

# MONA OFFSHORE WIND PROJECT

## Preliminary Environmental Information Report

Volume 7, chapter 21: Traffic and Transport



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Final

Image of an offshore wind farm

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## Glossary

Term	Meaning
Abnormal Indivisible Loads	Loads or vehicles that exceed maximum vehicle weight, axle weight or dimensions as set out in the Road Vehicles (Construction and Use) Regulations 1986 as amended.
Applicant	Mona Offshore Wind Limited.
AutoTRACK Analysis	Computer modelling of area taken up by a moving vehicle.
Code of Construction Practice (CoCP)	A document detailing the overarching principles of construction, contractor protocols, construction-related environmental management measures, pollution prevention measures, the selection of appropriate construction techniques and monitoring processes
Construction Traffic Management Plan (CTMP)	A plan managing all construction traffic, including protocols for delivery of Abnormal Indivisible Loads to site, personnel travel, measures for road cleaning and sustainable site travel measures.
Growthed	The application of traffic growth rates to traffic flows
Local Highway Authority	A body responsible for the public highways in a particular area of England and Wales, as defined in the Highways Act 1980.
NATA/WebTAG Methodology	A standard national approach to undertaking assessments of major transport infrastructure projects.
Pedestrian Amenity	The convenience or comfort of movement on foot.
Severance	Real or perceived difficulties moving between one part of a community to another.
Transport Assessment (TA)	A transport assessment is a comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be taken to deal with the anticipated transport impacts of the scheme and to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport.

## Acronyms

Acronym	Description
AADT	Annual Average Daily Traffic
AIL	Abnormal Indivisible Load
AoS	Appraisal of Sustainability
ASA	Achieving Sustainable Accessibility
CTMP	Construction Traffic Management Plan

Acronym	Description
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
ES	Environmental Statement
IEMA	Institute of Environmental Assessment
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicles
LRN	Local Road Network
MCC	Manual Classified Counts
MHWS	Mean High Water Spring
NMWTRA	North and Mid Wales Trunk Road Agent
NCN	National Cycle Network
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report
PIA	Personal Injury Accident
SRN	Strategic Road Network
TA	Transport Assessment

## Units

Unit	Description
GW	Gigawatt (power)
km	Kilometre (distance)
m	Metre (distance)
m <sup>2</sup>	Metres Squared
s	Seconds
%	Percentage

## 21 Traffic and Transport

### 21.1 Introduction

#### 21.1.1 Overview

21.1.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents the assessment of the potential impact of the Mona Offshore Wind Project on traffic and transport. Specifically, this chapter considers the potential impact of the Mona Offshore Wind Project landward of Mean High Water Springs (MHWS) during the construction, operations and maintenance, and decommissioning phases. This chapter has been informed by volume 1, chapter 3: Project description of the PEIR and also draws upon information contained within the following annexes:

- Volume 7, annex 21.1: Traffic and transport figures of the PEIR
- Volume 7, annex 21.2: Description of network links and sensitivity of the PEIR
- Volume 7, annex 21.3: Public transport network of the PEIR
- Volume 7, annex 21.4: Base traffic flows of the PEIR
- Volume 7, annex 21.5: Personal injury accident locations of the PEIR.

#### 21.1.2 Purpose of chapter

21.1.2.1 The primary purpose of the PEIR is outlined in volume 1, chapter 1: Introduction of the PEIR. In summary, the primary purpose of an Environmental Statement is to support the Development Consent Order (DCO) application for Mona Offshore Wind Project under the Planning Act 2008 (the 2008 Act). The PEIR constitutes the Preliminary Environmental Information for Mona Offshore Wind Project and sets out the findings of the EIA to date to support the pre-application consultation activities required under the 2008 Act. The EIA will be finalised following completion of pre-application consultation and the Environmental Statement will accompany the application to the Secretary of State for Development Consent.

21.1.2.2 The PEIR forms the basis for statutory consultation which will last for 47 days and conclude on 4 June 2023 as outlined in volume 1, chapter 2: Policy and legislation of the PEIR. At this point, comments received on the PEIR will be reviewed and incorporated (where appropriate) into the Environmental Statement, which will be submitted in support of the application for Development Consent scheduled for quarter one of 2024. The Environmental Statement to be submitted in support of the application for Development Consent will also include a Transport Assessment report which will be prepared in accordance with its own separate guidance and best practice and taking account of the consultation comments received to this PEIR.

21.1.2.3 In particular, this PEIR chapter:

- Presents the existing environmental baseline established from desk studies, site-specific surveys and consultation
- Identifies any assumptions and limitations encountered in compiling the environmental information

- Presents the potential environmental effects on traffic and transport arising from the Mona Offshore Wind Project, based on the information gathered and the analysis and assessments undertaken
- Highlights any necessary monitoring and/or mitigation measures which could prevent, minimise, reduce or offset the possible environmental effects of the Mona Offshore Wind Project on traffic and transport.

21.1.2.4 The construction phase will generate the greatest number of vehicle movements as the transportation of construction materials will incur the greatest number of Heavy Goods Vehicle (HGV) and staff movements. It is this phase that this chapter of the PEIR focusses on, as agreed with the Planning Inspectorate via the Mona Offshore Wind Farm EIA Scoping Report (Mona Offshore Wind Ltd, 2022) and Scoping Opinion (see Table 21.4). The construction of the Mona Onshore Cable Corridor and Onshore Substation is predicted over a 33 month duration as described in the volume 1, chapter 3: Project description of the PEIR. The level of vehicle movements generated during the operations and maintenance phase will be very low and irregular, only a few vehicle movements per week, whilst those during the decommissioning phase will be lower than those during the construction phase. Although the baseline environment (as detailed below in section 21.4) may change from the construction to decommissioning phases, the net result of this is that the construction impact would be higher. The assessments undertaken for the construction assessment will therefore cover the decommissioning phase together with the measures to be adopted as part of the Mona Offshore Wind Project.

21.1.2.5 The completed chapter of the Environmental Statement to be submitted in support of the application for Development Consent will set out the proposed access routes and access points to the Mona Onshore Cable Corridor and demonstrate their suitability. It will set out future year baseline traffic scenarios and it will assess the significance of effects created by the construction traffic based upon those access points and access routes. This chapter of the PEIR provides an initial analysis of the impacts on traffic and transport (including on active travel routes and active travel movement) during construction in advance of those access points being determined and access routes being confirmed. The impacts upon Public Rights of Way are considered in volume 3, chapter 20: Land use and recreation of the PEIR.

#### 21.1.3 Study area

21.1.3.1 The Mona Offshore Wind Farm EIA Scoping Report (Mona Offshore Wind Ltd, 2022) sets out that the initial traffic and transport study area to be used for the assessment of traffic and transport (including on active travel routes and active travel movement) will focus on areas (landward of MHWS) where potential impacts are most likely to occur and that this includes areas located near construction sites and access routes where construction traffic would not be dispersed across the highway network. That initial traffic and transport study area remains the same for this PEIR chapter and is defined as:

- The area of land to be temporarily or permanently occupied during construction, operation and maintenance and decommissioning of the onshore transmission assets, including the local highway network
- The Local Road Network (LRN) most likely to be used by construction traffic generated by the transportation of construction materials and staff movements,

including highways located within 1km of the Mona Proposed Onshore Development Area

- The Strategic Road Network (SRN) most likely to be used by construction traffic generated by the transportation of construction materials and staff movements, including highways located within 1km of the Mona Proposed Onshore Development Area
- Potential temporary accesses and/or potential road improvements that may be required to facilitate the construction of the onshore transmission assets.

21.1.3.2 The highway links that form the initial traffic and transport study area based upon the above are shown on Figure 21.1 of this traffic and transport chapter below and on Figure 1.1 at volume 7, annex 21.1 Transport figures of the PEIR.

21.1.3.3 Impacts on Public Rights of Way are identified in volume 3, chapter 20: Land use and recreation of the PEIR.

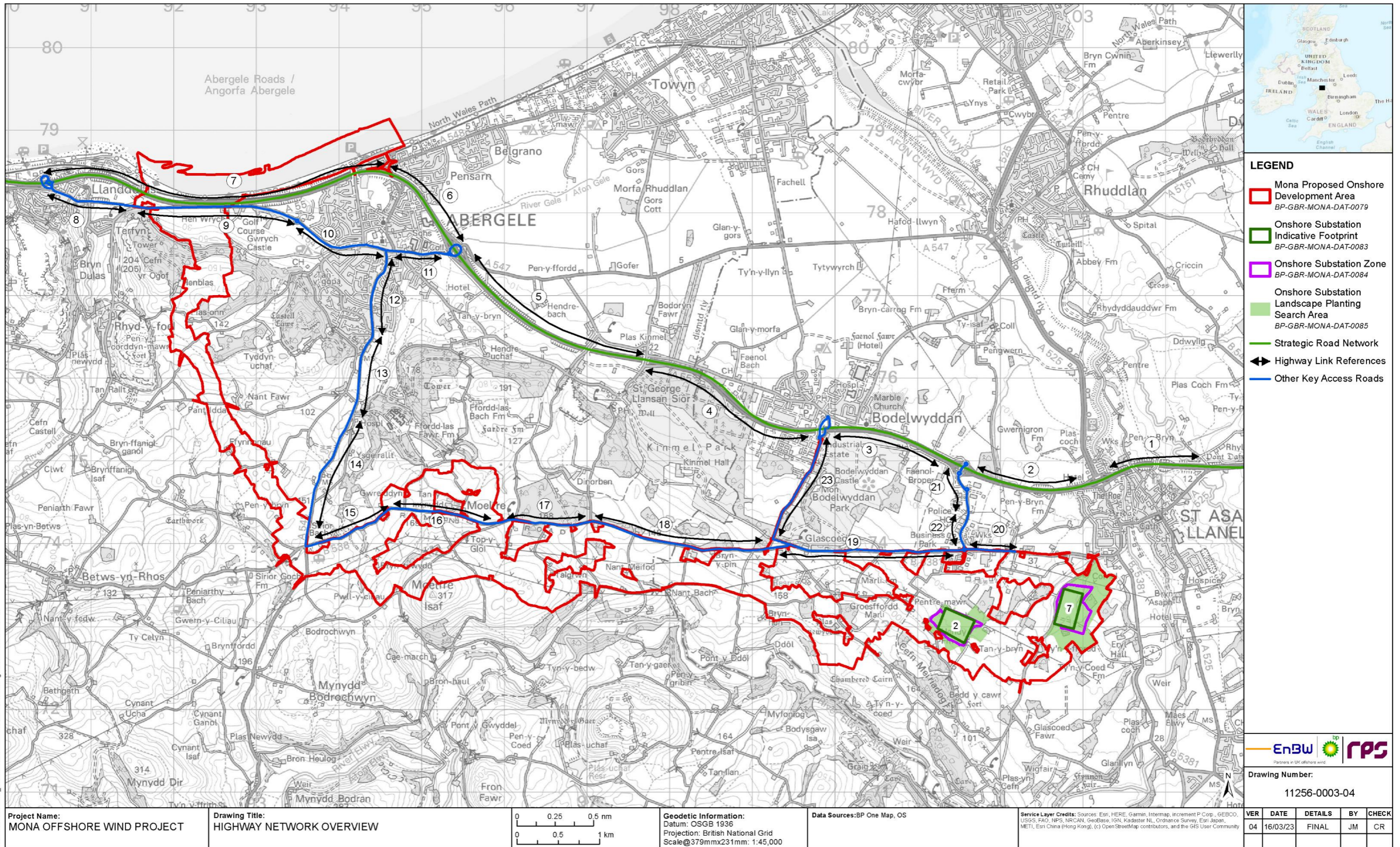


Figure 21.1: Traffic and transport study area.

**21.2 Policy context**

**21.2.1 National Policy Statements**

- 21.2.1.1 Planning policy on renewable energy infrastructure is presented in volume 1, chapter 2: Policy and legislation of the PEIR. Planning policy on offshore renewable energy Nationally Significant Infrastructure Projects (NSIPs), specifically in relation to traffic and transport, is contained in the Overarching National Policy Statement (NPS) for Energy (EN-1; DECC, 2011a) and the NPS for Renewable Energy Infrastructure (EN-3, DECC, 2011b).
- 21.2.1.2 NPS EN-1 includes guidance on what matters are to be considered in the assessment. These are summarised in Table 21.1. Table 21.1 refers to the current NPSs, specifically NPS EN-1 (DECC, 2011a). If the NPSs are updated prior to the application for Development Consent, the revised NPSs will be fully considered in relation to traffic and transport within the Environmental Statement.
- 21.2.1.3 Table 21.1 NPS EN-3 also highlights a number of factors relating to the determination of an application and in relation to mitigation. These are summarised in Table 21.2 below.
- 21.2.1.4 NPS EN-5, to be read in conjunction with NPS EN-1 deals with electricity network infrastructure including Mona Onshore Cable Corridor and grid connections. No specific policy is set out in relation to traffic and transport.

