



Wylfa Newydd Project

6.2.3 ES Volume B - Introduction to the environmental assessments B3 - Traffic and transport

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3 Traffic and transport

3.1 Introduction

- 3.1.1 This chapter provides an introduction to the technical basis for the traffic and transport assessment for the Wylfa Newydd Project. It includes a summary of legislation, policy and guidance; key points arising in consultation that have guided the traffic and transport assessment; and assessment methodologies and criteria.
- 3.1.2 The term traffic and transport refers to the following transport modes where the movement of workers and the delivery of materials could lead to environmental effects, during both the construction and operational phases of the Wylfa Newydd Project:
- private vehicle;
 - bus services;
 - rail services;
 - walking and cycling; and
 - equestrians.
- 3.1.3 Each of these modes of transport is assessed in the following chapters of the Environmental Statement:
- C2 (traffic and transport) (Application Reference Number: 6.3.2) – private vehicles, bus services and rail services; and
 - C3 (public access and recreation effects of traffic) (Application Reference Number: 6.3.3) – walking and cycling, and equestrians.
- 3.1.4 All the assessments adopt assumptions to provide a robust and conservative assessment, referred to as a worst case scenario including:
- up to 9,000 construction workers would be required in total during the peak period of construction, therefore 9,000 construction workers was assessed; and
 - 60% of materials required to construct the WYDA Development would be transported by sea compared to a target of transporting 80% of materials by sea. This increases the number of Heavy Goods Vehicle (HGV) deliveries assumed by road compared with the likely number of HGV deliveries by road.
- 3.1.5 Chapter C2 (Application Reference Number: 6.3.2) provides an assessment of the specific transport-related environmental effects of journey times by road, road traffic accidents and driver stress. It also provides details of changes in daily traffic flows. More detailed analysis of the impact of the Wylfa Newydd Project on the operation of the road network (e.g. junction performance) and rail capacity is provided in appendix C2-4 (DCO Transport Assessment) (Application Reference Number: 6.3.14).
- 3.1.6 All of the transport analysis of the Wylfa Newydd Project is underpinned by the transport strategy for the scheme. This is defined within appendix C2-4

(DCO TA Appendix F – Integrated Traffic and Transport Strategy) (Application Reference Number: 6.3.20).

- 3.1.7 The assessment of effects for traffic and transport is included in chapter C2 (Application Reference Number: 6.3.2). This is because the assessment of traffic and transport is for the whole Wylfa Newydd Project and is not separated into its separate elements. The exception to this is the assessment of effects for Ecological Compensation Sites, which is included in appendix D1-2 (Ecological Compensation Sites: Assessment of Environmental Effects, Application Reference Number: 6.4.18).

3.2 Legislation, policy and guidance

- 3.2.1 The following legislation, policy and guidance have been used to inform the scope and content of the traffic and transport assessment; assist in the identification of potential effects and mitigation; and influence the design of the Wylfa Newydd Project to reduce the significance of effects.

Key legislation

- 3.2.2 The relevant legislation, and how these relate to the traffic and transport assessment, are shown in table B3-1 below.

Table B3-1 Summary of key legislation

Policy	Description
Active Travel (Wales) Act 2013	<p>The Act requires local authorities to:</p> <ul style="list-style-type: none"> • have regard to integrated network maps in preparing transport policies and to secure new and improved active travel routes and related facilities; and • ensure that policies forming the basis of local transport plans “<i>have regard to the integrated network map for its area</i>”.

Key policy

- 3.2.3 The relevant national and local plans and policies, and how these relate to the traffic and transport assessment, are described in table B3-2.

Table B3-2 Summary of key policy

Policy	Description
<i>Overarching National Policy Statement for Energy (EN-1)</i> (NPS EN-1) [RD1]	<p>This National Policy Statement, designated by the Secretary of State (SoS) in July 2011, sets out the overarching national policy for delivery of major energy infrastructure projects. Part five of the NPS EN-1 states the following:</p> <ul style="list-style-type: none"> • “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

Policy	Description
	<p>potentially on connecting transport networks, for example through increased congestion” (paragraph 5.13.1);</p> <p>“The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development” (paragraph 5.13.2);</p> <p>“If a project is likely to have significant transport implications, the applicant Environmental Statement should include a transport assessment, using the New Approach to Appraisal (NATA)/Welsh Transport Appraisal Guidance (WeITAG) methodology” (paragraph 5.13.3);</p> <ul style="list-style-type: none"> • “Where appropriate, the applicant should prepare a travel plan...The applicant should 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); <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/WeITAG transport assessment, 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” (paragraph 5.13.7);</p> <ul style="list-style-type: none"> • “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” (paragraph 5.13.8); • “The IPC [Infrastructure Planning Commission] 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” (paragraph 5.13.9); and • “Water-borne or rail transport is preferred over road transport at all stages of the project, where cost-effective” (paragraph 5.13.10).

Policy	Description
<p><i>National Policy Statement for Nuclear Power Generation (EN-6)</i> [RD2]</p>	<p>The National Policy Statement designated by the SoS in July 2011 that sets out national policy on new Nuclear Power Stations identified as potentially suitable for deployment by 2025. Section 3.15 identifies that significant infrastructure and resources include trunk roads, the primary route network, and major highways (e.g. A roads) and applications should demonstrate that the proposed development would not have an unacceptable adverse effect on this significant infrastructure.</p> <p>Paragraph 3.15.1 of Volume I of NPS EN-6 highlights that the national and local significance of a new nuclear build should be taken into account, in particular the effect on significant infrastructure and resources such as motorways, major highways and the strategic rail network.</p> <p>Additionally, NPS EN-6 states that:</p> <ul style="list-style-type: none"> • “Applications should demonstrate that the proposed development would not have an unacceptable adverse impact on significant infrastructure. The IPC should take into account any local authority impact report, advice from the relevant Nuclear Regulators and relevant policy in NPSs in assessing impacts on significant infrastructure and resources” (paragraph 13.15.2); and • “In particular, the Nuclear AoS [Appraisal of Sustainability] identified that there may be adverse effects during the construction and decommissioning phases on regional transport networks that may already be under stress, particularly where there are clusters of potentially suitable sites for new nuclear power stations. In considering this issue the policy set out in Section 5.13 of EN-1 (Transport and Traffic impacts) applies” (paragraph 13.15.3).
<p><i>The Wales Transport Strategy</i> [RD3]</p>	<p>The Strategy outlines the following targets/priorities:</p> <ul style="list-style-type: none"> • improve road safety; • improve the efficient, reliable and sustainable movement of people and freight; • reduce the contribution by transport to greenhouse gas emissions; • integrate local transport with the wider national transport network; • improve access between key settlements and sites; and

