales Coast Path and the NCN Route 4 Cycle Route, within the Study Area, are anticipated to have a **Neutral** effect that is **Not Significant**.

Table 15-24 Summary of Magnitude of Impact and Significance of Effect (Construction Phase, Road user and Pedestrian Safety)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local highway network where HGV component could be halved or doubled	Negligible to Very High	Additional vehicles on the local highway network during the	Minor	Yet to be determined	Yet to be determined
Users of local PRow Footpaths within Study Area	Low	operational phase	No change	Neutral	No

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Anticipated Significant effect (Yes / No)
Users of local PRow Restricted Byway within Study Area	Low				
Users of local Wales Coast Path within Study Area	Low				
Users of local National Cycle Network Route 4 within Study Area	Low				

15.9 Additional Mitigation and Enhancement Measures

15.9.1 Additional mitigation and enhancement measures are not envisaged at this stage. This will be reviewed once the peak construction vehicle numbers on each highway link are established, all relevant measures will be incorporated into the oCTMP.

15.10 Residual Effects and Conclusions

15.10.1 A summary of residual effects on assessed receptors is presented in **Table 15-25**.

Table 15-25 Summary of Residual Effects (Construction and Decommissioning)

Receptor	Description of Impact	Significance of effect without mitigation	Mitigation/Enhancement measure	Residual effect after mitigation
Construction and Decommissioning Phase				

Receptor	Description of Impact	Significance of effect without mitigation	Mitigation/Enhancement measure	Residual effect after mitigation
Category: Severance				
Users of local highway network, PRow Footpaths and Restricted Byway, Wales Coast Path and National Cycle Network Route 4	Additional vehicles on the local highway network	Neutral	None required	Neutral
Category: Road Vehicle Driver and Passenger Delay				
Road vehicle drivers and passengers of local highway network	Additional vehicles on the local highway network		Yet to be determined	
Category: Non-motorised User Amenity and Delay				
Non-motorised	Additional HGVs on the		Yet to be determined	

Receptor	Description of Impact	Significance of effect without mitigation	Mitigation/Enhancement measure	Residual effect after mitigation
Users of local highway network	local highway network			
Users of local PRowS, Wales Coast Path and National Cycle Network Route 4 within Study Area		Slight Adverse or Neutral	None required	Slight Adverse or Neutral
Category: Fear and Intimidation on and by Road Users				
Users of local highway network	Additional HGVs on the local highway network		Yet to be determined	
Users of local PRowS, Wales Coast Path and National		Slight Adverse or Neutral	None required	Slight Adverse or Neutral

Receptor	Description of Impact	Significance of effect without mitigation	Mitigation/Enhancement measure	Residual effect after mitigation
Cycle Network Route 4 within Study Area				
Category: Road user and Pedestrian Safety				
Users of local highway network	Additional vehicles on the local highway network		Yet to be determined	
Users of local PRowS, Wales Coast Path and National Cycle Network Route 4 within Study Area	network	Neutral	None required	Neutral
Operational Phase				
Category: Severance				
Users of local	Additional vehicles on	Neutral	None required	Neutral

Receptor	Description of Impact	Significance of effect without mitigation	Mitigation/Enhancement measure	Residual effect after mitigation
highway network, PRow Footpaths and Restricted Byway, Wales Coast Path and National Cycle Network Route 4	the local highway network			
Category: Road Vehicle Driver and Passenger Delay				
Road vehicle drivers and passengers of local highway network	Additional vehicles on the local highway network	Slight Adverse or Neutral	None required	Slight Adverse or Neutral
Category: Non-motorised User Amenity and Delay				
Non-motorised Users of local	Additional HGVs on the local highway network		Yet to be determined	

Receptor	Description of Impact	Significance of effect without mitigation	Mitigation/Enhancement measure	Residual effect after mitigation
highway network				
Users of local PRowS, Wales Coast Path and National Cycle Network Route 4 within Study Area		Slight Adverse or Neutral	None required	Slight Adverse or Neutral
Category: Fear and Intimidation on and by Road Users				
Users of local highway network	Additional HGVs on the local highway network	Slight Adverse or Neutral	None required	Slight Adverse or Neutral
Users of local PRowS, Wales Coast Path and National Cycle Network				