**Table 21.1: Summary of the NPS EN-1 and NPS EN-3 provisions relevant to traffic and transport.**

Summary of NPS EN-1 and EN-3 provision	How and where considered in the PEIR
<b>NPS EN-1</b>	
The transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion. Impacts may include economic, social and environmental effects. Environmental impacts may result particularly from increases in noise and emissions from road transport. Disturbance caused by traffic and abnormal loads generated during the construction phase will depend on the scale and type of the proposal. (paragraph 5.13.1 of NPS EN-1).	This chapter of the PEIR provides an initial analysis of the impacts on traffic and transport during construction. The traffic and transport chapter of the Environmental Statement to be submitted with the application for Development Consent will consider all relevant potential transport impacts during the construction, operations and decommissioning phases of development. The initial traffic and transport study area has been established to include all relevant routes along the connecting transport network. Noise is considered in volume 3, chapter 22: Noise and Vibration of the PEIR, emissions is considered in volume 3, chapter 23 Air Quality of the PEIR and Inter-Related Effects are considered in volume 3, chapter 25 Inter-related Effects – Onshore of the PEIR.
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 2.2 of NPS EN-1. (paragraph 5.13.2 of NPS EN-1).	This chapter of the PEIR provides an initial analysis of the impacts on traffic and transport during construction. The traffic and transport chapter of the Environmental Statement to be submitted with the application for Development consent will identify possible transport impacts and ways to mitigate them. The mitigation of these impacts forms incorporated mitigation.

**Summary of NPS EN-1 and EN-3 provision    How and where considered in the PEIR**

<b>Applicant Assessment</b>	
If a project is likely to have significant transport implications, the applicant’s Environmental Statement (ES) should include a TA, using the NATA/WebTAG methodology stipulated in Department for Transport (DfT) guidance (DfT, 2007), or any successor to such methodology. Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation. (paragraph 5.13.3 of NPS EN-1).	A Transport Assessment (TA) will be prepared and submitted with the application for Development Consent in accordance with guidance and best practice and its scope will be discussed and agreed with the relevant Highway Authorities.
Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts. (paragraph 5.13.4 of NPS EN-1).	Where appropriate it is expected that movement by sustainable means will be facilitated and encouraged. However, it is recognised that the linear nature of the works, the absence of a fixed permanent work site along the Mona Onshore Cable Corridor and the rural nature of much of the Mona Onshore Cable Corridor may make it difficult to implement a standard travel plan for Mona Onshore Cable Corridor working.
If additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits. Guidance has been issued in England which explains the circumstances where this may be possible, although the Government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time. (paragraph 5.13.5 of NPS EN-1).	Additional transport infrastructure is limited to the provision of a number of mostly temporary construction accesses along the Mona Onshore Cable Corridor. Accesses will be removed where appropriate and where agreed with landowners and the land reinstated when Mona Onshore Cable Corridor construction is finished. Where accesses are not removed, they will remain in-situ.
<b>NPS EN-3</b>	
The extent to which generic impacts set out in EN-1 are relevant may depend upon the phase of the proposed development being considered. For example, land-based traffic and transport and noise issues may be relevant during the construction and decommissioning periods only, depending upon the specific proposal. (paragraph 2.6.4 of NPS EN-3).	This has been described and considered within the assessment of the Mona Offshore Wind Project and is located within section 21.8 of this traffic and transport chapter of the PEIR.



**Table 21.2: Summary of NPS EN-1 policy on decision making and mitigation relevant to traffic and transport.**

Summary of NPS EN-1 policy on decision making (and mitigation)	How and where considered in the PEIR
<p>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. 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. Applicants may also be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts.</p> <p>(paragraph 5.13.6 of NPS EN-1).</p>	<p>This chapter of the PEIR provides an initial analysis of the impacts on traffic and transport during construction. The traffic and transport chapter of the Environmental Statement to be submitted with the application for Development Consent will identify possible transport impacts resulting from all phases of the Mona Offshore Wind Project and ensure measures (where relevant/necessary) are incorporated into the scheme.</p>
<p>Provided that the applicant is willing to enter into planning obligations or requirements can be imposed to mitigate transport impacts identified in the NATA/WebTAG TA, with attribution of costs calculated in accordance with the Department for Transport's guidance, then development consent should not be withheld, and appropriately limited weight should be applied to residual effects on the surrounding transport infrastructure.</p> <p>(paragraph 5.13.7 of NPS EN-1)</p>	<p>This chapter of the PEIR provides an initial analysis of the impacts on traffic and transport during construction. The traffic and transport chapter of the Environmental Statement to be submitted with the application for Development Consent will identify possible transport impacts resulting from all phases of Mona Offshore Wind Project and any commitments made to implementing appropriate measures at this stage.</p>
<p>Where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts.</p> <p>(paragraph 5.13.8 of NPS EN-1).</p>	<p>The measures adopted as part of the Mona Offshore Wind Project relate to the routeing and timing of Heavy Goods Vehicle (HGV) movements and management of construction staff movement and are not expected to require the provision of any new inland transport infrastructure apart from temporary improvements to Mona Onshore Cable Corridor access points.</p>
<p>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.</p> <p>(paragraph 5.13.9 of NPS EN-1).</p>	<p>As stated above, no new provision of inland transport infrastructure apart from mostly temporary (with some remaining in-situ where appropriate) improvements to Mona Onshore Cable Corridor access points is expected.</p>

Summary of NPS EN-1 policy on decision making (and mitigation)	How and where considered in the PEIR
<p>The Secretary of State may attach requirements to a consent where there is likely to be substantial HGV traffic that:</p> <ul style="list-style-type: none"> <li>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</li> <li>Make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public road, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and</li> </ul> <p>Ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.</p> <p>(paragraph 5.13.11 of NPS EN-1).</p>	<p>HGV routes are being identified and restrictions on HGV timing will be proposed if necessary to avoid adverse impact on sensitive receptors, particularly schools. The design of the construction works will avoid the risk of HGV parking on surrounding highway. The transport of abnormal indivisible loads will be subject to necessary studies and is expected to cause minimal disruption. This study will be submitted with the application for Development Consent. The most likely landing site for abnormal indivisible loads will be identified as part of the ongoing studies and will also be set out in the application for Development Consent.</p>
<p>If an applicant suggests that the costs of meeting any obligations or requirements would make the proposal economically unviable this should not in itself justify the relaxation by the Secretary of State of any obligations or requirements needed to secure the mitigation.</p> <p>(paragraph 5.13.12 of NPS EN-1).</p>	<p>The costs of transport mitigation currently envisaged by the applicant will not make the proposal economically unviable.</p>

**21.2.2 National, Regional and Local Planning Policies/Legislation**

- 21.2.2.1 The assessment of potential changes to traffic and transport has also been made with consideration to the specific national, regional, and local policies. .
- 21.2.2.2 The impact of traffic and transport has been considered in relation to specific national policies located in the following documents;
  - Active Travel (Wales) Act (November 2013)
  - The National Development Framework: Future Wales – the National Plan 2040 (February 2021)
  - Llwybr Newydd: The Wales Transport Strategy (March 2021)
  - Planning Policy Wales (February 2021)
  - The impact of traffic and transport has been considered in relation to specific regional policies located in the following documents: North Wales Regional Transport Plan (September 2009)
  - North Wales Joint Local Transport Plan (January 2015).
- 21.2.2.3 The impact of traffic and transport has been considered in relation to specific local policies located in the following documents:
  - Conwy County Borough Council Local Development Plan (October 2013)
  - Denbighshire County Council: Adopted Local Development Plan (June 2013).

21.2.2.4 Key provisions are set out in Table 21.3 along with details as to how these have been addressed within the assessment.

**Table 21.3: National, Regional and Local Planning Policy/Legislation relevant to traffic and transport.**

Policy	Key provisions	How and where considered in the PEIR
<b>Legislation</b>		
<b>Active Travel (Wales) Act (November 2013)</b>		
	<p>The Active Travel (Wales) Act 2013 is Welsh legislation that aims to enhance provisions for walking and cycling as methods of transport.</p> <p>This legislation calls for Welsh ministers and local authority's to;</p> <ul style="list-style-type: none"> <li>• Provide approved maps of existing active travel routes in their area</li> <li>• Provide approved integrated network maps of the new and improved active travel routes and related facilities</li> <li>• To centralise integrated network maps in preparing transport policies</li> <li>• To promote active travel journeys and secure new and improved active travel routes and related facilities</li> </ul>	<p>Section 21.4.6 of this traffic and transport chapter of the PEIR sets out the existing pedestrian and cycling infrastructure within the initial traffic and transport study area. Highlighting the potential transport options for construction staff walking and cycling to the Mona Onshore Cable Corridor and onshore Substation.</p> <p>Public Rights of Way (PRoW) and cycle routes in the vicinity of the initial traffic and transport study area have been highlighted on Figure 1.2 in volume 7, annex 21.1 Transport figures of the PEIR.</p> <p>Management of any effected active travel routes will be discussed with the relevant county councils to ensure there is minimal impact on active travel route users.</p> <p>Active travel and the active travel routes will be promoted to construction staff within the traffic and transport chapter of the Environmental Statement to be submitted in support of the application for Development Consent.</p>
<b>National Policy</b>		
<b>The National Development Framework: Future Wales – the National Plan 2040 (February 2021)</b>		
Relating to Policy 11 – National Connectivity and Policy 12 – Regional Connectivity.	<p>The Welsh Government will be investing significantly to improve active travel and public transport. This needs to be combined with the implementation of policies in Planning Policy Wales which require development to be directed towards sustainable travel locations and designed to make it possible for everyone to make sustainable and healthy travel choices for their daily journeys.</p>	<p>Section 21.4.5 of this traffic and transport chapter of the PEIR sets out the available public transport to the Mona Onshore Cable Corridor and Onshore Substation and section 21.4.6 of this traffic and transport chapter of the PEIR sets out the existing pedestrian and cycling infrastructure within the initial traffic and transport study area. Highlighting the sustainable transport options to the Mona Onshore Cable Corridor and Onshore Substation for construction staff.</p>

Policy	Key provisions	How and where considered in the PEIR
		<p>Car sharing between construction staff will also be promoted within the traffic and transport chapter of the Environmental Statement to be submitted in support of the application for Development Consent.</p>
<b>Llwybr Newydd: The Wales Transport Strategy (March 2021)</b>		
Priority 2: Allow people and goods to move easily from door to door by accessible, sustainable, and efficient transport services and infrastructure.	<p>Providing safe, accessible, well-maintained, and managed transport infrastructure.</p> <p>Adapting to climate change and facilitating more sustainable transport choices</p>	<p>Volume 7, annex 21.5: Personal injury accident locations of the PEIR sets out the personal injury accident rates for each highway link within the initial traffic and transport study area highlighted on Figure 21.1 of this traffic and transport chapter of the PEIR. These injury accident rates are compared to the national average injury accident rates. Links assessed within the EIA of this traffic and transport chapter have further been analysed for the impact of Mona Offshore Wind Project construction traffic flows on road safety.</p> <p>Section 21.4.5 of this traffic and transport chapter of the PEIR sets out the available public transport to the Mona Onshore Cable Corridor and Onshore Substation and section 21.4.6 of this traffic and transport chapter of the PEIR sets out the existing pedestrian and cycling infrastructure within the initial traffic and transport study area. Highlighting the sustainable transport options to the Mona Onshore Cable Corridor and Onshore Substation for construction staff.</p> <p>Car sharing between construction staff will also be promoted within the traffic and transport chapter of the Environmental Statement to be submitted in support of the application for Development Consent.</p>
Priority 3: Encourage people to make the change to more sustainable transport.	<p>Encouraging people to change their travel behaviour to use low-carbon, sustainable transport.</p> <p>Achieving this by making sustainable transport more attractive.</p>	<p>Section 21.4.5 of this traffic and transport chapter of the PEIR sets out the available public transport to the Mona Onshore Cable Corridor and Onshore Substation and section 21.4.6 of this traffic and transport chapter of the PEIR sets out the existing pedestrian and cycling infrastructure within the initial traffic and transport study area. Highlighting the sustainable transport options to the Mona Onshore Cable Corridor</p>

Policy	Key provisions	How and where considered in the PEIR
		and Onshore Substation for construction staff. Car sharing between construction staff will also be promoted within the traffic and transport chapter of the Environmental Statement to be submitted in support of the application for Development Consent.
<b>Planning Policy Wales (February 2021)</b>		
Paragraph 4.1.1	Enabling More Sustainable Travel Choices – measures to increase walking, cycling and public transport, reduce dependency on the car for daily travel; Network Management – measures to make best use of the available capacity, supported by targeted new infrastructure; and Demand Management – the application of strategies and policies to reduce travel demand, specifically that of single-occupancy private vehicles.	Section 21.4.5 of this traffic and transport chapter of the PEIR sets out the available public transport to the Mona Onshore Cable Corridor and Onshore Substation and section 21.4.6 of this traffic and transport chapter of the PEIR sets out the existing pedestrian and cycling infrastructure within the initial traffic and transport study area. Highlighting the sustainable transport options to the Mona Onshore Cable Corridor and Onshore Substation for construction staff. Car sharing between construction staff will also be promoted within the traffic and transport chapter of the Environmental Statement to be submitted in support of the application for Development Consent.
Paragraph 4.1.4	Land use and transport planning must be integrated. The planning system must ensure it enables integration: <ul style="list-style-type: none"> <li>• Within and between different types of transport;</li> <li>• Between transport measures and land use measures;</li> <li>• Between transport measures and policies to protect the environment; and</li> <li>• Between transport measures and policies for education, health, social, inclusion and wealth creation.</li> </ul>	Section 21.4.5 of this traffic and transport chapter of the PEIR sets out the available public transport to the Mona Onshore Cable Corridor and Onshore Substation and section 21.4.6 of this traffic and transport chapter of the PEIR sets out the existing pedestrian and cycling infrastructure within the initial traffic and transport study area. Highlighting the sustainable transport options to the Mona Onshore Cable Corridor and Onshore Substation for construction staff. Car sharing between construction staff will also be promoted within the traffic and transport chapter of the Environmental Statement to be submitted in support of the application for Development Consent.
<b>Regional Policy</b>		
<b>North Wales Regional Transport Plan (September 2009)</b>		