Policy	Description
<p><i>Planning Policy Wales (Edition 9)</i> [RD4]</p>	<ul style="list-style-type: none"> • enhance international connectivity. <p>Land-use planning can help to achieve the Welsh Government’s objectives for transport through:</p> <ul style="list-style-type: none"> • “supporting traffic management measures” (paragraph 8.1.5); • “Park-and-ride should normally be considered as one element of a comprehensive planning and transport strategy designed to improve the relative attractiveness of public transport and reduce the overall dependence on cars” (paragraph 8.3.3); • “the accessibility by a range of different transport modes [and] the effects on the safety and convenience of other users of the transport network” (paragraph 8.7.1); • “the willingness of a developer to promote travel by walking, cycling or public transport, or to provide infrastructure or measures to manage traffic, to overcome transport objections to the proposed development” (paragraph 8.7.1); • “...the environmental impact of both transport infrastructure and the traffic generated (with a particular emphasis on minimising the causes of climate change associated with transport)” (paragraph 8.7.1); and • “[reducing] the effects on the safety and convenience of other users of the transport network” (paragraph 8.7.1).
<p><i>Technical Advice Note 18: Transport</i> [RD5]</p>	<p>The Advice Note outlines that the applicant is required to:</p> <ul style="list-style-type: none"> • use the relevant design standard applicable to Trunk Roads, which is the Design Manual for Roads and Bridges (DMRB) (paragraph 5.7); • consider the potential, and identify any proposals for new routes, including the potential for opening and/or reusing rail lines, or creation of additional stations on existing lines, light rail or guided bus routes. Interchange facilities with bus, rail and taxi services should also be considered (paragraph 7.3); • consider whether their development is located in the vicinity of trunk roads and local roads (and junctions) of strategic importance, would significantly increase local traffic movements and reduce the efficiency of the road network. Planning authorities should identify these through

Policy	Description
	<p>routes as corridors for movement adjacent to which development will be resisted (paragraph 8.3);</p> <ul style="list-style-type: none"> • engage with relevant planning and highway authorities prior to submitting their planning application, to ensure agreement is reached on the scope of the Transport Assessment, including geographical extent, and to establish the data available and whether any surveys are required (paragraph 9.3); • construct any highway improvements to a trunk road to the standards set out by the Welsh Government (paragraph 9.17); and • consider whether the additional traffic generated by their development may “bring forward the need for transport improvements in the vicinity of the scheme, and beyond.” Planning conditions may be imposed, making its commencement/occupation subject to completion of those highway works. Alternatively, the applicant may be invited to conclude an agreement under section 278 of the Highways Act 1980 for the provision of highway works. In some circumstances, the use of planning obligations may be appropriate to ensure improved transport provision (paragraph 9.18).
<p><i>A Walking and Cycling Action Plan for Wales 2009–2013</i> [RD6]</p>	<p>The Action Plan lists the following relevant policies in chapter 3:</p> <ul style="list-style-type: none"> • promote the wide range of benefits that can be achieved through walking and cycling; • encourage walking and cycling through effective travel planning; • increase walking and cycling trips made in conjunction with public transport usage; • provide high quality cycle parking and storage facilities for use by cyclists and walkers; and • promote walking and cycling as sustainable transport modes through the development and implementation of relevant cross-cutting policies in line with the Wales Transport Strategy.
<p><i>An Active Travel Action Plan for Wales</i> [RD7]</p>	<p>This Plan complements the Active Travel (Wales) Act 2013 and outlines Welsh Government’s vision for walking and cycling and encourages a modal shift from private transport to walking and cycling for short commutes.</p>

Policy	Description
<p><i>Building a more Prosperous Wales: Infrastructure for a Modern Economy</i> [RD8]</p>	<p>The policy document identifies the following key challenges in relation to transport:</p> <ul style="list-style-type: none"> • ensuring that provision is made for future public transport capacity and that growth does not stagnate as demand increases; and • ensuring that transport infrastructure along strategic routes is enhanced to drive economic growth. <p>Future needs are also identified for transport which include improving local connectivity.</p>
<p><i>North Wales Joint Local Transport Plan 2015</i> [RD9]</p>	<p>Key outcomes that the North Wales Joint Local Transport Plan aims to achieve include:</p> <ul style="list-style-type: none"> • providing affordable and accessible transport to jobs and services with a focus on the most deprived communities; • “improved Safety and Security: of both actual and perceived safety of travel by all modes”; and • minimising effects on the natural environment with infrastructure to support public and community transport.
<p><i>Anglesey and Gwynedd Joint Local Development Plan 2011 – 2026</i> (JLDP) [RD10]</p>	<p>The JLDP covers the local authorities of the Isle of Anglesey County Council (IACC) and Gwynedd Council and forms the basis for land use planning in these areas. The JLDP covers the period 2011 to 2026.</p> <p>Strategic Policy PS 4 (Sustainable transport, development and accessibility) states that “development will be located so as to minimise the need to travel” and “the Council will endeavour to improve accessibility and seek to change travel behaviour”.</p> <p>Policy PS 5 (Sustainable Development) states that development will be supported where it is demonstrated that they are consistent with the principles of sustainable development. It states that proposals should where appropriate “reduce the need to travel by private transport and encourage the opportunities for all users of travel when required as often as possible by means of alternative modes, placing particular emphasis on walking, cycling and using public transport...”.</p>

Policy	Description
	<p>With specific regard to Wylfa Newydd and related development Policy PS 9 states that the Councils will take various considerations into account in the preparation of Local Impact Reports, including amongst others that:</p> <p>“Highways and transport proposals for the Wylfa Newydd Project form part of the integrated traffic and transport strategy that has regard to Strategic Policy PS 4 and any relevant detailed Policies in the Plan and minimises adverse transport impacts to an acceptable level, including those arising during the construction, operation and decommissioning stages, and any restoration stages. Proposals should where feasible make a positive contribution to transportation policy objectives in the locality, and should include multi-modal solutions and investment that encourages travel by public transport, walking and cycling and other sustainable forms of transport”; and</p> <p>“All proposals shall be appropriately serviced by transport infrastructure including public transport and shall not have adverse impacts on local communities and tourism and this shall be demonstrated in a transport assessment. Where there is insufficient transport linkage or the road network does not have sufficient capacity to accommodate the level of traffic which will result from any development or an adverse impact is predicted, appropriate improvements to the transport network and the provision of sustainable transport options shall be provided to mitigate the impacts”.</p> <p>Strategic Policies PS 10, PS 11 and PS 12 relate specifically to campus style accommodation for construction workers, logistics centres and park and ride facilities respectively.</p>
<p><i>New Nuclear Build at Wylfa: Supplementary Planning Guidance (Wylfa SPG)</i> [RD11]</p>	<p>The Wylfa SPG states that some key junctions and sections of carriageway may need improving to accommodate peak traffic flows (paragraph 4.6.7).</p>
<p><i>Wylfa SPG. Topic Paper 5: Transport</i> [RD12]</p>	<p>Regional and local transport plans and programmes should include objectives that seek to:</p> <ul style="list-style-type: none"> • improve the safety and efficiency of travel; and