Receptor	Description of Impact	Significance of effect without mitigation	Mitigation/Enhancement measure	Residual effect after mitigation
Route 4 within Study Area				
Category: Road user and Pedestrian Safety				
Users of local highway network	Additional vehicles on the local highway		Yet to be determined	
Users of local PRowS, Wales Coast Path and National Cycle Network Route 4 within Study Area	network	Neutral	None required	Neutral

15.10.2 An assessment of residual environmental effects has been undertaken based on information available at this stage. **Potential Slight Adverse** effects are likely for the following categories:

- Non-motorised User Amenity and Delay during the construction, operational and decommissioning phases on users of local PRowS, the Wales Coast Path and National Cycle Network Route 4 within Study Area;

- Fear and Intimidation on and by Road Users during the construction, operational and decommissioning phases on users of local PRowS, the Wales Coast Path and National Cycle Network Route 4 within Study Area; and
- Road Vehicle Driver and Passenger Delay during the operational phase, on road vehicle drivers and passengers of local highway network.

15.10.3 A **Neutral** residual effect is likely for the following categories:

- Severance during the construction, operational and decommissioning phases on users of the local highway network, local PRowS, the Wales Coast Path and NCN Route 4 within the Study Area; and
- Road user and Pedestrian Safety during the construction, operational and decommissioning phases on users of local PRowS, the Wales Coast Path and National Cycle Network Route 4 within the Study Area.

15.10.4 An assessment of residual environmental effects associated for the following categories will be determined within the ES:

- Road Vehicle Driver and Passenger Delay during the construction and decommissioning phases, on road vehicle drivers and passengers of local highway network;
- Non-motorised User Amenity and Delay during the construction and decommissioning phases on non-motorised users of local highway network;
- Fear and Intimidation on and by Road Users during the construction and decommissioning phases on users of local highway network;
- Road user and Pedestrian Safety during the construction and decommissioning phases on users of local highway network;
- Non-motorised User Amenity and Delay during the operational phase on non-motorised users of local highway network; and

- Road user and Pedestrian Safety during the operational phase on users of local highway network.

15.11 Cumulative Effects

15.11.1 A detailed cumulative assessment will be undertaken for the ES utilising Tempo growth factors to reflect incremental growth from committed development. The Cumulative Short List has been reviewed and has been determined that any potential cumulative effects on traffic and transport within the Study Area are unlikely to be significant and would be temporary. Any applications added to the short list going forward will be assessed in due course. Applications that could potentially have a cumulative impact during the construction phase are presented in **Table 15-26**. Applications that could potentially have a cumulative impact during the operation and or decommissioning phase are presented in **Table 15-26**.

Table 15-26 Committed Developments / Scheme Summary

Committed Developments / Scheme	Status of Development	Potential for significant cumulative effects
DNS/3220457 - Rush Wall Solar Park Ltd	Examination Stage	<p>Moderate adverse effects are predicted on North Row and Green Street in relation to fear and intimidation.</p> <p>Minor adverse effects are predicted on North Row and Green Street in relation to driver delay, severance, pedestrian delay and accident and road safety.</p>
CAS-01960-J2H3X5 - Magor Solar Farm	Scoping stage.	<p>Proposed Development would potentially utilise the following highway links within the Study Area during its construction phase: M4; A4810; Broad Street Common; North Row; Green Street; Pill Street; Whitewall; and Barecroft Common. Vehicle total numbers currently unavailable, therefore, there is insufficient detail at this time to determine whether there could be significant cumulative effects. .</p>
06/0471 - Mixed Use Urban Extension, Llanwern Works Queensway Llanwern	Decided in outline	<p>Proposal of residential led mixed use, sustainable urban expansion area which will provide a range and choice of housing, employment land and community uses. Development would potentially utilise the following highway links within the Study Area during its construction and operation : M4; A4810; Meadows Road; Queensway Meadows Road; Nash Road; and A48. Potential cumulative effects will be assessed at ES.</p>