Policy	Key provisions	How and where considered in the PEIR
Priority 1 – Efficiently meeting North Wales’s diverse transport needs	Providing a transport network for North Wales that recognises geographic and social diversity of the Region, making best use of the available resources to give efficient movement of both people and freight.	The movement of construction vehicles has been considered to make best use of the existing network to ensure efficient movement on the network.
Priority 3 – Reducing congestion and journey times	Resolving congestion and highway access issues	The movement of construction vehicles has been considered to make best use of the existing network to ensure efficient movement on the network.
<b>North Wales Joint Local Transport Plan (January 2015)</b>		
Local Transport Plan Outcome 1 – Connections to Key Destinations and Markets	Support for Economic Growth through an improvement in the efficiency, reliability, resilience, and connectivity of movement, including freight, within and between North Wales and other regions and countries (with particular focus on accessibility to the Enterprise Zones and an improvement in the vitality and viability of towns and other keys centres.	The movement of construction vehicles has been considered to make best use of the existing network to ensure efficient movement on the network.
Local Transport Plan Outcome 4 – Increasing Levels of Walking and Cycling	Increasing Levels of Walking and Cycling for both necessary travel and recreation, by residents and visitors.	Section 21.4.6 of this traffic and transport chapter of the PEIR sets out the existing pedestrian and cycling infrastructure within the initial traffic and transport study area. Highlighting the sustainable transport options to the Mona Onshore Cable Corridor and Onshore Substation for construction staff.
Local Transport Plan Outcome 5 – Improved Safety and Security	Improved Safety and Security of both actual and perceived safety of travel by all modes.	Volume 7, annex 21.5: Personal injury accident locations of the PEIR sets out the personal injury accident rates for each highway link within the initial study area highlighted on Figure 21.1 of this traffic and transport chapter of the PEIR. These injury accident rates are compared to the national average injury accident rates. Links assessed within the EIA of this traffic and transport chapter have further been analysed for the impact of Mona Offshore Wind Project construction traffic flows on road safety.
<b>Conwy County Borough Council Local Development Plan (October 2013)</b>		
Paragraph 4.8.2.1	New development is required to address the transport implications of that development. Larger schemes may be required to prepare transport	Initial estimates of construction HGV movements have been outlined within this PEIR chapter. This chapter of the PEIR provides an initial analysis of

Policy	Key provisions	How and where considered in the PEIR
	assessments to illustrate how the amount of trips generated will be accommodated and how accessibility to and from the site by all modes of transport will be achieved. For non-residential proposals which are likely to have significant transport implications, the Government also requires the submission of travel plans, the purpose of which is to promote more sustainable forms of transport in relation to the activities of a particular development (for example; encouraging reductions in car usage and increased use of public transport, walking and cycling)	the impacts on traffic and transport during construction. The traffic and transport of the Environmental Statement (including a Transport Assessment) to be submitted in support of application for Development Consent, will assess and address all transport implications.
<b>Denbighshire County Council: Adopted Local Development Plan (June 2013)</b>		
Policy Achieving Sustainable Accessibility 1 – New transport infrastructure)	Development proposals for the provision of new transport infrastructure and improvements to existing infrastructure facilities will be supported providing that the following criteria are met: a. There is a need and justification for the proposal on economic and / or social grounds; and b. There are no unacceptable effects on the natural and built environment. Provision is made for safe access by all users, including cyclists, pedestrians, and the mobility impaired.	Any required improvements to existing highway infrastructure will be agreed with the relevant highway authority. Any such potential improvements to existing highway infrastructure will be provided within the Environmental Statement chapter to be submitted with the application for Development Consent.
Policy ASA 3 – Parking Standards	Development proposals, including changes of use, will be expected to provide appropriate parking spaces for cars and bicycles. If the use of a property or premises requires parking infrastructure for mobility impaired people, these facilities will be taken into account when determining the amount of parking space required. Consideration will be given to the following circumstances (where they apply) in determining parking provision: <ul style="list-style-type: none"> <li>The site is located within a high-densely populated area</li> <li>Access to and availability of public transport is secured</li> <li>Parking is available within reasonable distance of the site</li> </ul>	All parking proposals will be developed in accordance with these guidelines.

Policy	Key provisions	How and where considered in the PEIR
	<ul style="list-style-type: none"> <li>Alternative forms of transport are available in the area.</li> </ul>	
Policy STR/3 – Mitigating Travel Impact	<ol style="list-style-type: none"> <li>New developments will be required to mitigate the undesirable effects of travel such as; noise, pollution, impact on amenity and health and other environmental impacts.</li> <li>Where a proposed development is likely to have significant transport, social or environmental implications, the Council will require developers to submit a Transport Assessment and a Travel Plan with the planning application. A Road Safety Audit may also be required.</li> <li>Where the proposed development is considered to have significant transport implications on a wider area, financial contributions will be required towards improvements in transport infrastructure, in particular to support public transport, cycling and walking, in accordance with the development principles in Section 4 – Spatial Policies and Supporting Development Management Policies.</li> <li>The Council may also require developers to submit a Transport Statement for other development proposals where there is need to understand the traffic impact of the proposal.</li> </ol>	This chapter of the PEIR provides an initial analysis of the impacts on traffic and transport during construction. The traffic and transport of the Environmental Statement (including a Transport Assessment) to be submitted in support of application for Development Consent, will assess the implications of travel associated with the Mona Offshore Wind Project and address these provisions if any significant effects are predicted.
Paragraph 4.8.4.2	A primary planning consideration is to ensure that development proposals achieve a suitable connection to the highway that is safe for pedestrians, cyclists, occupants of vehicles and other road users. Equally important is the need to ensure that road safety is not jeopardised by allowing proposals which would generate levels of traffic beyond the capacity of the surrounding road network.	<p>The traffic and transport of the Environmental Statement (including a Transport Assessment) to be submitted in support of application for Development Consent, will propose access routes, locations and management measures such that safe access is achieved, and that the local highway network would continue to function.</p> <p>Levels of trip generation will be assessed to ensure levels of traffic do not exceed capacity on the surrounding road network.</p>

## 21.3 Consultation

- 21.3.1.1 A summary of the key issues raised during consultation activities undertaken to date specific to traffic and transport is presented in Table 21.4 below, together with how these issues have been considered in the production of this PEIR chapter.
- 21.3.1.2 Contact has been made with the relevant traffic and transport officers at Conwy County Borough Council, Denbighshire County Council and North and Mid Wales Trunk Road Agent. This will be progressed through the establishment of a Traffic and Transport Expert Working Group (see section 21.13 next steps).

**Table 21.4: Summary of key consultation issues raised during consultation activities undertaken for the Mona Offshore Wind Project relevant to traffic and transport.**

Date	Consultee and type of response	Issues raised	Response to issue raised and/or were considered in this chapter
June 2022	The Planning Inspectorate – Scoping Opinion	<p>The Scoping Report states that during the operational and maintenance phase, the onshore transmission assets will only need to be visited for maintenance purposes as there are no manned facilities and the assets would be monitored remotely.</p> <p>The Inspectorate agrees that on this basis, significant operation and maintenance traffic related effects are unlikely to occur and assessment of this matter can be scoped out of the Environmental Statement. The Environmental Statement should provide a description of the likely number and type of vehicles required during all phases of development to support this conclusion.</p>	Noted.
June 2022	The Planning Inspectorate – Scoping Opinion	<p>The Scoping Report anticipates that the retired onshore infrastructure/ equipment will either be left in situ or transported away from site in bulk during the decommissioning phase. The Scoping Report therefore predicts that there will be a lower number of vehicle movements on the LRN and SRN during decommissioning compared to the construction phase. The Inspectorate also understands that a decommissioning plan will be prepared post consent (Part 1, paragraph 3.8.1.2). The Inspectorate is content that the assessment of the construction phase would represent a worst case and therefore agrees a detailed assessment of decommissioning traffic impacts can be scoped out of the ES. However, the ES should explain the approach taken</p>	Noted
June 2022	The Planning Inspectorate – Scoping Opinion	<p>The impact of ALLs has been excluded from the operation, maintenance and decommissioning phase columns in Part 3, Table 8.9, however it is not identified as a ‘scoped out impact’ in Part 3, Table 8.10. Taking into account the nature of the operation and maintenance, the Inspectorate is content that this matter can be scoped out. The Inspectorate is also content that the assessment of the construction phase would represent a worst case and therefore, considers a detailed assessment of decommissioning traffic impacts can be scoped out of the ES. However, the ES should explain the approach taken.</p>	Noted
June 2022	Network Rail – Response to Scoping Report	<p>Any works near to Network Rail land and infrastructure will need to be undertaken following engagement with Asset Protection to determine the interface with Network Rail assets, buried or otherwise and by entering into a Basis Asset Protection Agreement, if required, with a minimum of 3months notice before works start.</p> <p>The Mona Offshore Wind Project is located within an area of historic mining for metals. Network Rail wish to be consulted on any site investigation and/or remediation works for historic/ abandoned mining hazards, alongside Network Rail’s infrastructure.</p> <p>No part of the Mona Offshore Wind Project shall cause any existing level crossing road signs or traffic signals or the crossing itself to be obscured. Clear sighting of the crossing must be maintained for the construction / operational period and as a permanent arrangement. The same conditions apply to the rail approaches to the level crossing,</p> <p>At no point during construction on site or after completion of works should there be any deterioration of the ability of pedestrians and vehicles to see the level crossing and its signage.</p> <p>There must be no reduction in the distance that pedestrians and vehicles have sight of the warning signs and the crossing itself.</p>	Noted

Date	Consultee and type of response	Issues raised	Response to issue raised and/or were considered in this chapter
April 2023 TBC	Conwy County Borough Council, Denbighshire County Council and Welsh Government	<p>A meeting to introduce the Mona Offshore Wind Project and:</p> <ul style="list-style-type: none"> <li>• Provide an update on its progress through the consenting process.</li> <li>• Provide an overview of the information that will be included in the PEIR with regards to traffic</li> <li>• Identify any particular junctions on the road network where you may have concerns – this will be used to inform the Transport Assessment scoping exercise</li> <li>• Agree the consultation requirements following PEIR</li> </ul>	Noted

## 21.4 Baseline environment

### 21.4.1 Methodology to inform baseline

21.4.1.1 This section provides details on the baseline studies and surveys undertaken to characterise the baseline for the Mona Offshore Wind Project.

### 21.4.2 Desktop study

21.4.2.1 Information on traffic and transport within the initial traffic and transport study area was collected through a detailed desktop review of existing studies and datasets. These are summarised at Table 21.5 below.

**Table 21.5: Summary of key desktop reports.**

Title	Source	Year	Author
Identification of sensitive receptors	Google Maps Conwy County Council Denbighshire County Council	N/A	Google Maps Conwy County Council Denbighshire County Council
Road geometries and layouts	Google Maps Ordnance Survey (1:50 000 scale) Land Ranger Map Series	2022	Google Maps Ordnance Survey (1:50 000 scale) Land Ranger Map Series
Identification of facilities for sustainable travel	Google Maps Arriva Bus M and H coaches Transport for Wales	N/A	Google Maps Arriva Bus M and H coaches Transport for Wales
Identification of potential route options	Google Maps Ordnance Survey (1:50 000 scale) Land Ranger Map Series	2022	Google Maps Ordnance Survey (1:50 000 scale) Land Ranger Map Series
Existing publicly available traffic survey data	Department for transport Survey data from Denbighshire County Council and Conwy County Borough Council advised from highway officers via email.	Various	Department for transport Survey data from Denbighshire County Council and Conwy County Borough Council advised from highway officers via email.
Personal Injury Accident Locations	Crash Map	Data covers 2017 to 2021 inclusive	Crash Map

### 21.4.3 Site specific surveys

21.4.3.1 In order to inform the PEIR, site-specific surveys were undertaken. A summary of the surveys undertaken to inform the traffic and transport impact assessment are outlined in Table 21.6 below.

**Table 21.6: Summary of site-specific survey data.**

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference to further information
Traffic Surveys	Along predicted access routes within the initial traffic and transport study area.	Daily traffic flows and traffic speeds on key road links were measured by placing Automatic Traffic Counts (ATCs) for two-week periods and weekday peak period traffic flows through junctions were measured by undertaking Manual Classified Counts (MCCs).	360 TSL	2022	Volume 21, annex 21.2 of the PEIR.

### 21.4.4 Highway network

21.4.4.1 The main routes into the initial traffic and transport study area are via the A55, which forms part of the Strategic Road Network (SRN) and is operated and maintained by North and Mid Wales Trunk Road Agent (NMWTRA) on behalf of Welsh Government.