Policy	Description
	<ul style="list-style-type: none"> • upgrade and, where appropriate, provide new infrastructure.
<p><i>Regional Planning Guidance for North Wales</i> (Supplementary Planning Guidance) [RD13]</p>	<p>The planning guidance document outlines a strategy to provide future sustainable development in the region, which includes:</p> <ul style="list-style-type: none"> • upgrading key transport corridors which provide essential rail, bus and trunk road links to adjacent areas and the principal towns within the region; • ensuring that regional employment sites are “served, or capable of being served, by public transport”; • increasing public transport/other transport provision through coordinating land use and transport policies; • recognising “the continued importance of the car in rural areas where the use of other forms of transport may be unrealistic”; and • encouraging sustainable transport of freight via sea/rail in preference to road transport.
<p><i>North Wales Regional Transport Plan (2009)</i> [RD14]</p>	<p>Figure 4.3 outlines the regional transport priorities for North Wales, including:</p> <ul style="list-style-type: none"> • providing a transport network for North Wales that makes “best use of the available resources to give efficient movement of both people and freight”; • enhancing performance of public transport through the integration of different public transport services including trains, fast inter-urban bus and coach services, improving the local bus network and an appropriate mix of services involving smaller vehicles for rural areas; • “resolving congestion and highway access issues”; • “maintaining safe, efficient and more sustainable transport networks”; • “implementing road, rail and terminal improvements in conjunction with national and regional agencies and companies”; and • “increasing current levels of cycling and walking by residents and visitors”.

Key guidance

3.2.4 The traffic and transport assessment and associated modelling has been undertaken in line with a number of key technical guidance documents. These guidance documents are widely used across the UK and represent standard

good practice for the assessment for the various consenting regimes. These are summarised in table B3-3.

Table B3-3 Summary of key guidance

Guidance	Description
<p><i>Guidelines for the Environmental Assessment of Road Traffic.</i> [RD15]</p>	<p>The traffic assessment should produce estimates, not only of the traffic being attracted to the development, but also of the projected traffic volumes along key routes leading to the site, with HGV movements provided separately.</p> <p>The IEA guidelines highlight the following rules to be used to define the study area and extent of assessment:</p> <ul style="list-style-type: none"> • “include highway links where traffic flows will increase by more than 30%”; and • “include any other specifically sensitive areas where traffic flows have increased by 10% or more”.
<p><i>Design Manual for Roads and Bridges (Volume 11)</i> (DMRB). [RD16]</p>	<p>Used to assist the identification of user groups that are potentially sensitive to effects associated with traffic flow changes.</p>
<p>WelTAG Welsh Transport Appraisal Guidance [RD17]</p>	<p>The methodology and assessment used in the Transport Assessment is consistent with the guidelines set out in WelTAG. Used to assist the identification of junctions that are potentially sensitive to increases in traffic related to the Project.</p>

- 3.2.5 The DCO Transport Assessment (Application Reference Number: 6.3.14) was completed based on appropriate and relevant guidance. Modelling upon which the Environmental Assessment is based was also completed in accordance with appropriate guidance, which is also set out in the DCO Transport Assessment (Application Reference Number: 6.3.14).

3.3 Consultation

- 3.3.1 This section provides a topic-specific account of scoping, statutory and non-statutory consultation undertaken to support the assessment. For a full overview of the environmental consultation activities undertaken for the Wylfa Newydd Project, refer to chapter A6 (EIA Scoping Report and Addendum) (Application Reference Number: 6.1.6) and chapter A7 (consultation with environmental stakeholders) (Application Reference Number: 6.1.7).

Planning Inspectorate Scoping Opinion

- 3.3.2 In March 2016, Horizon submitted an updated Wylfa Newydd Project EIA Scoping Report to the Planning Inspectorate. In May 2017, Horizon submitted an Addendum to the March 2016 Wylfa Newydd Project EIA Scoping Report to the Planning Inspectorate. Following a period of consultation with

stakeholders, a Scoping Opinion was received from the Secretary of State (SoS) (via the Planning Inspectorate) on 14 June 2017.

- 3.3.3 The Wylfa Newydd Project EIA Scoping Report, Addendum and the subsequent Scoping Opinions inform the approach to the assessment. Table B3-4 provides an account of how comments raised by stakeholders in the Scoping Opinion have been considered in the traffic and transport assessment.

Table B3-4 Key issues raised through Scoping

Key issue raised	Action taken
Scoping Opinion 2016	
<p>Given the scale and duration of the proposed development's potential traffic and transport impacts, the SoS expects the applicant's consultation with local highways authorities to extend beyond IACC alone. The SoS would expect documented evidence of any agreements reached in terms of figures used in the assessment (based on worst-case assumptions), extent of study areas, assessment methodologies and mitigation measures.</p>	<p>Liaison was undertaken with local authorities/stakeholders that are expected to experience significant effects arising from the Wylfa Newydd Project through Transport Focus Group Meetings. These meetings were held monthly from late 2016 with the IACC, Welsh Government and Gwynedd Council (and emergency services where relevant). Further detailed meetings were undertaken on a regular basis in between Transport Focus Group Meetings.</p> <p>In addition, Pre-Application Consultation was undertaken with the IACC, Welsh Government, Gwynedd Council and Conwy County Borough Council through Pre-Application Consultation Stage Two in September/October 2016 and Pre-Application Consultation Stage Three in May 2017. Meeting summaries are presented in table B3-10.</p>
<p>The SoS welcomes the preparation of an Integrated Traffic and Transport Strategy (ITTS) to support the Wylfa Newydd Project as a whole and will expect the applicant to clearly explain the relationship between this document and those prepared in assessing the transport impacts of the DCO application. Similarly, the applicant describes that a Freight Management Strategy and overarching travel plan will be</p>	<p>Appendix C2-4 (Application Reference Number: 6.3.20) is an overarching strategy that describes the transport proposals associated with the movement of construction materials and workers. The strategy was developed during project redefinition through option testing, with the aim of ensuring that the strategy was affordable whilst</p>