Committed Developments / Scheme	Status of Development	Potential for significant cumulative effects
25/0052 - Llanwern Works Queensway Llanwern;	Decided 15/06/25	Proposal of land as an open storage and distribution facility would potentially utilise the following highway links within the Study Area during its construction and operation: M4 and A4810. Potential cumulative effects will be assessed at ES.
DM/2021/00358 & DM/2021/00357 - Land At Rockfield Farm Silurian Road Undy Monmouthshire	Decided 21/12/22	Proposal of 266 new dwellings 5,575m ² employment (B1) would potentially utilise the following highway links within the Study Area during its construction: M4 and A4810. Potential cumulative effects will be assessed at ES.
22/00634 - Unit 103 Wales 1 Business Park Newport Road Magor	Decided 17/10/22	Proposal of an industrial, storage and distribution warehouse, together with ancillary offices would potentially utilise the following highway links within the Study Area during its construction and operation: M4 and A4810. Potential cumulative effects will be assessed at ES.
24/0537 - Site Of Future Primary School, Great Milton Park Cot Hill Llanwern	Decided 18/06/25	Proposal of Primary school, nursery, ALN learning resource base, MUGAs would potentially utilise the following highway links within the Study Area during its construction and operation: A48. Potential cumulative effects will be assessed at ES.
22/0349 (92/0875) - Land On The North Side Of Bareland Street Magor;	Decided 28/11/22	Proposal for use of building for B1 (Business) and/or B2 (General Industrial) would potentially utilise the following highway links within the Study Area during its construction and operation: M4 and A4810. Potential cumulative effects will be assessed at ES.

Committed Developments / Scheme	Status of Development	Potential for significant cumulative effects
24/0467 (Outline 06/0845) - Llanwern Village Development Site Phase 1 Cot Hill Llanwern Newport NP18 2DP	Outline decided 03/07/06	Proposal would potentially utilise the following highway links within the Study Area during its construction and operation: A48. Potential cumulative effects will be assessed at ES.

15.12 Summary

15.12.1 The information provided in this PEIR is preliminary, the final assessment of potential significant effects will be reported in the ES. This section concludes the preliminary findings of this PEIR assessment and describes the further work to be undertaken to support the transport and access assessment presented in the ES.

15.12.2 The main conclusion to be drawn at this stage of the assessment is that the Proposed Development may have a slight adverse impact, which are not significant, on:

- users of local PRowS, the Wales Coast Path and National Cycle Network Route 4 within Study Area in relation to non-motorised user amenity and delay, and fear and intimidation during the construction and decommissioning phases; and
- users of the local highway network in relation to road vehicle driver and passenger delay during the operational phase.

15.12.3 The Proposed Development is likely to have a neutral effect on users of the local highway network and users of local PRowS, the Wales Coast Path and National Cycle Network Route 4 within the Study Area in relation to severance, and road user and pedestrian safety, during the construction and decommissioning phases.

15.12.4 A draft Travel Plan has been included as part of the PEIR (**Appendix 15A**) which

will encourage car sharing and alternatives to arriving by private car, including encouraging the adoption of mini buses for staff, as per the Commitment Register (**Appendix 19.A**).

15.12.5 The assessments made within this PEIR Chapter will be reviewed following further details related to the construction, operational and decommissioning vehicle volumes and composition.

15.12.6 An assessment of residual environmental effects associated for the following categories will be determined in due course within the ES:

- Road Vehicle Driver and Passenger Delay during the construction and decommissioning phases, on road vehicle drivers and passengers of local highway network;
- Non-motorised User Amenity and Delay during the construction and decommissioning phases on non-motorised users of the local highway network;
- Fear and Intimidation on and by Road Users during the construction and decommissioning phases on users of local highway network;
- Road user and Pedestrian Safety during the construction and decommissioning phases on users of local highway network;
- Non-motorised User Amenity and Delay during the operational phase on non-motorised users of local highway network; and
- Road user and Pedestrian Safety during the operational phase on users of local highway network.

15.12.7 A final conclusion of significance for all identified receptors, for all assessment categories and for all phases, will be made in the ES. Additional mitigation measures will also be explored if necessary to ensure any potential effects are not significant.