21.4.4.2 All other roads within the initial traffic and transport study area, including those that access onto the A55, form part of the local highway network and are operated and maintained by Denbighshire County Council or Conwy County Borough Council as determined by their respective administrative boundaries.

21.4.4.3 The highway network within the initial traffic and transport study area includes the A55 and relevant parts of the local highway network (determined as being likely to be used by construction vehicles) and has been depicted into highway links, as shown on Figure 21.1 of this traffic and transport chapter and Figure 1.1 in volume 7, annex 21.1 Transport figures of the PEIR.

21.4.4.4 A description of all of these highway links, their geometries and layout and their local environs is presented in volume 7, annex 21.2 Description of network links and sensitivity of the PEIR.

### 21.4.5 Public transport services

21.4.5.1 Details of local bus services accessible from bus stops located along the Mona Onshore Cable Corridor are summarised in Table 21.7 and shown graphically at volume 7, annex 21.3: Public transport network of the PEIR.

**Table 21.7 Summary of local bus services.**

Service	Operator	Route	Frequency (Monday to Friday)	Frequency (Saturday)	First Service	Last Service
12	Arriva Wales	Rhyl – Llandudno	Every 15 minutes	Every 15 minutes	05:15	23:00
X12	Arriva Wales	Rhyl – Llandudno	Mon-Sat 05:50 (Return 18:27 or 23:40)			



Service	Operator	Route	Frequency (Monday to Friday)	Frequency (Saturday)	First Service	Last Service
13	Arriva Wales	Llandudno – Prestatyn	Every 50 minutes	Every 50 minutes	08:10	20:40
21	M & H Coaches	Colwyn Bay – Betws yn Rhos, Rhyd Y Foel – Llandudno	8 per day	6 per day	09:25	15:45
43	M & H Coaches	Llanfair – Pensarn via Abergele, Belgrano	6 per day	6 per day	07:43	17:52
45	M& H Coaches	Rhyl – Ysbyty Glan Clwyd via Kinmel Bay	4 per day	6 per day	09:40	14:22
46	M & H Coache	Rhyl – Ysbyty Glan Clwyd	2 per day	2 per day	13:25	17:05
51	Arriva Wales	Rhyl – Denbigh	Hourly	Hourly	05:50	23:05
51B	Arriva Wales	Rhyl – Denbigh	Hourly	Hourly	05:00	20:50
52	Arriva Wales	Denbigh – Rhyl	2 per day (00:00 and 23:55)			
54	M & H Coaches	Trefnant – St Asaph Business Park via Rhyl	Mon-Fri 07:25 (Return 16:30)			

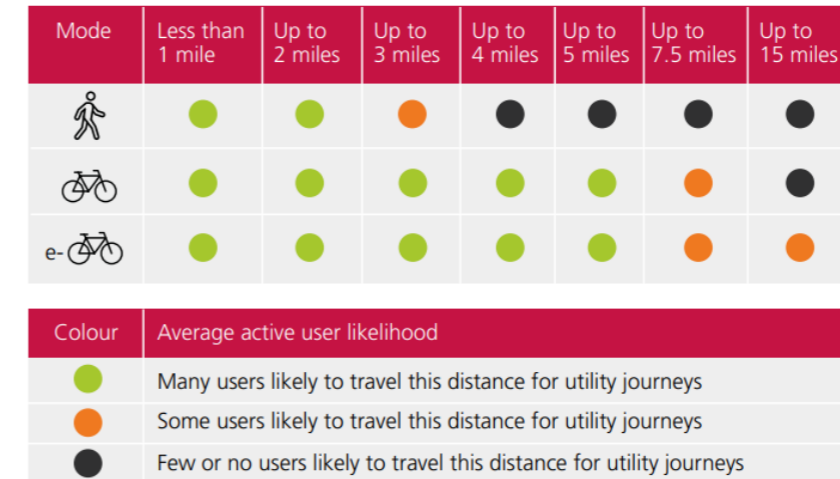
21.4.5.2 Abergele and Pensarn Railway Station is located in Pensarn on the North Wales Coast Line. Details of train services at the Railway Station are summarised in Table 21.8.

**Table 21.8: Summary of local train services at Abergele and Pensarn Railway Station**

Destination	Weekday			Saturday		
	First Service	Last Service	Typical Frequency	First Service	Last Service	Typical Frequency
Manchester Airport	04:44	22:11	Hourly	04:52	22:10	Hourly
Cardiff Central	1 service at 17:35			No Saturday Service		
Holyhead	07:33	23:37	Hourly	07:33	23:20	Hourly

## 21.4.6 Pedestrian and cycle infrastructure

21.4.6.1 Guidance on walking and cycling distances is set out in Table 4.1 of the Welsh Government publication ‘Active Travel Act Guidance’, July 2021, an extract of which is shown in Figure 21.2.



**Figure 21.2: Welsh Government guidance on walking and cycling distances.**

21.4.6.2 As can be seen, Welsh Government considers many users are likely to walk up to two miles (3.2km) for utility journeys with some users likely to walk up to three miles (4.8km) for such uses.

21.4.6.3 In terms of cycling, Welsh Government considers many users are likely to cycle up to five miles (8.0km) for utility journeys with some users likely to cycle up to 7.5 miles (12.0km) for such uses.

21.4.6.4 Residential areas in Abergele, St Asaph, Bodelwyddan and Llanddulas are in close proximity to the Mona Onshore Cable Corridor, although footway provision in some areas is poor.

21.4.6.5 The Mona Onshore Cable Corridor is located within a section of Northern Wales which consists primarily of agricultural land, with few heavy urbanised areas; however, several residential areas lie within 5km of the Mona Onshore Cable Corridor. Route 84 of the National Cycle Network (NCN84) routes south from Rhyl and ends in St Asaph.

21.4.6.6 Construction staff for the Mona Offshore Wind Project will not be commuting to a fixed location for the duration of the construction phase; therefore, the capacity to commute via walking or cycling will vary.

## 21.4.7 Base traffic flows

21.4.7.1 Table 21.5 and Table 21.6 set out that existing publicly available traffic surveys have been obtained and that site-specific traffic surveys have been undertaken. As the proposed access routes for the Mona Offshore Wind Project and subsequent assessment requirements evolve, the use of specific traffic surveys (either those publicly available or those site-specific) will be identified and future year baseline traffic flow scenarios can be created specific for the assessments.

21.4.7.2 Once the proposed access routes and subsequent assessment requirements have evolved and the future year baseline traffic flow scenarios have been identified, these will be set out within the traffic and transport Environmental Statement chapter and the Transport Assessment to be submitted in support of the application for Development Consent.

21.4.7.3 For the purposes of this PEIR chapter, the daily base traffic flows along key highway links that form the initial traffic and transport study area are set out in volume 7, annex 21.4: Base traffic flows of the PEIR.

21.4.7.4 The highway links are numbered, and their locations are shown graphically on Figure 21.1 of this traffic and transport chapter and Figure 1.1 at volume 7, annex 21.1 Transport figures of the PEIR.

## 21.4.8 Road safety

21.4.8.1 Personal Injury Accident (PIA) data is being used to consider the road safety record within the initial traffic and transport study area. Given that the initial traffic and transport study area covers a large area, a two-stage assessment of road safety is being undertaken.

21.4.8.2 Stage 1 is to calculate the injury accident rate along each of the key highway links that form the initial traffic and transport study area as shown on Figure 21.1 of this chapter and Figure 1.1 at volume 7, annex 21.1 Transport figures of the PEIR. This is then compared to the national average injury accident rate set out in Table RAS1002 of the DfT document 'Reported Road Casualties Great Britain 2020'.

21.4.8.3 This analysis is set out at volume 7, annex 21.5: Personal injury accident locations of the PEIR.

21.4.8.4 Where injury accident rates are in excess of national averages, this does not necessarily indicate a poor safety record. Indeed, because they are an average, this means that 50% of all roads will have an injury accident rate that exceeds the national average.

21.4.8.5 For robustness, stage 2 of the analysis will identify the highway links with an injury accident rate that is 25% higher than the national average rate and then assess each individual injury accident to identify any consistent contributory factors.

21.4.8.6 This stage 2 assessment will be set out within the traffic and transport Environmental Statement chapter and the Transport Assessment to be submitted in support of the application for Development Consent.

## 21.4.9 Future baseline scenario

21.4.9.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires that "*an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge*" is included within the Environmental Statement. In the event that Mona Offshore Wind Project does not come forward, an assessment of the future baseline conditions is to be carried out.

21.4.9.2 An initial impact assessment has been undertaken within this chapter of the PEIR and is found in section 21.8. This assessment is undertaken in advance of access points

being determined and therefore by using an initial prediction of Mona construction traffic flows. Further assessments will be undertaken and reported as part of the traffic and transport Environmental Statement chapter and Transport Assessment to be submitted in support of the application for Development Consent to assess the construction impact. The impact assessment will entail a future baseline scenario for the future year in which construction has commenced, with the base traffic flows growthed to forecast traffic conditions on the highway network within the initial traffic and transport study area during this future year. The construction phase generates the highest number of vehicle movements in comparison to the operations and maintenance and decommissioning phases and so undertaking assessments with a future baseline for this phase covers the other phases, as agreed with the Planning Inspectorate via the Scoping Report and Scoping Opinion.

21.4.9.3 Future baseline scenarios will be created using the desk top data and site-specific surveys. Traffic growth rates will be applied to the base traffic flows and the traffic flows (plus any associated transport infrastructure) generated by any committed developments will be added to these to create the relevant future year baseline scenarios.

## 21.4.10 Data limitations

21.4.10.1 The base data has been obtained from recognised sources and methodologies and is considered representative of current conditions.

## 21.5 Impact assessment methodology

### 21.5.1 Overview

21.5.1.1 The traffic and transport impact assessment has followed the methodology set out in volume 1, chapter 5: EIA methodology of the PEIR. Specific to the traffic and transport impact assessment, the following guidance documents have also been considered:

- Guidelines for the Environmental Assessment of Road Traffic (IEMA, 1993) (the 'IEMA guidelines')
- Design Manual for Roads and Bridges (DMRB) LA104: Environmental Assessment and Monitoring (Highways England (now National Highways), Transport Scotland, Welsh Government and Department for Infrastructure Northern Ireland, 2020)
- Technical Advice Note 18: Transport (TAN18: Transport) (Welsh Government, 2007).

### 21.5.2 Impact assessment criteria

#### Assessment Guidance

21.5.2.1 The initial assessment within this chapter of the PEIR has been prepared in accordance with the IEMA guidelines with reference to DMRB LA104: Environmental Assessment and Monitoring (Welsh Government *et al*, 2020) and TAN18: Transport (Welsh Government, 2007).

21.5.2.2 The significance of transport environmental effects have been assessed by considering the interaction between the magnitude of the impacts and the sensitivity of the receptors in the vicinity of transport corridors. The initial assessment within this chapter of the PEIR has assessed the initial Mona construction traffic flows against the base traffic flows. The traffic and transport Environmental Statement chapter and Transport Assessment to be submitted in support of the application for Development Consent will compare the future baseline situation in the year of construction with the development, taking into account other schemes that are likely to affect the future baseline condition in the year of construction.

21.5.2.3 Consistent with the IEMA guidelines, the following will be considered in this chapter:

- Driver delay
- Severance of routes
- Pedestrian delay
- Pedestrian amenity
- Accidents and road safety
- Hazardous, dangerous and abnormal indivisible loads.

21.5.2.4 The effects of construction traffic upon noise and air quality are considered separately within chapter 22: Noise and vibration of the PEIR and chapter 23: Air quality of the PEIR and are based upon traffic flows derived from this chapter. Public Rights of Way and diversions are considered within volume 3, chapter 20: Land use and recreation of the PEIR.

**Technical Methodologies**

21.5.2.5 The technical methodology for undertaking the assessment of transport impacts is based upon the IEMA guidelines, as set out above. A Transport Assessment will be prepared in accordance with the guidance contained within TAN18: Transport (Welsh Government, 2007) and will form part of the Environmental Statement to be submitted in support of the application for Development Consent.

21.5.2.6 The assessment of abnormal indivisible load movements is informed by the Road Vehicles (Construction and Use) Regulations 1986 (as amended) and the Road Vehicles (Authorisation of Special Types) (General) Order 2003. The ability of vehicles to negotiate links and junctions will be assessed using the AutoTrack computer programme (Savoy Computing Services Ltd, 2012) that models the areas required to allow the passage of vehicles and loads.

**Screening Tests**

21.5.2.7 In terms of the assessment of the environmental impacts of traffic, the IEMA guidelines sets out that the following two ‘rules’ should be followed as a screening test to establish whether a highway link should be included as part of the detailed environmental assessment:

- Rule 1: include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)

- Rule 2: include any other specifically sensitive areas where traffic flows will increase by 10% or more.

21.5.2.8 The assessment therefore identifies the sensitivity of affected transport routes, taking into account the presence and location of sensitive receptors or route users. The determination of receptor sensitivity will be based on the criteria of value, adaptability and tolerance.