Key issue raised	Action taken
<p>prepared as part of the EIA process for the DCO. The SoS will need to understand the relationship between these documents and the ITTS and their overall contribution to the residual effects reported by the applicant in the DCO Environmental Statement.</p>	<p>having minimal impact on the environment.</p> <p>For the construction stage, appendix C2-4 (Application Reference Number: 6.3.20) includes relevant sections, such as the Freight Management Strategy and Worker Travel Strategy, that provide more detailed information. Through liaison with stakeholders (Welsh Government, IACC, Gwynedd Council, North Wales Police), the principles for managing road based freight are described in the Wylfa Newydd CoCP (Application Reference Number: 8.6) that will be submitted as part of the application for development consent.</p> <p>For the operational stage see appendix C2-4 (Application Reference Number: 6.3.20).</p>
<p>The SoS notes that of these ‘strategic measures’ (i.e. Marine Off-Loading Facility (MOLF)), Logistics Centre, [Temporary Workers’ Accommodation], [Park and Ride facility at Dalar Hir <i>[sic]</i>], dedicated bus services and A5025 Highway Improvements), only the MOLF (which will enable the transport of construction materials by sea) will be included as part of the DCO application, with all of the other measures being proposed as Associated Development to be consented separately. The SoS will need to understand the extent to which these measures are relied upon to mitigate potential significant effects in the EIA and, if applicable, the significance of residual effects in the event that they cannot be relied upon.</p>	<p>Following the passing of the Wales Act 2017 on 31 January 2017, Associated Development (i.e. Site Campus, Park and Ride, dedicated shuttle bus services) can now be consented by DCO submissions in Wales and, as such, Associated Development is now included as part of Horizon’s application for development consent.</p> <p>The A5025 On-line Highway Improvements will form part of a separate planning application, which would be consented independently to the application for development consent for the Wylfa Newydd Project.</p>
<p>The SoS expects that a review is undertaken as to whether other ‘committed’ developments should be included in the baseline traffic data as</p>	<p>Committed Developments and Reasonably Foreseeable Future Projects were discussed with Welsh Government, the IACC, Gwynedd</p>

Key issue raised	Action taken
<p>opposed to being included in any future traffic impact assessment scenarios.</p>	<p>Council and Natural Resources Wales and updated for the application for development consent. The Committed Developments listed in the appendix C2-4 (Application Reference Number: 6.3.14) were included in the baseline scenario in the Strategic Traffic Model (Application Reference Number: 6.3.21). Reasonably Foreseeable Future Projects are listed in table I2-3 of the cumulative effects chapter I2 (scope) (Application Reference Number: 6.9.2).</p>
<p>No reference is made to the assessment of shipping during the operation of the proposed development. The SoS would expect to see justification of a 'worst case' approach to the assessment where estimates are to be relied upon. Equally, the assessment of road traffic impacts should be based on justified worst case assumptions in terms of the numbers of road-based deliveries that shipping would negate. The SoS expects that any assessment of construction and operational shipping impacts considers any effects on the commercial operation of Holyhead Port.</p>	<p>Appendix C2-4 (Application Reference Number: 6.3.20) has derived the number of deliveries that would be required by ships and HGVs throughout the construction programme. The assessment in chapter C2 (Application Reference Number: 6.3.2) was based upon a 'worst case' scenario that 60% of materials required to construct the WND A Development would be transported by sea, therefore increasing the number of deliveries by road and providing a 'worst case' scenario for HGVs. The potential effects on the commercial operation of Holyhead Port are assessed as part of chapter D15 (Application Reference Number: 6.4.15).</p>
<p>Amlwch Town Council expressed concerns regarding traffic flow along the A5025 from Cemaes to Rhosgoch Junction near Amlwch. Their concerns not only focus on increased traffic flow but also the safety of the road itself as one of the main routes to and from the proposed station site.</p>	<p>Assessments, including safety, have concluded that no significant improvements are required. This was based upon a review of the causes of accidents and capacity on this section of road.</p> <p>As part of the new strategy, proposals for Temporary Workers' Accommodation at Rhosgoch and Amlwch were withdrawn. Therefore, traffic associated with the Wylfa Newydd Project would comprise cars and shuttle buses, primarily on</p>

Key issue raised	Action taken
	the A5025, travelling to and from the north of Anglesey.
<p>Section 20.3 lists the potential effects and mitigation which include the provision of Associated Development such as [Park and Ride facility at Dalar Hir <i>[sic]</i>] and the Logistics Centre together with management strategies. The IACC request that the Environmental Statement sets out how the mitigation will be secured so that, for example in the case of a management strategy, a specific requirement is contained within the DCO. The list should also include for the provision of the ITTS which is referenced at 20.4.1 and could be extended to include the applicant's proposals for works to the A5025; if these are to be completed prior to the commencement of the Wylfa Newydd Project.</p>	<p>A Schedule of Commitments was produced, to include the appendix C2-4 (Application Reference Number: 6.3.20) and the A5025 Highway Improvements.</p>
<p>The IACC request that clarification is sought as to whether site preparation and clearance traffic movements will be incorporated within the project assessment or within the cumulative assessment is sought <i>[sic]</i>.</p>	<p>Consideration of Site Preparation and Clearance works within the project assessment are included in chapter C2 (Application Reference Number: 6.3.2).</p> <p>Consideration of Site Preparation and Clearance within the cumulative assessment are included in chapter I4 (intra-project cumulative effects) (Application Reference Number: 6.9.4).</p>
<p>The IACC looks forward to discussing the draft ITTS with the applicant at the earliest opportunity and understands that it will cover all elements of the wider project (i.e. the Town and Country Planning Act (1990) and DCO applications).</p>	<p>Transport Focus Group Meetings were held monthly from late 2016 with the IACC, Welsh Government and Gwynedd Council (and emergency services where relevant). In early 2017, further detailed meetings were undertaken generally on a weekly basis in between Transport Focus Group Meetings.</p> <p>In addition, Pre-Application Consultation was undertaken with the IACC, Welsh Government and</p>

Key issue raised	Action taken
	Gwynedd Council through Pre-Application Consultation Stage Two in September/October 2016 and Pre-Application Consultation Stage Three in May 2017.
<p>Section 20.4.2 in the first paragraph references the Site Preparation and Clearance and as per the above comment, clarification of how this is to be treated within the assessment is needed. The IACC acknowledges the commitment to consider off-island traffic impacts, particularly at the point they cross the Britannia Bridge. Impacts should consider both HGVs and home-based construction workers. The management strategies should also identify the arrangements to be put into place for times when the Britannia Bridge is closed to [high-sided vehicles] due to bad weather. Mitigation in the form of 'lay-over' areas either side of the bridge may be appropriate.</p>	<p>Consideration of Site Preparation and Clearance are included in chapter C2 (Application Reference Number: 6.3.2).</p> <p>Assessments consider HGVs and all workers (whether home-based or non-home-based).</p> <p>Assessments were undertaken to assess the effects of additional traffic on the A55 Britannia Bridge.</p> <p>The Wylfa Newydd CoCP (Application Reference Number: 8.6) outlines how Horizon would aid network resilience. This is also considered in appendix C2-4 (Application Reference Number: 6.3.14).</p>
<p>The IACC confirmed that the routes identified for construction traffic appear to be appropriate given the level of current knowledge which it holds on the project. The routes should include the highways used to access the main site from each of the proposed Associated Development locations.</p>	<p>Traffic and transport assessments have also included routes from Associated Development to the Wylfa Newydd Development Area.</p>
<p>For clarity, the IACC assumes that the assessment of operational effects will include for an allowance for journeys to the proposed visitor centre the MEEG and the AECC/ ESL [sic].</p>	<p>The Mobile Emergency Equipment Garage (MEEG) and Alternative Emergency Control Centre (AECC)/ Environmental Survey Laboratory ESL (Off-Site Power Station Facilities) are now proposed to be located on the same site at Llanfaethlu. Traffic and transport analysis has included journeys to Off-Site Power Station Facilities during the operational stage. The visitor centre is not included as part</p>