15.13 References

- Ref 15-1 Department for Energy Security & Net Zero. (2023). Overarching National Policy Statement for Energy (EN-1). Available at <https://assets.publishing.service.gov.uk/media/65bbfbd709fe1000f637052/overarching-nps-for-energy-en1.pdf> [Accessed 14 November 2015].
- Ref 15-2 Welsh Government. (2021). Llwybr Newydd The Wales Transport Strategy. Welsh Government.
- Ref 15-3 Welsh Government. (2023). Wales National Transport Delivery Plan 2022 to 2027. Welsh Government.
- Ref 15-4 Welsh Government. (2024). Planning Policy Wales (PPW) Edition 12. Welsh Government.
- Ref 15-5 Welsh Assembly Government. (2007). Planning Policy Wales Technical Advice Note 18 Transport.
- Ref 15-6 Welsh Government. (2021). Active Travel (Wales) Act Guidance. Welsh Government.
- Ref 15-7 The Well-Being of Future Generations (Wales) Act (2015), [online], available at <https://www.legislation.gov.uk/anaw/2015/2/contents> [Accessed November 2025].
- Ref 15-8 Monmouthshire County Council. (2014). Adopted Local Development Plan. Monmouthshire County Council.
- Ref 15-9 Newport City Council. (2015). Newport Local Development Plan 2011-26 Adopted Plan. Newport City Council.
- Ref 15-10 Department of Transport and National Highways. (2022). Circular 01/2022: The Strategic Road Network and the Delivery of Sustainable Development.
- Ref 15-11 Institute of Environmental Management and Assessment (IEMA) Institute of Environmental Management and Assessment Guidelines. Environmental Assessment of Traffic and Movement (2023) Online, available at <https://www.iema.net/media/5mrmquib/iema-report-environmental-assessment-of-traffic-and-movement-rev07-july-2023.pdf> [Accessed November 2025].

- Ref 15-12 Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (2020) Online. Available at <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an> [Accessed November 2025].
- Ref 15-13 Institute of Environmental Management and Assessment (IEMA). (1993). Guidelines for the Environmental Assessment of Road Traffic. IEMA.
- Ref 15.14 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017), [online], available at <https://www.legislation.gov.uk/ukxi/2017/571/contents> [Accessed November 2025].
- Ref 15-15 Road Traffic Statistics, [online], available at <https://roadtraffic.dft.gov.uk/#6/55.250/-1.000/basemap-regions-countpoints> [Accessed November 2025].
- Ref 15-16 Road Safety Data [online], available at <https://www.gov.uk/government/statistics/road-safety-data> [Accessed November 2025].
- Ref 15-17 Newport City Council Public Rights of Way Interactive Map [online], available at https://my.newport.gov.uk/mynewport.aspx?StartEasting=329700&StartNorthing=187418&StartZoom=50000&Layers=PROW_CAMS [Accessed November 2025].
- Ref 15-18 Monmouthshire County Council Public Rights of Way Interactive Map, [online], available at <https://access.monmouthshire.gov.uk/standardmap.aspx> [Accessed November 2025].
- Ref 15-19 Active Travel Network Maps, [online], available at <https://datamap.gov.wales/maps/active-travel-network-maps/> Accessed November

2025].

Ref 15-20 Walk Wheel Cycle Trust Interactive Map, [online], available at

<https://explore.osmaps.com/?lat=51.641136&lon=-2.923634&zoom=8.4445&style=Standard&type=2d&overlays=os-ncn-layer>

[Accessed November 2025].

Ref 15-21 Ordnance Survey mapping data, [online], available at [Accessed November 2025].

Ref 15-22 Google Street View, [online], available at www.google.com [Accessed November 2025].

Ref 15-23 National Rail, [online], available at <https://www.nationalrail.co.uk/> [Accessed November 2025].

Ref 15-24 Newport Bus, [online], available at <https://www.newportbus.co.uk/> [Accessed November 2025].

Ref 15-25 Design Manual for Roads and Bridges, [online], (2020). Available at: [0f6e0b6a-d08e-4673-8691-cab564d4a60a](https://www.dorset.gov.uk/media/1000000/0f6e0b6a-d08e-4673-8691-cab564d4a60a)

Ref 15-26 Design Manual for Roads and Bridges. (n.d.). Available at: [A83 Access Argyll and Bute - Volume 2 - Chapter 15 - Population and Human Health](https://www.dorset.gov.uk/media/1000000/a83-access-argyll-and-bute-volume-2-chapter-15-population-and-human-health)

Ref 12-28 Department of Transport, TAG Unit A4-1 Social Impact Appraisal, [online], available at (2021) <https://www.standardsforhighways.co.uk/search/1e13d6ac-755e-4d60-9735-f976bf64580a> [Accessed November 2025].