21.5.2.9 In accordance with the IEMA guidelines, for rule 1, highway links with increases in total traffic flows that exceed 30% or HGVs that exceed 30% are screened into the assessment. Whilst for rule 2, highway links with increases in total traffic flows that exceed 10% or HGVs that exceed 30% are screened into the assessment.

21.5.2.10 It should be noted that changes in traffic of less than 10% are generally considered to be insignificant given that the daily variations in background traffic flows may fluctuate by this amount.

**Impact Assessment Criteria**

21.5.2.11 The criteria for determining the significance of effects is a two-stage process that involves defining the magnitude of the impacts and the sensitivity of the receptors. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity are based on those which are described in further detail in volume 1, chapter 5: EIA methodology of the PEIR.

21.5.2.12 The criteria for defining magnitude in this chapter are outlined in Table 21.9 below.

**Table 21.9: Definition of terms relating to the magnitude of an impact.**

Magnitude of impact	Definition
High	Substantial or total loss of capability for movement along or across transport corridors, loss of access to key facilities and loss of highway safety. Severe delays to travellers (Adverse)
	Large scale improvement in the capability for movement along and across transport corridors, major improvement in access to key facilities, in highway safety and in delays to travellers (Beneficial)
Medium	Loss of capability for movement along or across transport corridors, loss of access to key facilities and loss of highway safety. Delays to travellers (Adverse)
	Improvement in the capability for movement along and across transport corridors, improvement in access to key facilities, in highway safety and in delays to travellers (Beneficial)
Low	Some measurable loss of capability for movement along and across transport corridors, some measurable loss of access to key facilities and some measurable loss of highway safety. Some measurable increase in delays to travellers (Adverse)
	Some measurable increase in the capability for movement along and across transport corridors, some measurable increase in access to key facilities and some measurable increase in highway safety. Some measurable increase in delays to travellers. Reduced risk of negative impacts occurring (Beneficial)
Negligible	Very minor loss of capability for movement along and across transport corridors, very minor loss of access to key facilities and very minor loss of highway safety. Very minor increase in delays to travellers (Adverse)

Magnitude of impact	Definition
	Very minor increase in capability for movement along and across transport corridors, very minor increase in access to key facilities and very minor increase in highway safety. Very minor decreases in delays to travellers (Beneficial)
No change	No loss of capability for movement along and across transport corridors, no change of access to key facilities and highway safety. No delays to travellers.

21.5.2.13 The criteria for defining sensitivity in this chapter are outlined in Table 21.10 below.

**Table 21.10: Definition of terms relating to the sensitivity of the receptor.**

Sensitivity	Definition
Very High	Those receptors with greatest sensitivity with site-specific reasons for being particularly sensitive to changes in traffic flow (e.g. community with high incidence of mobility impairment requiring to cross roads to access essential facilities).
High	Those receptors with high sensitivity due to site-specific characteristics which make them particularly sensitive to changes in traffic flow including schools, colleges, playgrounds, accident black spots (with reference to injury accident data and PIA rates), retirement homes, urban/residential/built-up roads without commensurate footway provision, high footfall, severely congested junctions
Medium	Receptors of medium sensitivity to traffic flows including congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, unsegregated cycleways, community centres, parks, recreation facilities, roads with PIA rates close to the national average
Low	Receptors with some sensitivity to traffic flows including places of worship, public open space, nature conservation areas, listed buildings, tourist attractions, urban/residential/built-up areas with good/adequate footway provision commensurate for its use and footfall
Negligible	Receptors with low sensitivity to traffic flows and those sufficiently distant from affected roads and junctions

21.5.2.14 Links that are defined as high or very high sensitivity are deemed as sensitive, in accordance with the IEMA thresholds, and have been assessed against the rule 2 threshold. Links that are defined as medium, low or negligible sensitivity are deemed as not being sensitive, in accordance with the IEMA thresholds, and have been assessed against the rule 1 threshold.

21.5.2.15 The significance of the effect upon traffic and transport is determined by correlating the magnitude of the impact and the sensitivity of the receptor. The particular method employed for this assessment is presented in Table 21.16. Where a range of significance of effect is presented in Table 21.16, the final assessment for each effect is based upon expert judgement.

21.5.2.16 For the purposes of this assessment, any effects with a significance level of minor or less have been concluded to be not significant in terms of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

**Table 21.11: Matrix used for the assessment of the significance of the effect.**

Sensitivity of Receptor	Magnitude of Impact				
	No Change	Negligible	Low	Medium	High
Negligible	No change	Negligible	Negligible or Minor	Negligible or Minor	Minor
Low	No change	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Medium	No change	Negligible or Minor	Minor	Moderate	Moderate or Major
High	No change	Minor	Minor or Moderate	Moderate or Major	Major
Very High	No change	Minor	Moderate or Major	Major	Major

### 21.5.3 Sensitivity of Receptor

21.5.3.1 Table 21.12 below highlights the qualification of the sensitivity assessment for each of the highway links (as shown on Figure 21.1 of this chapter) within the initial traffic and transport study area and are subject to the EIA screening tests, in conjunction with the descriptions set out at volume 7 annex 21.3 Description of network links and sensitivity of the PEIR. The sensitivity for each highway link has been defined using Table 21.10 above, using professional judgement and by incorporating all receptor groups identified and discussed above.

**Table 21.12: Sensitivity of receptor relevant to the Mona Offshore Wind Project.**

Link	Sensitivity	Qualification
Link 1: A55 between Junctions 27 and 27A	Negligible	No sensitive receptors
Link 2: A55 between Junctions 27 and 26	High	National speed limit dual carriageway road. Combined footway/cycleway adjacent to the carriageway.
Link 3: A55 between Junctions 26 and 25	High	National speed limit dual carriageway road. Combined footway/cycleway adjacent to the carriageway.
Link 4: A55 between Junctions 25 and 24A	Negligible	No sensitive receptors
Link 5: A55 between Junctions 24A and 24	Negligible	No sensitive receptors
Link 6: A55 between Junctions 24 and 23A	Negligible	No sensitive receptors
Link 7: A55 between Junctions 23A and 23	Negligible	No sensitive receptors
Link 8: A547 through Llanddulas	Medium	Residential areas, adequate footways for the demand, green spaces, some commercial spaces, church.
Link 9: A547 between Llanddulas and Parc Busnes Gogledd Cymru	Negligible	No sensitive receptors

Link	Sensitivity	Qualification
Link 10: A547 between Parc Busnes Gogledd Cymru and A548 Chapel Street	High	Built up area and town centre location with footways provided and high footfall in locations.
Link 11: A547 between A548 Chapel Street and A55	High	Built up area and town centre location with footways provided and high footfall in locations.
Link 12: A548 Chapel Street between A547 and Lon Dirion	High	Built up area and town centre location with footways provided and high footfall in locations.
Link 13: A548 Chapel Street between Lon Dirion and Abergele Hospital	Low	Footways provided, small section of residential area with limited pedestrian demand, limited frontage access.
Link 14: A548 Chapel Street between Abergele Hospital and B5381 Roman Road	Negligible	No sensitive receptors
Link 15: B5381 Roman Road between A548 and Moelfre	Low	Two adjacent caravan parks and residential properties all separated from the carriageway by hedgerow.
Link 16: B5381 Roman Road between Moelfre and Capel Carmel	Negligible	No sensitive receptors
Link 17: Roman Road between Capel Carmel and Roberts D a O	Negligible	No sensitive receptors
Link 18: B5381 Roman Road between Roberts D a O and Engine Hill	Negligible	No sensitive receptors
Link 19: B5381 Glascoed Road between Engine Hill and Ffordd William Morgan	Negligible	No sensitive receptors
Link 20: B5381 Glascoed Road between Ffordd William Morgan and Cwttir Lane	Low	Some business parks, adequate footway provision for demand.
Link 21: Ffordd William Morgan between A55 and Carlton Court	Low	Business units on both sides set back with good screening from carriageway, footway/cycleway on western side segregated from the carriageway by a verge and footway on eastern side with provisions suitable for demand.
Link 22: Ffordd William Morgan between Carlton Court and B5381 Glascoed Road	Low	Business units on both sides set back with good screening from carriageway, footway/cycleway on western side segregated from the carriageway by a verge and footway on eastern side with provisions suitable for demand.
Link 23: Engine Hill between A55 and B5381 Glascoed Road	Low	Hotel, commercial areas and some residential properties all set back and screened from carriageway. Footways provided at location of demand and segregated from carriageway by a grass verge and trees.

21.5.3.2 On the basis of the above, the following links (as shown on Figure 21.1 of this chapter) are deemed to be sensitive and assessed against the rule 2 threshold:

- Link 2: A55 between Junctions 27 and 26
- Link 3: A55 between Junctions 26 and 25
- Link 10: A547 between Parc Busnes Gogledd Cymru and A548 Chapel Street
- Link 11: A547 between A548 Chapel Street and A55
- Link 12: A548 Chapel Street between A547 and Lon Dirion.

## 21.6 Key parameters for assessment

### 21.6.1 Maximum design scenario

21.6.1.1 The maximum design scenarios identified in Table 21.13 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the Project Design Envelope provided in volume 1, chapter 3: Project description of the PEIR. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g. different infrastructure layout), to that assessed here be taken forward in the final design scheme.

21.6.1.2 There is an inter-relationship with this chapter and the Air Quality, Noise and Vibration and Human Health chapters in so far as these chapters consider traffic flows. The traffic flows and conclusions of the chapter will be made available, and these chapters will utilise these as part of their assessments and are therefore fully consistent with the above.

**Table 21.13: Maximum design scenario considered for the assessment of potential impacts on traffic and transport.**

<sup>a</sup> C=construction, O=operational and maintenance, D=decommissioning

Potential impact	Phase <sup>a</sup>			Maximum Design Scenario	Justification
	C	O	D		
The impact on driver and pedestrian delay/pedestrian amenity caused by construction works or construction traffic using the LRN and SRN	✓	x	x	<p><b>Construction phase</b></p> <ul style="list-style-type: none"> <li>There are up to four cable trenches within the permanent Mona Onshore Cable Corridor, each trench measures up to 2.5m wide at the top, 1.5m at the base and the depth is 1.8m</li> <li>The maximum number of joint bays along the Mona Onshore Cable Corridor is based on a distance of 750m between each joint bay</li> <li>The maximum number of link boxes along the Mona Onshore Cable is based on a distance of 750m between each link box</li> <li>There is one haul road within the Onshore Cable Corridor along the length of the corridor; it is 6m wide excluding passing places. It will be constructed using imported engineered granular fill with geotextile style layers with a nominal thickness of 400mm and a maximum thickness of up to 1000mm</li> <li>The maximum number of HDD locations along the Onshore Cable Corridor and 400kV Grid Connection Cable Corridor is 60. Primary HDD operations will require a compound, these will measure up to 150m x 100m. Secondary HDDs will require a smaller compound (measuring up to 30m x 20m) and will be located within the 100m temporary construction corridor</li> <li>Up to two primary construction compounds (each measuring 150m x 150m) and up to 10 secondary construction compounds (each measuring 150m x 100m) will be located along the Onshore Cable Corridor and the Onshore Substation. The compounds will be located within the Mona Proposed Onshore Development Area. Soils will be removed and stored on site and crushed stone or other suitable materials will be used across the entire area to create hardstanding</li> <li>The maximum duration of construction of the onshore export cable construction and installation is 33 months</li> <li>The depth of stabilised backfill in each of the four onshore cable trenches is up to 600mm which results in an expected average along the Onshore Cable Corridor of 450mm</li> <li>The number of work fronts associated with the cabling components (i.e excluding landfall and the Onshore Substation) at adjacent locations along the Onshore Cable Corridor undertaken at any one time is two</li> <li>The maximum footprint of the Onshore Substation will measure 125,000m<sup>2</sup> and will be located within the Onshore Substation zone: this area will include the substation buildings and the earthworks to create the platform. The Onshore Substation will comprise up to four buildings. The maximum dimensions of the main building are 20m high, 40m wide and 90m long</li> <li>Access to the substation will be via a new permanent access road measuring up to 8m wide and 1.2km in length</li> <li>A construction compound will be required to support the construction of the substation extending up to 250,000m<sup>2</sup>. The duration of construction and installation of the onshore substation is 33 months</li> <li>For the Mona 400kV Grid Connection Cable Corridor will be up to 3km long. There are up to two cable trenches within the permanent 400kV Grid Connection Cable corridor, each trench measures up to 2.5m wide at the top, 1.5m at the base and the depth is 1.8m</li> <li>The maximum number of joint bays along the 400kV Grid Connection Cable Corridor is based on a distance of 500m between each joint bay</li> </ul>	<p>The greatest reasonable estimates of the number of cable trenches, link boxes, joint bays, HDD compounds, construction compounds, number of buildings and the greatest depth of the engineered fill for the haul road and stabilised backfill represents the greatest potential for impacts on pedestrian delay and amenity; community severance; temporary delays to public transport services; and accidents and safety for transport receptors as a result of larger numbers of HGV movements.</p> <p>The shortest duration of construction represents the greatest potential for impacts on pedestrian delay and amenity; community severance; temporary delays to public transport services; and accidents and safety for transport receptors as a result of larger numbers of HGV movements.</p> <p>Adopting the first full year of construction for assessing the impact of construction traffic represents the year in which the greatest impact will result. This is because baseline traffic flows generally grow year-on-year and therefore such a year results in the greatest increases in traffic flows relative to the baseline traffic flows.</p> <p>Assuming that all materials etc are transported by HGV rather than rail or maritime etc results in the greatest number of HGV movements and thus the greatest impact on the highway network.</p> <p>Assuming a reasonable estimation of working days and working hours results in a reasonable balance of maximum Mona construction traffic flows for both daily and weekday peak hour periods.</p> <p>The maximum number of work fronts will maximise the number of HGV movements.</p>
The impact on community severance caused by construction works or construction traffic using the LRN and SRN and the disruption of other transport receptors	✓	x	x		
The impact of temporary delays to public transport services caused by construction of the onshore transmission assets	✓	x	x		
The impact of construction traffic on accidents and safety for users of the LRN, SRN and other transport receptors	✓	x	x		