Key issue raised	Action taken
	of the application for development consent.
<p>The IACC notes that the issue of severance is likely to be mitigated for certain communities as a result of the A5025 improvements and the Environmental Statement should set out at what stage during the construction of the generating station these improvements will become operational.</p>	<p>Severance is assessed in chapter C3 (Application Reference Number: 6.3.3).</p>
<p>North Wales Police note that the period look [<i>sic</i>] at (January 2010 to December 2014) only includes data for “<i>a road accident that has resulted in someone sustaining an injury</i>”. We believe that damage-only incidents should also be included as these can also have a detrimental effect on the safe passage and movement of other road users affecting the free flow of traffic along the roads and surrounding areas.</p>	<p>The traffic and transport assessments have adopted the industry standard approach, which is to use personal injury accidents data only. Accidents were downloaded from STATS19 data [RD18], which do not include information regarding damage-only accidents [RD19].</p>
<p>North Wales Police suggest that a longer period than the current five-years (January 2010 to December 2014) of accident data, particularly in relation to A5025 which has not been subject to significant improvements for a number of years, is used and analysed.</p>	<p>Personal injury accident STATS19 [RD18] data were used covering the period from January 2011 to December 2015. This is the latest complete five-year period for which data were available at the time of writing, and is the industry-standard approach.</p>
<p>Addendum to Scoping Opinion 2016</p>	
<p>Welsh Government requests that capacity analysis should be undertaken on the affected sections of the trunk road network including but not limited to:</p> <ul style="list-style-type: none"> • the Menai Loop (A487/A5/Menai Bridge from Junction 9 to 8A of the A55 trunk road); • the A487 from Vaynol roundabout to Junction 9 of the A55; and • any other section of the road network where traffic movements may impact the road network. 	<p>The volume of traffic on all sections of the trunk road is low during each baseline scenario and therefore additional traffic can be accommodated on these sections. The exception is the A55 Britannia Bridge where baseline conditions suggest that the bridge would not be able to accommodate significant increases in traffic flow during peak periods. Therefore, dedicated shuttle bus services are proposed to transport construction workers to the</p>

Key issue raised	Action taken
<p>The analysis should also be undertaken prior to the MOLF becoming operational due to the projected number of workers constructing various elements of the Wylfa Newydd Project prior to the end of 2021. Any proposed highway improvements should be designed to DMRB standards.</p>	<p>Wylfa Newydd Development Area, which would decrease the number of private vehicle trips over Britannia Bridge.</p> <p>The traffic and transport assessment focuses on 2020 (opening year of the A5025 Off-line Highway Improvements), 2023 (peak year of construction) and 2033 (peak year of operation). These years were anticipated to produce the most significant environmental effects during the Wylfa Newydd Project.</p> <p>Additional road studies on the B5111/B5112/minor roads and the A5025 between Tregele and Amlwch were undertaken and concluded that highway improvements were not required.</p> <p>A detailed microsimulation model considers the operational effects around A55 Britannia Bridge, including Menai Bridge and roads from A55 Junction 9. This is described in the appendix C2-4 (Application Reference Number: 6.3.14).</p>
<p>The SoS has indicated that the existing traffic modelling that they have received to date is not AQUA book compliant (guidance on producing quality analysis for government).</p>	<p>AQUA is not considered appropriate for the trip generation modelling used to assess the transport impact of the Wylfa Newydd Project. The traffic modelling that has been undertaken of junctions and roads in the study area has been reviewed by stakeholders (including Welsh Government and IACC) and their consultants as part of the consultation process.</p>
<p>The SoS has suggested that an alternative assessment to the current transport strategy (i.e. suppliers consolidating loads at source) is undertaken to determine whether a Logistics Centre could be provided on the mainland to consolidate loads. The SoS has requested that the</p>	<p>A separate site selection exercise has been completed that includes review of transport implications alongside other relevant considerations (see volume 1 of the Site Selection Report, introduction and context, Application Reference Number: 8.24.1).</p>

Key issue raised	Action taken
<p>Environmental Statement provides a justification for why the Logistics Centre is located within an arbitrary 30-minute drive from the Wylfa Newydd Development Area.</p>	<p>The transport strategy is detailed in the appendix C2-4 (Application Reference Number: 6.3.20). Some loads would be consolidated at source, minimising the number of freight movements across Britannia Bridge and with no further consolidation required at the Logistics Centre.</p>
<p>The SoS requested that the Environmental Statement provides a justification for why the Park and Ride is located within an arbitrary 30-minute drive from the Wylfa Newydd Development Area.</p>	<p>A separate site selection exercise has been completed that includes review of transport implications alongside other relevant considerations (see volume 7 of the Site Selection Report, A5025 Off-Line Highways Improvements, Application Reference Number: 8.24.1).</p>
<p>The SoS would like to see how empty outbound HGV movements will be controlled from the Wylfa Newydd Development Area to ensure that there is no significant impact on the local roads and trunk roads, in particular Britannia Bridge.</p>	<p>Empty outbound HGV movements would be controlled on departure from the Wylfa Newydd Development Area. They are required to travel along the agreed construction route (A5025 between Valley and Wylfa Newydd Development Area and A55 Junction 3 to A55 Junction 12). This is incorporated into the Wylfa Newydd CoCP (Application Reference Number: 8.6).</p> <p>As part of the proposed transport strategy, there would be a maximum of 40 one-way HGV movements per hour on the A5025 between Valley and the Wylfa Newydd Development Area. In advance of the opening of the A5025 Off-line Highway Improvements there would be restrictions on deliveries at sensitive times of day. No significant impacts on local roads, trunk roads and A55 Britannia Bridge are anticipated. This assessment and conclusion is presented in the appendix C2-4 (Application Reference Number: 6.3.14).</p>

Key issue raised	Action taken
<p>The SoS notes that any analysis should be based on a worst-case scenario, i.e. that only 60% of freight would be transported to the MOLF.</p>	<p>The Strategic Traffic Model (Application Reference Number: 6.3.21) was based on a robust and conservative assumption that only 60% of freight would be transported by sea. This assumption informed all traffic and transport assessments. Further information on the modelling methodology is detailed in appendix C2-4 (DCO TA Appendix G – Strategic Traffic Model – Overview, Application Reference Number: 6.3.21).</p>
<p>Welsh Government requests that traffic volume, traffic composition, routing and the period of day is shared with them based on 40% of freight movements being made by road (worst-case scenario) to establish the potential impact on the operation of Britannia Bridge.</p>	<p>The Strategic Traffic Model (Application Reference Number: 6.3.21) is based on a scenario of 60% of freight being delivered via the MOLF and 40% of freight being delivered by road. The requested information is available in the appendix C2-4 (Application Reference Number: 6.3.14).</p>

Statutory consultation

Pre-Application Consultation Stage One

- 3.3.4 The aim of Pre-Application Consultation Stage One [RD20], undertaken in late 2014, was to share information available at the time with Horizon’s key consultees and stakeholders, in order to consider feedback in ongoing design development. Table B3-5 outlines how key issues raised during Pre-Application Consultation Stage One have been considered in the assessment.

Table B3-5 Key issues raised during Pre-Application Consultation Stage One

Key issue raised	Action taken
<p>Public Transport: The IACC was supportive of bus services, including their potential for use by local communities and as a legacy benefit. Feedback noted that this should include consideration of links to, and/or enhancement of, existing services, with key concerns relating to the potential use of rail for passenger transport, including enhanced services to benefit</p>	<p>Dedicated shuttle bus services for construction workers living in the north of Anglesey, Holyhead and the mainland would be provided to the Wylfa Newydd Development Area. Dedicated shuttle bus services between Park and Ride and the Wylfa Newydd Development Area would also be provided. These shuttle buses would not be for</p>

Key issue raised	Action taken
<p>communities, the use of Valley Railway Station, and the potential for multi-modal transport hubs. The potential for air travel was acknowledged to be limited, but should remain a potential option for travel to Anglesey.</p>	<p>general public use as part of the proposals.</p> <p>Regarding rail services, investigations were undertaken to assess existing rail passenger use and determine capacity to accommodate construction workers, to identify any necessary potential improvements to infrastructure (trains, platforms, station facilities, pickup areas) at key stations including Holyhead and Bangor and to engage with existing station operators and service providers to discuss the potential improvement options. Further discussion and analysis is included in appendix C2-4 (Application Reference Number: 6.3.14).</p> <p>A further review of air travel was undertaken to determine whether the option was feasible for the movement of workers/freight associated with the Wylfa Newydd Project. The review concluded that air travel was unlikely to form a viable option for transporting materials or as an alternative mode of transport for workers travelling daily to/from Anglesey.</p>
<p>Non-motorised users:</p> <p>Details on the potential impacts on existing Public Rights of Way were requested, including the routing, connectivity and management of diverted routes during construction. Comments related to the provision of cycling, including new and improved routes, and avoiding HGV routes.</p>	<p>In relation to non-motorised users, meetings and discussions were held with the IACC and other stakeholders, including Sustrans, to agree the form and extent of temporary and permanent non-motorised users' provisions that would need to be incorporated into the design and implementation of the Wylfa Newydd Project, to both mitigate potential environmental effects and enhance existing facilities. Non-motorised users are assessed as part of chapter C3 (Application Reference Number: 6.3.3).</p>

Key issue raised	Action taken
<p>Sustainability: It was highlighted that Associated Development should be sited in areas with good accessibility to maximise use of existing facilities and connectivity. Issues relating to the consideration of legacy uses for Associated Development were raised, in particular the Park and Ride Facility at Dalar Hir. The potential for wider enhancements to existing facilities was also noted.</p>	<p>All the confirmed Associated Development locations are considered to be easily accessible with dedicated shuttle bus services to be provided for construction workers.</p>
<p>Methodology: Recommendations included the assessment of traffic and consideration of the potential impacts on traffic movements on road crossings, taking into account the seasonality of traffic volumes on Anglesey. Information was requested on the volume of goods requiring transport and the number of workers required over the construction period.</p>	<p>Presentations were given to both the IACC and Welsh Government on the traffic modelling, which has taken into account the seasonality of traffic on Anglesey and the mainland, and the likely key routes for the movement of workers and HGVs.</p>

Pre-Application Consultation Stage Two

- 3.3.5 In September 2016, Horizon shared a Preliminary Environmental Information Report as part of Pre-Application Consultation Stage Two. This presented preliminary details of the predicted environmental effects and mitigation measures for any adverse effects identified. Table B3-6 outlines how key issues raised during Pre-Application Consultation Stage Two have been considered in the assessment.

Table B3-6 Key issues raised during Pre-Application Consultation Stage Two

Key issue raised	Action taken
<p>Public Transport: Feedback noted that consideration should be given to the use of Valley Railway Station in addition to Holyhead Railway Station, and the potential for multi-modal transport hubs. The bus pick-up points were also queried, especially on the mainland where there may not be enough parking for workers.</p>	<p>The appendix C2-4 (Application Reference Number: 6.3.20) proposes a transport strategy based on shuttle buses, a Park and Ride, car sharing and a site campus. Rail is expected to be used by workers travelling at the start and end of each 11-day shift cycle. Horizon liaised with Welsh Government, Gwynedd Council and the IACC to consider suitable</p>

Key issue raised	Action taken
	parking for workers travelling to pick-up points on the mainland that would be used should they become required.
<p>Non-motorised users: Concern that the proposals do not outline the cycling routes in sufficient detail. Concerns that cycling schemes would not be successful unless dedicated, segregated cycleways away from roads were constructed as part of the Wylfa Newydd Project.</p>	<p>More detailed information on existing and proposed cycleways can be found in chapter C3 (Application Reference Number: 6.3.3). A cycling strategy was discussed at monthly Transport Focus Group meetings. The public access and recreation chapter outlines the proposals for the cycling strategy, including new cycle routes.</p>
<p>Methodology: Increased congestion on both Britannia Bridge and Menai Bridge as a result of increased traffic associated with the construction of the Wylfa Newydd Project. Suggestions included an off-island Park and Ride to reduce the number of vehicles travelling over Britannia Bridge. There is also a concern that the increased traffic will have a significant impact on emergency response times and the journey time for land ambulances to reach Bangor Hospital.</p> <p>Potential for traffic to rat-run through the centre of the island via the B5111/ B5112 routes.</p>	<p>The effect on the mainland crossings were investigated through microsimulation modelling. Consultation was undertaken with Welsh Government, the IACC and Gwynedd Council on the methodology for the microsimulation model. Welsh Government, the IACC and Gwynedd Council were also consulted to discuss/agree the conclusions of the modelling and to identify appropriate/necessary measures to mitigate any effects identified by the model. No additional mitigation was proposed following analysis of the results of the microsimulation modelling. A dedicated shuttle bus service for construction workers living on the mainland is proposed to reduce the volume of traffic across both bridges. The modelling indicates no significant effects on journey times and therefore on response times.</p> <p>An additional review was undertaken to consider the effect of construction traffic travelling through the centre of Anglesey and this has informed the preparation of</p>