Potential impact	Phase <sup>a</sup> Maximum Design Scenario			Justification
	C	O	D	
			<ul style="list-style-type: none"> <li>The maximum number of link boxes along the 400kV Grid Connection Cable Corridor is based on a distance of 500m between each link box</li> <li>There is one haul road within the 400kV Grid Connection Cable Corridor for the entire length of the corridor; it is 6m wide excluding passing places. It will be constructed using imported engineered granular fill with geotextile style layers with a nominal thickness of 400mm and a maximum thickness of up to 1000mm</li> <li>A reasonable estimate for ground work requirements is a neutral cut and fill whereby any cut material would be used as fill material to form a flat working area</li> <li>A reasonable assumption is that 75% of staff are assumed to drive themselves to work with limited access by sustainable modes of travel. (Additional 25% of staff assumed to car share)</li> <li>A construction assessment year of 2026 is adopted</li> <li>It is assumed that all materials etc are transported by HGV and no allowance for rail or maritime has been included</li> <li>A 6 day working week (Monday to Saturday) 07.00 to 19.00 has been adopted.</li> </ul>	
The impact of Abnormal Indivisible Loads on the safety of users of the LRN, SRN and other transport receptors	✓	x	<p><b>Construction phase</b></p> <ul style="list-style-type: none"> <li>A reasonable maximum estimate for cable drum dimensions and weights will maximise the transportation requirements for Abnormal Indivisible Loads in terms of highway geometries</li> <li>A reasonable maximum estimate of the number of heavy electrical components (for example transformers) will maximise the number of AILs.</li> </ul>	<p>The maximum weight and dimensions of the cable drums will maximise the AIL requirements and present the greatest potential for impact on transport receptors.</p> <p>The greatest number of heavy electrical components will maximise the number of <a href="#">Map Road traffic statistics - Road traffic statistics (dft.gov.uk)</a> and present the greatest potential for impact on transport receptors.</p>

**21.6.2 Impacts scoped out of the assessment**

- 21.6.2.1 On the basis of the baseline environment and the description of development outlined in volume 1, chapter 3: Project description of the PEIR, a number of impacts are scoped out of the assessment for traffic and transport. These impacts are outlined, together with a justification for scoping them out, in Table 21.14.
- 21.6.2.2 The number of vehicle movements generated during the operations phase and during the decommissioning phase would be substantially lower than during the construction phase, thus, these impacts have been scoped out of the assessment, as agreed with the Planning Inspectorate via the Scoping Report and Scoping Opinion.

**Table 21.14: Impacts scoped out of the assessment for traffic and transport.**

Potential impact	Justification
Assessment of effects during the operational phase.	During the operations phase, the only vehicle movements generated will be maintenance visits, which will be typically one vehicle on an approximate weekly basis. These visits are likely to be made by light vehicles only and would use the existing road network. One vehicle arrival per week is very low and infrequent and is significantly under thresholds on which assessment is required. Even if repair work was required for example to a section of cable, such vehicle movements would be low and would be under the thresholds on which assessment would be required. Therefore, there will be no significant effects resulting from the traffic generated during the operational phase and an assessment of this is scoped out, as agreed with the Planning Inspectorate via the Scoping Report and Scoping Opinion and similar agreements is sought with the Highway Authorities via this PEIR and via ongoing liaisons.
Assessment of effects during the decommissioning phase.	Vehicle movements generated during the decommissioning phase will be lower than those during the construction phase since the removal of materials does not need to be in any order and / or delicately transported and some infrastructure may be retained in-situ. Background traffic flows are generally increasing year on year, therefore, in comparison to the construction phase, the combination of lower decommissioning traffic flows against higher baseline traffic flows results in a lower impact. Therefore, the assessments undertaken for the construction assessment will cover the decommissioning phase together with the measures identified. An assessment of the decommissioning phase is therefore scoped out. However, all measures that are identified for the construction phase will also be adopted during the decommissioning phase, thus, for a worst case assessment, it can be determined that the identification of significant effects resulting from traffic generated during the construction phase, would also apply to the decommissioning phase. This is agreed with the Inspectorate via the Scoping Opinion and similar agreements is sought with the Highway Authorities.

**21.7 Measures adopted as part of the Mona Offshore Wind Project**

- 21.7.1.1 For the purposes of the EIA process, the term 'measures adopted as part of the project' is used to include the following measures (adapted from IEMA, 2016):
  - Measures included as part of the project design. These include modifications to the location or design of the Mona Offshore Wind Project which are integrated into the application for consent. These measures are implemented through the consent itself; through the requirements of the DCO or the conditions within the marine licences (referred to as primary mitigation in IEMA, 2016)
  - Measures required to meet legislative requirements, or actions that are standard practice used to manage commonly occurring environmental effects (referred to as tertiary mitigation in IEMA, 2016).
- 21.7.1.2 A number of measures (primary and tertiary) have been adopted as part of the Mona Offshore Wind Project to reduce the potential for impacts on traffic and transport. These are outlined in Table 21.15 below. As there is a commitment to implementing these measures, they are considered inherently part of the design of the Mona Offshore Wind Project and have therefore been considered in the assessment presented in section 21.8 below (i.e. the determination of magnitude and therefore significance assumes implementation of these measures).

**Table 21.15: Measures adopted as part of the Mona Offshore Wind Project.**

Measures adopted as part of the Mona Offshore Wind Project	Justification	How the measure will be secured
<b>Tertiary measures: Measures required to meet legislative requirements, or adopted standard industry practice</b>		
Suitable HGV routes will be identified.	To avoid adverse effects on communities and road users.	Proposed to be secured as a requirement of the DCO
Adoption of a CTMP which will set out that a pre-entry condition survey (e.g. video condition survey) will be undertaken before the start of works and after the substantial completion of works on minor road links and new junctions used by HGVs to access the Mona Onshore Cable Corridor. Damage to the highway that has been demonstrably caused by construction traffic will be repaired.	To ensure that construction traffic has no lasting adverse impact on the condition of highways.	Proposed to be secured as a requirement of the DCO



Measures adopted as part of the Mona Offshore Wind Project	Justification	How the measure will be secured
<p>Adoption of a CTMP which will set out the construction working hours. For the Mona Onshore Cable Corridor and Onshore Substation, the core working hours will be 07.00 to 19.00 Monday to Saturday. Some primary HDD works may require 24 hour working depending on the nature and scale of the crossing.</p> <p>Other activities that will require 24 hour operation will be: site security, oil filling of transformers, some work at jointing pits, some HDD activities, possible remedial works in response to severe weather events and construction critical operations such as major plant item installation and concrete pours. These will be agreed in consultation with the relevant planning authorities.</p> <p>It is expected that in some circumstances working hours could be extended when this would reduce the magnitude of environmental impacts of construction (e.g. to increase safety, reduce driver delays, reduce the duration of impacts etc.)</p>	To avoid adverse effects on communities.	Proposed to be secured as a requirement of the DCO
Adoption of a CTMP which will set out restrictions on HGV operating hours, along those sections of the highway network that provide access to local schools.	To minimise adverse impacts on local communities and vulnerable highway users.	Proposed to be secured as a requirement of the DCO
Adoption of a CTMP which will set out restrictions on HGV operating hours and measures to minimise the number of HGV movements through sensitive areas when access to HDD sites is essential.	To minimise adverse impacts on local communities and vulnerable highway users.	Proposed to be secured as a requirement of the DCO
Adoption of a CTMP which will set out the requirement for wheel cleaning methods at appropriate locations where it is necessary to eliminate the risk of mud and debris on the highway.	To eliminate risks to highway users resulting from mud and debris on the highway.	Proposed to be secured as a requirement of the DCO
Adoption of a CTMP which will set out measures to minimise dust and dirt associated with the movement of construction vehicles.	To minimise adverse air quality effects (see volume 3, chapter 23: Air Quality) of the PEIR and to prevent transportation of dust and dirt onto the highway.	Proposed to be secured as a requirement of the DCO
The provision of appropriate parking facilities for construction workers.	To eliminate risks associated with inappropriate parking.	Proposed to be secured as a requirement of the DCO
Adoption of a CTMP which will set out traffic management measures at those points where cable trenches are cut across highways or where existing access rights are affected.	To minimise delays to existing highway users and to maintain highway safety.	Proposed to be secured as a requirement of the DCO

Measures adopted as part of the Mona Offshore Wind Project	Justification	How the measure will be secured
Adoption of a CTMP which will set out requirements to monitor load sizes and vehicle usage and, where possible, load consolidation and delivery to construction sites using alternative vehicles. Encouragement to re-use HGVs wherever possible, such as backloading. Where practical, local suppliers will be used to minimise the distance travelled by HGVs.	To minimise the impact on sensitive receptors.	Proposed to be secured as a requirement of the DCO
Adoption of a CTMP which will set out the local management of vehicle movements to minimise the risks of vehicles meeting each other on narrow sections.	To minimise highway risk and possible delays.	Proposed to be secured as a requirement of the DCO
The design of HGV access points, including visibility standards and, where necessary, temporary speed restrictions on the adjacent highway will be agreed with the relevant Highway Authorities.	To maintain highway safety.	Via the Transport Assessment to be submitted in support of the application for Development Consent and via a subsequent Section 278 Agreement with the relevant Highway Authorities.
At all vehicle accesses where accommodation works are undertaken to allow the movement of vehicles between the Mona Onshore Cable Corridor and the highway the original highway will be reinstated after construction work is completed.	To ensure the ongoing safe and efficient functioning of the highway.	Via the Transport Assessment to be submitted in support of the application for Development Consent and via a subsequent Section 278 Agreement with the relevant Highway Authorities.
For HDD crossings, the drilling compound is anticipated to receive a greater number of HGV movements than that receiving compound. Wherever practical, the drilling direction will be set so as to minimise the number of HGV movements through sensitive receptors.	To minimise the impact on sensitive receptors.	Proposed to be secured as a requirement of the DCO
CTMP	A CTMP will form part of the Code of Construction Practice and will be secured through a requirement of the Development Consent Order for the project. Once a main contractor has been appointed the CTMP will be agreed with the relevant planning authorities in consultation with the highway authority and the Highways Agency.	Proposed to be secured as a requirement of the DCO
A route for abnormal indivisible loads will be identified (this will be between the port of entry, the SRN and the onshore substation). The route timing and method of transport of abnormal indivisible loads will be discussed and agreed with the relevant highways and bridge authorities and the police.	To avoid damage to inappropriate highways, to minimise delays and risks to road users and to avoid adverse impacts on local communities.	As part of a Special Order to permit the movement of abnormal indivisible loads on the highway as issued by the Secretary of State for Transport on behalf of Welsh Ministers following an application by the appointed heavy haulage contractor.

Measures adopted as part of the Mona Offshore Wind Project	Justification	How the measure will be secured
It is expected that a number of abnormal indivisible loads comprising large components such as transformers will be transported to the onshore substation site. The heavy haulage contractor appointed to undertake this work will be required to comply with statutory regulations in terms of consulting with the relevant highways and bridge authorities and the police.	To minimise disruption and driver delay.	As part of a Special Order to permit the movement of abnormal indivisible loads on the highway as issued by the Secretary of State for Transport on behalf of Welsh Ministers following an application by the appointed heavy haulage contractor.
The timing of abnormal indivisible load deliveries will be discussed with the relevant highway authorities to minimise delay for other road users and to minimise risk to highway users. The timing of abnormal indivisible load deliveries to the onshore substation will be discussed to minimise delays to other road users.	To minimise disruption and driver delay.	As part of a Special Order to permit the movement of abnormal indivisible loads on the highway as issued by the Secretary of State for Transport on behalf of Welsh Ministers following an application by the appointed heavy haulage contractor.
The routing of abnormal indivisible load deliveries will be agreed with the relevant highway authorities. The delivery of abnormal indivisible loads would typically be undertaken in convoy and under escort. Where abnormal indivisible loads require the full width of the carriageway or for unusual manoeuvres at junctions, appropriate temporary road closures and traffic management will be put in place as appropriate to maintain the safety of other road users.	To minimise disruption and driver delay.	As part of a Special Order to permit the movement of abnormal indivisible loads on the highway as issued by the Secretary of State for Transport on behalf of Welsh Ministers following an application by the appointed heavy haulage contractor.

21.7.1.3 Where significant effects have been identified, further mitigation measures (secondary mitigation) have been identified to reduce the significance of effect to acceptable levels following the initial assessment. These are measures that could further prevent, reduce and, where possible, offset any adverse effects on the environment. These measures are set out in section 21.8 below.