Key issue raised	Action taken
<p>Concerns raised by IACC regarding “A55 Junction 2 capacity with the large number of vehicles entering and departing the logistics centre. Mitigation - Traffic modelling will be required on Junction 2 including the roundabouts at the top of the slip roads and the links to Parc Cybi. Further traffic modelling to include all associated and permitted developments (Former Anglesey Aluminium site) and to give consideration of any other proposed developments”.</p>	<p>appendix C2-4 (Application Reference Number: 6.3.20).</p> <p>Junction modelling of the A55 Junction 2 was undertaken. This included Committed Developments and growth in background flows.</p> <p>This analysis shows that there is no need to modify the junction due to traffic associated with the Wylfa Newydd Project. Further details are provided in the appendix C2-4 (Application Reference Number: 6.3.14).</p>
<p>Road safety:</p> <p>Road safety would be compromised along the A5025 east and other minor roads (in particular the Rhosgoch access road) as a result of the increase in traffic associated with the Wylfa Newydd Project, in particular buses. Highway improvements should be considered along these routes to improve the quality of the route.</p>	<p>Further studies were undertaken following Pre-Application Consultation Stage Two to review the A5025 east of the Wylfa Newydd Development Area and other minor roads that could be affected by increases in traffic.</p> <p>As part of the new strategy, proposals for Temporary Workers’ Accommodation at Rhosgoch and Amlwch were withdrawn and all accommodation was relocated to the Wylfa Newydd Development Area. Therefore, traffic associated with the Wylfa Newydd Project travelling along the A5025 east of the Wylfa Newydd Development Area would only comprise construction workers’ living in the north of Anglesey. Additionally, minor roads would not experience significant increases in traffic flows as up to 4,000 workers are proposed to live at the Site Campus, located at the Wylfa Newydd Development Area.</p>

Pre-Application Consultation Stage Three

- 3.3.6 Table B3-7 outlines how key issues raised during Pre-Application Consultation Stage Three have been considered in the assessment.

Table B3-7 Key issues raised during Pre-Application Consultation Stage Three

Key issue raised	Action taken
<p>Assessment methodology: Concerns raised by the IACC that the EIA process has been misunderstood and “consideration should be given to the effects of the increase in road traffic upon environmental receptors as a result of driver delay, pedestrian delay, fear and intimidation, etc. unless they can be scoped out”.</p> <p>The IACC are also concerned that traffic flow increases are shown as Annual Average Daily Traffic (AADT) flows rather than peak hourly flows, which may not be representative of increases in traffic during shift changeovers.</p> <p>The IACC are concerned that “the Preliminary Environmental Information fails to consider effects arising from the decommissioning of the main Site Campus which the Council considers could be substantially greater than those predicted for a 500 bed campus at PAC2 [Pre-Application Consultation Stage Two]. The effects upon the environment as a result of the traffic required to decommission the campus should have been provided”.</p> <p>“North Wales Fire and Rescue Service would wish that construction traffic impact assessments to consider the worst case scenario i.e. 60%. This would ensure that in the</p>	<p>The assessment follows the guidance set out in the Guidelines for the Environmental Assessment of Road Traffic [RD15] and Volume 11 of DMRB [RD16]. The assessment includes an analysis of the change in traffic flows, journey times, accidents and safety and driver stress. The assessment is consistent with the scoping report and comments received in the 2016 scoping opinion and addendum to the 2016 scoping opinion received in 2017.</p> <p>Peak hours are used for the assessment of driver stress and journey times, and are used in the operational assessment presented in the appendix C2-4 (Application Reference Number: 6.3.14). AADTs are used to calculate changes in accidents and the overall impact that receptors would experience across a day.</p> <p>The peak of construction was assessed because more workers and vehicle movements are required to construct the Power Station than to decommission Associated Development sites. Therefore, the construction period would produce greater environmental effects.</p> <p>The assessment of transport effects assumes a worst case scenario for material movement by road with the remaining deliveries via the MOLF.</p>

Key issue raised	Action taken
<p>eventuality of the MOLF not being available the impact has been appropriately assessed and suitable mitigation measures in place should they be required”.</p>	
<p>Assumptions: The IACC “does not accept that some of Horizon's assumptions such as car-sharing rates are realistic or appropriate. Horizon requires to ensure that the traffic modelling takes multiple scenarios into account and is robust and realistic, the Council does not accept that the current modelling reaches the required standard”.</p> <p>Welsh Government are concerned that no detail was provided on “how empty HGVs will be marshalled on site and controlled for return journeys to ensure that there is not an adverse impact on the highway network and further information on this aspect would be welcomed”.</p>	<p>Appendix C2-4 (Application Reference Number: 6.3.20) provides details on how the car sharing scheme would operate and how car sharing rates would be achieved.</p> <p>The assessment states that the departure of empty HGVs would be managed at the Wylfa Newydd Development Area so that a regular flow of vehicles is provided along the A5025 to avoid ‘convoys’ that could potentially have an effect on the operation of the road network.</p>
<p>Bus routes and stops: Concerns raised by Mechell Community Council and North Anglesey Community Partnership that PAC 3 does not mention amended bus routes from PAC 2.</p>	<p>Appendix C2-4 (Application Reference Number: 6.3.20) includes details of the Park and Ride shuttle bus routes, shuttle bus routes and car sharing scheme. The proposed shuttle bus routes are shown in appendix C2-4 appendix F (Application Reference Number: 6.3.20) and they would be flexible to maximise the number of workers using them. There are currently no proposals to divert existing bus routes.</p>
<p>Car Sharing: “The IACC is very concerned regarding the lack of detail surrounding car sharing and parking. Horizon have stated that 3 workers per vehicle is required to be allowed to park on site. Although the IACC support the principle of sustainable transport, given the lack of detail within PAC3 and present monitoring</p>	<p>At peak construction, a project-wide average car share ratio of two workers per car is assumed across the Wylfa Newydd Project, comprising 1.5 at the Park and Ride and three at the Wylfa Newydd Development Area. This would be monitored and enforced. Appendix C2-4 (Application Reference</p>