## 21.8 Assessment of significant effects

21.8.1.1 The impacts of the construction phase of the Mona Offshore Wind Project have been assessed on traffic and transport. As set out in section 21.6.2 above, the impacts of the operations and maintenance and decommissioning phases of the Mona Offshore Wind Project on traffic and transport have been scoped out of the assessment.

21.8.1.2 The potential impacts arising from the construction, operations and maintenance and decommissioning phases of the Mona Offshore Wind Project are listed in Table 21.13, along with the maximum design scenario against which each impact has been assessed.

21.8.1.3 A description of the potential effect on traffic and transport receptors caused by each identified impact is given below.

## 21.8.2 Screening for assessment of transport environmental impacts

21.8.2.1 As set out in Section 21.1.2, this chapter of the PEIR provides an initial analysis of the impacts on traffic and transport during construction in advance of access points being determined and access routes being confirmed.

21.8.2.2 An initial estimate of average daily construction vehicle movements over the construction period has therefore been calculated using the maximum design scenario set out in Table 21.16. High level initial estimations have then been made with regard to the routing of those construction vehicle movements between the A55 and the initial traffic and transport study area.

21.8.2.3 These are initial estimates only for the purposes of providing an initial indication of the average daily construction vehicle movements within the initial traffic and transport study area.

21.8.2.4 Detailed calculations of the construction vehicle movements and their movements within the initial traffic and transport study area will be undertaken when access points are identified. These will be set out within the traffic and transport Environmental Statement chapter and Transport Assessment submitted in support of the application for Development Consent.

21.8.2.5 For the purposes of this chapter of the PEIR, the initial estimates of the average daily construction vehicle movements over the construction period within the initial traffic and transport study area are set out in Table 21.16 along with an assessment of these against the base traffic flows.

**Table 21.16: Impact of Mona Offshore Wind Project daily construction traffic flows**

Link	Base Traffic Flows		Construction Traffic Flows		% Increase	
	Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
Link 1: A55 between Junctions 27 and 27A	41,471	3,170	272	140	1%	4%
Link 2: A55 between Junctions 27 and 26	46,215	2,938	272	140	1%	5%
Link 3: A55 between Junctions 26 and 25	46,215	2,938	190	110	0%	4%
Link 4: A55 between Junctions 25 and 24A	46,215	2,938	165	96	0%	3%
Link 5: A55 between Junctions 24A and 24	46,215	2,938	165	96	0%	3%
Link 6: A55 between Junctions 24 and 23A	43,715	2,280	109	89	0%	4%

Link	Base Traffic Flows		Construction Traffic Flows		% Increase	
Link 7: A55 between Junctions 23A and 23	50,827	2,968	109	89	0%	3%
Link 8: A547 through Llanddulas	8,408	755	166	128	2%	17%
Link 9: A547 between Llanddulas and Parc Busnes Gogledd Cymru	6,847	812	214	128	3%	16%
Link 10: A547 between Parc Busnes Gogledd Cymru and A548 Chapel Street	9,256	839	99	29	1%	3%
Link 11: A547 between A548 Chapel Street and A55	5,955	657	99	29	2%	4%
Link 12: A548 Chapel Street between A547 and Lon Dirion	9,042	974	102	57	1%	6%
Link 13: A548 Chapel Street between Lon Dirion and Abergele Hospital	4,000	824	102	57	3%	7%
Link 14: A548 Chapel Street between Abergele Hospital and B5381 Roman Road	2,919	460	102	57	4%	12%
Link 15: B5381 Roman Road between A548 and Moelfre	1,972	368	93	56	5%	15%
Link 16: B5381 Roman Road between Moelfre and Capel Carmel	1,554	223	169	117	11%	52%
Link 17: B5381 Roman Road between Capel Carmel and Roberts D a O	1,586	298	162	117	10%	39%
Link 18: B5381 Roman Road between Roberts D a O and Engine Hill	1,736	284	162	117	9%	41%
Link 19: B5381 Glascoed Road between Engine Hill and Ffordd William Morgan	1,745	234	84	61	5%	26%
Link 20: B5381 Glascoed Road between Ffordd William Morgan and Cwttir Lane	4,046	493	111	29	3%	6%

Link	Base Traffic Flows		Construction Traffic Flows		% Increase	
Link 21: Ffordd William Morgan between A55 and Carlton Court	3,481	398	195	90	6%	23%
Link 22: Ffordd William Morgan between Carlton Court and B5381 Glascoed Road	5,991	505	195	90	3%	18%
Link 23: Engine Hill between A55 and B5381 Glascoed Road	3,492	565	78	56	2%	10%

21.8.2.6 In terms of total vehicle movements, no links are predicted to exceed their respective rule 1 or rule 2 thresholds as defined in the IEMA guidelines and in paragraph 21.5.2.9 of this PEIR chapter.

21.8.2.7 In terms of HGVs, Link 16: B5381 Roman Road between Moelfre and Capel Carmel (52%), Link 17: B5381 Roman Road between Capel Carmel and Roberts D a O (39%) and Link 18: B5381 Roman Road between Roberts D a O and Engine Hill (41%) are predicted to exceed their respective rule 1 or rule 2 threshold.

21.8.2.8 Therefore, in accordance with the IEMA guidelines and in paragraph 21.5.2.9 of this PEIR chapter, these three links will be analysed as part of the Environment Impact Assessment. These are summarised in Table 21.17.

**Table 21.17: Highway links for transport Environmental Impact Assessment**

Link	Sensitivity of receptor	Percentage Change in daily traffic flows due to Mona Offshore Wind Project	
		Total Vehicles	HGVs
Link 16: B5381 Roman Road between Moelfre and Capel Carmel	Negligible – No Sensitive Receptors	11%	52%
Link 17: Roman Road between Capel Carmel and Roberts D a O	Negligible – No Sensitive Receptors	10%	39%
Link 18: B5381 Roman Road between Roberts D a O and Engine Hill	Negligible – No Sensitive Receptors	9%	41%

21.8.2.9 Given the similarity of the three highway link characteristics in terms of local environs, street lighting, highway geometries, footway provision, environmental sensitivity/receptors, road users, base traffic flows and average daily Mona construction traffic flows along each, the three highway links have been assessed as a whole.

21.8.2.10 In terms of the other 20 highway links (all highway links save for links 16, 17 and 18), in accordance with the IEMA guidelines, these highway links are screened out of the

assessment and therefore the effect along these will be of negligible adverse significance, which is not significant in EIA terms.

**21.8.3 The impact on driver delay caused by construction works or construction traffic (including temporary delays to public transport services)**

- 21.8.3.1 Driver delay during the construction phase can result from the following:
- An increase in traffic flows, particularly during peak hours resulting in increased queues on links and at junctions
  - The passage of slow-moving vehicles such as abnormal indivisible loads
  - Reduction in link capacity resulting from changes in carriageway width or other highway characteristics.

**Magnitude of impact**

21.8.3.2 An analysis of the base traffic flows along links 16, 17 and 18 determine these to be very low and substantially lower than the level at which they could create congestion. Similarly, the Mona construction traffic flows are also low, therefore the resultant base plus Mona construction traffic flows would remain substantially lower than the level at which they could create congestion.

21.8.3.3 The impact in terms of driver delay resulting from daily traffic flows associated with the construction is predicted to be of local spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be **negligible**.

21.8.3.4 The movement of large Abnormal Indivisible Loads transporting transformers associated with the onshore substation are not expected to use links 16, 17 or 18.

21.8.3.5 Smaller Abnormal Indivisible Loads transporting cable drums will be an irregular movement but would need to access the Mona Onshore Cable Corridor and, depending upon the access points, these three links may be utilised for those purposes.

21.8.3.6 However, as above, such movements would be irregular and would not be a daily occurrence. Although the movement of cable drums are classified as AILs, this is on account of their dimensions and not of their weight, thus, although their speeds when travelling along the highway are slower than other vehicles, they are not substantially slower.

21.8.3.7 In terms of AILs, the impact is predicted to be of local spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be **negligible**.

**Sensitivity of the receptor**

21.8.3.8 The three highway links being considered are lightly trafficked and on typical days do not suffer from congestion. There is therefore low vulnerability with regards to driver delay.

21.8.3.9 There is an alternative route (the A55) for these three highway links with good connectivity. Therefore, the sensitivity of links that are predicted to carry construction traffic, in terms of driver delay, is considered to be low.

21.8.3.10 The road links are deemed to be of low vulnerability, high recoverability and low value. The sensitivity of the receptor is therefore, considered to be **negligible**.

**Significance of the effect**

21.8.3.11 Overall, the magnitude of impact is deemed to be negligible and the sensitivity of the receptor is considered to be negligible. The effect will, therefore, be of **negligible** adverse significance, which is not significant in EIA terms.

**21.8.4 The impact on pedestrian delay caused by construction works or construction traffic**

21.8.4.1 Highly trafficked roads and changes to the volume or speed of traffic may affect the ability of people to cross roads. The IEMA guidelines set out above notes that studies have shown that pedestrian delay is perceptible or considered significant beyond a delay threshold of 10 seconds, for a link with no crossing facilities. It goes on to say that a 10 second pedestrian delay in crossing a road broadly equates to a two-way link flow of approximately 1,400 vehicles per hour. This means that where two-way traffic flows on a road exceed 1,400 vehicle movements per hour, then a pedestrian seeking to cross that road would perceive a delay.

**Magnitude of impact**

21.8.4.2 To consider the potential for pedestrian delay to occur on the three highway links, the maximum peak hour base traffic flow of the three links has been set out below and summarised in Table 21.18 along with the Mona construction traffic flows and the resultant change in predicted pedestrian delay.

**Table 21.18: Summary of change in pedestrian delay.**

Section	Baseline		Mona	Baseline plus Mona Offshore		
	Traffic Flow (max hourly)	Pedestrian Delays (s)	Construction Traffic Flow	Traffic Flow (max hourly)	Pedestrian Delay (s)	Change in Pedestrian Delay (s)
Link 16, 17 and 18	179	1.28	11	190	1.35	0.08

21.8.4.3 Table 21.18 shows that the base traffic flows (maximum of 179 vehicle movements per hour) are far below the threshold (1,400 vehicle movements per hour) at which any pedestrian delay would be perceived.

21.8.4.4 The maximum pedestrian delay with the base traffic flows is calculated at 1.28 seconds, increasing to 1.35 seconds following the addition of the Mona construction traffic flows generated by the Mona Offshore Wind Project. This represents a change of 0.08 seconds which would be difficult to perceive.

21.8.4.5 The impact is predicted to be of local spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be **negligible**.

#### Sensitivity of the receptor

21.8.4.6 The three highway links being considered have few surrounding dwellings and generators of pedestrian demand. There are some recreational features around these three highway links, this includes PRow that connect to and cross the highway links being assessed. Pedestrian activity is limited.

21.8.4.7 The three highway links are deemed to be of low vulnerability, high recoverability and medium value. The sensitivity of the receptor is therefore, considered to be **low**.

#### Significance of the effect

21.8.4.8 Overall, the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be low. The effect will, therefore, be of **negligible** adverse significance (rather than minor adverse significance due to the magnitude of the impact being at the low end of negligible), which is not significant in EIA terms.

### 21.8.5 The impact on pedestrian amenity caused by construction works or construction traffic

21.8.5.1 The term pedestrian amenity is broadly defined as the relative pleasantness of a journey and is considered to be affected by traffic flow, traffic composition and footway width and separation from traffic.

21.8.5.2 The IEMA guidelines refers to a tentative threshold for judging the significance of changes in pedestrian amenity where the traffic flow (or its HGV component) is halved or doubled.

#### Magnitude of impact

21.8.5.3 In terms of total vehicle movements, Table 21.16 sets out a maximum increase on the three highway links of 11%. Therefore, in accordance with the IEMA guidelines, this on its own should not result in any significant changes in pedestrian amenity.

21.8.5.4 In terms of HGV movements, Table 21.14 to Table 21.16 sets out a maximum increase on the three highway links of 52%. Therefore, in accordance with the IEMA guidelines, this should not result in any significant changes in pedestrian amenity.

21.8.5.5 The impact is predicted to be of local spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be **low**.

#### Sensitivity of the receptor

21.8.5.6 The three highway links being considered have few surrounding dwellings and generators of pedestrian demand. There are some recreational features around these three highway links, this includes PRow that connect to and cross the highway links being assessed. Pedestrian activity is limited.

21.8.5.7 The three highway links are deemed to be of medium vulnerability, high recoverability and medium value. The sensitivity of the receptor is therefore, considered to be **medium**.

#### Significance of the effect

21.8.5.8 Overall, it is predicted that the magnitude is deemed to be low and the sensitivity of the receptor is considered to be medium. The effect will, therefore, be of **minor adverse** significance, which is not significant in EIA terms.

### 21.8.6 The impact on community severance caused by construction works or construction traffic

21.8.6.1 Severance is only likely to occur on highly trafficked roads and result from the perceived division the road and traffic creates between communities on either side.

21.8.6.2 The IEMA guidelines set out above identifies that increases in total traffic volumes of between 30% and 60% could result in a slight impact (the lowest category) upon severance.

#### Magnitude of impact

21.8.6.3 The change in total traffic flow as a result of the construction traffic on the three highway links are all significantly lower than the 30% that the IEMA guidelines sets out is required for a slight effect (the lowest category) to occur.

21.8.6.4 The impact is predicted to be of local spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be **negligible**.

#### Sensitivity of the receptor

21.8.6.5 There are few dwellings along and adjacent to the three highway links upon which severance could occur, baseline traffic flows are low and the highway links are not highly trafficked.

21.8.6.6 The communities along the three highway links are deemed to be of low vulnerability, highly recoverability and low value. The sensitivity of the receptor is therefore, considered to be **low**.

#### Significance of the effect

21.8.6.7 Overall, it is predicted that the magnitude is deemed to be negligible and the sensitivity of the receptor is considered to be low. The effect will, therefore, be of **negligible adverse** significance (rather than minor adverse significance due to the magnitude of the impact being at the low end of negligible), which is not significant in EIA terms.

### 21.8.7 The impact of construction traffic on accidents and safety

21.8.7.1 It is possible to estimate the effects of increased traffic on accidents and safety from existing accident records, national statistics and the type and quantity of traffic generated.

**Magnitude of impact**

21.8.7.2 An analysis of road safety along the three highway links is set out at volume 7, Annex 21.5: Personal injury accident locations of the PEIR. This shows that there were four personal injury accident along the three highway links over five years (2017-2022).

21.8.7.3 These injury accidents all took place at different locations, with two occurring at junctions and two occurring on sections of road. From an initial analysis it appears the two injury accidents occurring at junctions were due to drivers failing to give way and the two injury accidents occurring on sections of road appear to be due to drivers losing control. Overall, it appears the injury accidents were caused by driver error.

21.8.7.4 The HGVs routing along these three highway links will all be under traffic management control via the CTMP and signage will be used to alert other drivers of the construction traffic.

21.8.7.5 The impact is predicted to be of local spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be **low**.

**Sensitivity of the receptor**

21.8.7.6 An analysis of injury accident rates at volume 7, annex 21.5: Personal injury accident locations of the PEIR shows that these three highway links are slightly above the national average for this type of road. As above, on the basis of the national average being an average, this means that the injury accident rate of 50% of all roads will exceed this. Volume 7, annex 21.5: Personal injury accident locations of the PEIR shows that these three highway links do not exceed the national average by much.

21.8.7.7 The three highway links are deemed to be of medium vulnerability, highly recoverability and medium value. The sensitivity of the receptor is therefore, considered to be **medium**.

**Significance of the effect**

21.8.7.8 Overall, it is predicted that the sensitivity of the receptor is considered to be medium and the magnitude is deemed to be low. The effect will, therefore, be of **minor adverse** significance, which is not significant in EIA terms.

**21.8.8 The impact of abnormal indivisible loads on the safety of users of the LRN, SRN and other transport receptors**

**Magnitude of impact**

21.8.8.1 It is expected that some larger Abnormal Indivisible Loads would be transported to the onshore substation. In addition, smaller Abnormal Indivisible Loads will also need access to several points along the Mona Onshore Cable Corridor. The Abnormal Indivisible Loads are expected to be components that exceed standard load weight and possibly exceed standard width and height. These movements are irregular one off movements throughout the initial traffic and transport study area and not just links 16, 17 and 18 that are being assessed following the screening exercise. The magnitude of impact relating to Abnormal Indivisible Loads is therefore considered across the whole initial traffic and transport study area.

21.8.8.2 Entry points to the onshore substation and to sections of the cable corridor would be chosen based on it being capable of accepting Abnormal Indivisible Loads, in which case, the roads leading to the port would receive Abnormal Indivisible Loads.

21.8.8.3 Depending on the width, length or weight of the vehicle, different notice periods have to be provided to highway authorities, bridge authorities and the police. These can vary between two and five days. The following activities would need to be undertaken in accordance with the Road Vehicles (Authorisation of Special Types) Order 2003 (STGO):

- Before the start of any journey, notify in accordance with Schedule 5 the chief office of police for each area in which the vehicle or vehicle-combination is to be used
- Ensure that the vehicle or vehicle-combination is used in accordance with the requirements of that Schedule
- Ensure that the vehicle or vehicle-combination is accompanied during the journey by one or more attendants employed in accordance with Schedule 6.

21.8.8.4 The number of abnormal indivisible load movements would be low, each load would be present on the network for a short period of time and standard measures would be applied in terms of route, timing and method of delivering to minimise delays to other highway users. This includes prior notification given to the locality via local newspapers/radio etc so that other users have advance notification and can avoid or re-time their journeys so as to negate any impact.

21.8.8.5 Large and heavy Abnormal Indivisible Loads would also be under escort (police escort where necessary) who would not only control the Abnormal Indivisible Loads but would also interact with other road users to control, guide and protect them accordingly so as to safeguard their safe and expedient passage.

21.8.8.6 The impact is predicted to be of local spatial extent, short term duration, intermittent and highly reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore considered to be **negligible**.

**Sensitivity of the receptor**

21.8.8.7 The access route used by the Abnormal Indivisible Loads would necessarily be of good standard to accommodate the transport delivery vehicles.

21.8.8.8 Any restrictions would also necessarily be removed to accommodate the transport delivery vehicles and they would travel under controlled environments.

21.8.8.9 The passage of heavy Abnormal Indivisible Loads would, however, lead to some limited driver delay as the loads would move slowly under escort (police escort where necessary) in a controlled environment.

21.8.8.10 Given the controlled environment, the road users are deemed to be of negligible vulnerability, high recoverability and negligible value. The sensitivity of the receptor is therefore, considered to be **negligible**.

	<b>Significance of the effect</b>
21.8.8.11	Overall, it is predicted that the magnitude is deemed to be negligible and the sensitivity of the receptor is considered to be negligible. The effect will, therefore, be of <b>negligible adverse</b> significance, which is not significant in EIA terms.
<b>21.9</b>	<b>Cumulative effect assessment methodology</b>
21.9.1.1	The Cumulative Effects Assessment (CEA) takes into account the impact associated with the Mona Offshore Wind Project together with other projects and plans. The projects and plans selected as relevant to the CEA presented within this chapter are based upon the results of a screening exercise (see volume 5, annex 5.1: CEA screening matrix). Each project has been considered on a case by case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.
21.9.1.2	The traffic and transport CEA methodology has followed the methodology set out in volume 1, chapter 5: EIA methodology of the PEIR. As part of the assessment, all projects and plans considered alongside the Mona Offshore Wind Project have been allocated into 'tiers' reflecting their current stage within the planning and development process, these are listed below.
21.9.1.3	A tiered approach to the assessment has been adopted, as follows: <ul style="list-style-type: none"> <li>• Tier 1           <ul style="list-style-type: none"> <li>– Under construction</li> <li>– Permitted application</li> <li>– Submitted application</li> <li>– Those currently operational that were not operational when baseline data were collected, and/or those that are operational but have an ongoing impact</li> </ul> </li> <li>• Tier 2           <ul style="list-style-type: none"> <li>– Scoping report has been submitted and is in the public domain</li> </ul> </li> <li>• Tier 3           <ul style="list-style-type: none"> <li>– Scoping report has not been submitted and is not in the public domain</li> <li>– Identified in the relevant Development Plan</li> <li>– Identified in other plans and programmes.</li> </ul> </li> </ul>
21.9.1.4	This tiered approach is adopted to provide a clear assessment of the Mona Offshore Wind Project alongside other projects, plans and activities.
21.9.1.5	This PEIR chapter sets out the initial traffic and transport study area, the key highway links within this, estimations on the typical daily number of construction vehicle movements and an initial environmental impact assessment that has been undertaken in advance of access points being determined and access routes being confirmed. It invites responses to these for consideration and assessment which will be set out within the traffic and transport Environmental Statement chapter and Transport Assessment submitted in support of the application for Development Consent.

21.9.1.6	This PEIR sets out the initial traffic and transport study area, the key highway links within this, estimations on the typical daily number of construction vehicle movements and an initial environmental impact assessment that has been undertaken in advance of access points being determined and access routes being confirmed. The full extent of the highway network to be assessed has not yet been fully confirmed, therefore the projects within the CEA long list that need to be considered cannot yet be confirmed. For these reasons, full details of the CEA will be set out in the application for Development Consent alongside the assessment of effects for Mona Offshore Wind Project.
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## 21.10 Transboundary effects

21.10.1.1	A screening of transboundary impacts has been carried out and has identified that there was no potential for significant transboundary effects with regard to traffic and transport from the Mona Offshore Wind Project upon the interests of other states.
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## 21.11 Inter-related effects

21.11.1.1	Inter-relationships are considered to be the impacts and associated effects of different aspects of the proposal on the same receptor. These are considered to be: <ul style="list-style-type: none"> <li>• Project lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of the Mona Offshore Wind Project (construction, operation and maintenance, and decommissioning), to interact to potentially create a more significant effect on a receptor than if just assessed in isolation in these three phases (e.g. subsea noise effects from piling, operational turbines, vessels and decommissioning)</li> <li>• Receptor led effects: Assessment of the scope for all effects to interact, spatially and temporally, to create inter-related effects on a receptor. As an example, all effects on traffic and transport, such as construction dust and noise, increased traffic and visual change etc, may interact to produce a different, or greater effect on this receptor than when the effects are considered in isolation. Receptor-led effects may be short term, temporary or transient effects, or incorporate longer term effects.</li> </ul>
21.11.1.2	A description of the likely interactive effects arising from the Mona Offshore Wind Project on traffic and transport is provided in volume 3, chapter 24: Inter-related effects of the PEIR. Full consideration of these will be set out within the Environmental Statement chapter submitted in support of the application for Development Consent.

## 21.12 Summary of impacts, mitigation measures and monitoring

21.12.1.1	Information on traffic and transport within the initial traffic and transport study area was collected through desktop reviews and site surveys.
21.12.1.2	Table 21.19 presents a summary of the potential impacts, measures adopted as part of the project and residual effects in respect to traffic and transport. The impacts assessed include: <ul style="list-style-type: none"> <li>• Driver delay</li> <li>• Severance of routes</li> </ul>

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- Pedestrian delay
- Pedestrian amenity
- Accidents and road safety
- Hazardous, dangerous and abnormal indivisible loads.

21.12.1.3 Overall, it is concluded that there will be no significant effects arising from the Mona Offshore Wind Project during the construction, operations and maintenance or decommissioning phases.

21.12.1.4 No potential transboundary impacts have been identified in regard to effects of the Mona Offshore Wind Project.



**Table 21.19: Summary of potential environmental effects, mitigation and monitoring.**

<sup>a</sup> C=construction, O=operational and maintenance, D=decommissioning

Description of impact	Phase <sup>a</sup>			Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D							
The impact on driver delay (including temporary delays to public transport services) caused by construction works or construction traffic using the LRN and SRN	✓	x	x	See Table 21.15	C: negligible O: negligible D: negligible	C: negligible O: negligible D: negligible	Negligible adverse	None	C: negligible adverse O: negligible adverse D: negligible adverse	None
The impact on pedestrian delay caused by construction works or construction traffic using the LRN and SRN	✓	x	x	See Table 21.15	C: low O: negligible D: negligible	C: low O: negligible D: negligible	Negligible adverse	None	C: negligible adverse O: negligible adverse D: negligible adverse	None
The impact on pedestrian amenity caused by construction works or construction traffic using the LRN and SRN	✓	x	x	See Table 21.15	C: low O: negligible D: negligible	C: medium O: negligible D: negligible	Minor adverse	None	C: minor adverse O: negligible adverse D: negligible adverse	None
The impact on community severance caused by construction works or construction traffic	✓	x	x	See Table 21.15	C: negligible O: negligible D: negligible	C: low O: negligible D: negligible	Negligible adverse	None	C: negligible adverse O: negligible adverse D: negligible adverse	None
The impact of construction traffic on accidents and safety for users of the LRN, SRN and other transport receptors	✓	x	x	See Table 21.15	C: low O: negligible D: negligible	C: medium O: negligible D: negligible	Minor adverse	None	C: minor adverse O: negligible adverse D: negligible adverse	None
The impact of Abnormal Indivisible Loads (AILs) on the safety of users of the LRN, SRN and other transport receptors	✓	x	x	See Table 21.15	C: negligible O: negligible D: negligible	C: negligible O: negligible D: negligible	Negligible adverse	None	C: negligible adverse O: negligible adverse D: negligible adverse	None

## 21.13 Next steps

- 21.13.1.1 Identification of access points and the subsequent access routes will be undertaken in conjunction with the comments received on this PEIR chapter to determine the preferred routes and determine an access strategy. This includes the operational access road for the Onshore Substation.
- 21.13.1.2 Further consultation will continue by the establishment of a Traffic and Transport Expert Working Group which will include relevant traffic and transport officers at Conwy County Borough Council, Denbighshire County Council and North and Mid Wales Trunk Road Agent.
- 21.13.1.3 The Expert Working Group will discuss the traffic and transport aspects of the Mona Offshore Wind Project including access, assessment, effects, the need for any potential additional surveys and any mitigation requirements.
- 21.13.1.4 This will then allow further assessments to be undertaken to determine any significant effects, as set out above, in order to inform the EIA and the application for Development Consent.

## 21.14 References

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