Key issue raised	Action taken
<p>information from Hinkley Point C which demonstrates that only 3%-4% of people are car-sharing. The concept of 3 workers per car must be implemented throughout the construction phase to increase sustainable transport. Horizon should demonstrate how this will be delivered or increase vehicle numbers to reflect the realistic likely impact”.</p>	<p>Number: 6.3.20) sets out how this would be achieved.</p> <p>Hinkley Point C is not directly comparable to the Wylfa Newydd Project and travel is focused on the use of four Park and Ride sites and more than 90% of workers use these Park and Ride sites to access the main work site. This means the number of workers who car share to travel to the site is lower than that assumed for the Wylfa Newydd Project.</p>
<p>Transport proposals: “The IACC has identified the potential adverse impacts on the highway network as a consequence of construction traffic related to the Associated Development sites. As per IACC's previous request at PAC2 (para. 8.24.1), Horizon should submit Construction Traffic Management Plans (CTMP) for all Associated Developments and A5025 highway improvements”.</p>	<p>The Wylfa Newydd CoCP (Application Reference Number: 8.6) and supporting sub-Codes of Construction Practice (sub-CoCP) for the Maine Power Station Site, Marine Works, Off-Site Power Station Facilities, Park and Ride, Logistics Centre and A5025 Off-line Highways Improvements (Application Reference Number: 8.7 to 8.12).</p>
<p>North Wales Fire and Rescue Service recognises that there will be on-site facilities for construction workers however they are mindful that workers who park at the site may make use of their vehicles, during their own time, to visit local areas and the potential impact that could have.</p>	<p>The Strategic Traffic Model (Application Reference Number: 6.3.21) does not consider worker trips in their own time. The purpose of the model is to identify any significant increases in traffic flows, journey times and congestion on the highway network. It is proposed that provision would be made for off-site travel to reduce these impacts. In addition, there would be on-site leisure facilities to reduce the need to travel into the local community for this.</p>
<p>“Further, North Wales Fire and Rescue Service do have a concern in regards to the impact on the A5025, east of the development, relating to contractors making use of private</p>	<p>The Wylfa Newydd CoCP (Application Reference Number: 8.6) sets out the measures by which construction worker travel would be managed. The Strategic Traffic</p>

Key issue raised	Action taken
<p>vehicles - either out of hours or travelling to and from home address to temporary accommodation. Whilst HNP or their contractors may encourage car sharing and have processes in place relating to designated parking spaces on site, how this will reduce construction worker travel relating to non-site specific accommodation is not clear and could still result in a large volume of vehicles impacting local roads”.</p>	<p>Model (Application Reference Number: 6.3.21) does not consider worker trips in their own time, therefore contractors travelling to and from their home address to temporary accommodation is also not considered, although the majority of contractors would be sourced locally. Contractors are assumed to work the same shift hours as other construction workers.</p>
<p>Welsh Government note that “Figure 4.1 indicates that the proposed Park and Ride facility at Dalar Hir will be under construction until Q4 2020 and operational Park and Ride Staff will only be in place from Q4 2020. Within this period overall worker numbers are indicated in figure 4.1 to be around 3,250. This raises a question as to where (given that the main site would only have 1,900 spaces, and the on-site temporary worker accommodation will also be under construction) these workers will be able to park during this period before the Park and Ride site is available?”</p>	<p>The appendix C2-4 (Application Reference Number: 6.3.14) sets out the different routes that workers would take to travel to/from the site and how these routes would be adhered to and enforced. Appendix C2-4 (Application Reference Number: 6.3.14) also provides details of worker travel arrangements in the early years of construction e.g. 2020.</p>
<p>Amlwch Town Council and North Anglesey Community Partnership raised their community’s concerns about “the increased number of vehicles (both cars and construction traffic) along the A5025 from the bridge towards the site. We acknowledge Horizon’s commitment to a transport strategy, however further clarification and information is required”.</p>	<p>The transport strategy is set out in detail in appendix C2-4 (Application Reference Number: 6.3.20). Analysis of the Strategic Traffic Model (Application Reference Number: 6.3.21) does not indicate any significant changes in congestion and/or journey times across Britannia Bridge or the wider highway network. Increased traffic flows and impacts on residents are mitigated through the introduction of the A5025 Off-line Highway Improvements, the Park and Ride shuttle buses and car sharing,</p>

Key issue raised	Action taken
<p>Concerns raised regarding the potential impact of the construction and operational traffic on the operation of Holyhead Retail Park.</p>	<p>The Strategic Traffic Model (Application Reference Number: 6.3.21) does not indicate any significant change in congestion and/or journey times on the wider highway network. A55 Junction 2 was modelled and is estimated to operate within capacity during the construction and operational periods. Any increase in traffic flows and impacts on residents and businesses are mitigated through the introduction of A5025 Off-line Highway Improvements.</p>
<p>Emergency vehicle access: Public Health Wales and Welsh Ambulance Service Trust raised concerns regarding the increase in traffic volumes during the construction period and the impact this will have on journey times (i.e. their ability to respond to calls), with particular reference to the A5025 between Valley and the Wylfa Newydd Development Area.</p>	<p>The relevant transport measures within the Wylfa Newydd CoCP (Application Reference Number: 8.6), which was discussed with Stakeholders, including the emergency services, since Pre-Application Consultation Stage Two, outlines the measures that Horizon would implement to minimise the impacts of project-related traffic during an incident. The assessment of effects does not forecast any significant increases to current journey times on the road network during the construction period.</p>
<p>Road Safety: A common concern raised by members of the public related to the increase in traffic associated with the Wylfa Newydd Project and the proposed junctions as part of the highway improvements would lead to more road traffic collisions. Also concerns raised that the proposed A5025 Off-line Highway Improvements would increase vehicle speeds and that other roads (e.g. A5025 between Cemaes and Amlwch) should be considered for highway improvements.</p>	<p>Effects on residents are mitigated through the introduction of the A5025 Off-line Highway Improvements and the Park and Ride. Furthermore, studies along the A5025, B5111, B5112 and minor roads, in addition to detailed accident analysis for the road network, showed no significant adverse effects associated with the Wylfa Newydd Project. This analysis is presented in the appendix C2-4 (Application Reference Number: 6.3.14).</p>

Key issue raised	Action taken
<p>Concerns raised by the IACC regarding the increase in traffic along the A5025 during school start/end times may increase the number of accidents in the vicinity of schools.</p> <p>“North Wales Fire and Rescue Service are mindful that convoys may inadvertently form and that other road users may be impacted which could result in inappropriate actions being taken by drivers which could have detrimental road safety outcomes”.</p> <p>Land and Lakes – “Page 124 of the PAC3 Main Consultation Document ('MCD') confirms that 'there will be 1,200 more car movements per day' in place of 260 professionally driven buses (as proposed under PAC 2 [Pre-Application Consultation Stage Two]). Such a dramatic increase in traffic numbers will undoubtedly have a significant adverse impact on traffic in the local area, not least from a road safety perspective, with the majority of drivers being tired after having worked long hours as discussed at subparagraph (ii) above”.</p>	<p>Restrictions would be in place during school opening/closing times until the bypasses open as outlined in the Wylfa Newydd CoCP (Application Reference Number: 8.6).</p> <p>The Logistics Centre at Parc Cybi has 100 HGV spaces to enable deliveries to be managed and reduce the potential for convoys on the A5025.</p> <p>Increased traffic flows and impacts on residents are mitigated through the introduction of the A5025 Off-line Highway Improvements and the Park and Ride. Furthermore, journey time and driver stress assessments have been undertaken and show no significant adverse effects on the road network during the Wylfa Newydd Project. This analysis is presented in chapter C2 (Application Reference Number: 6.3.2).</p>

Consultation on Additional Land

- 3.3.7 In February 2018, Horizon undertook consultation on additional land that had not been consulted on previously. The additional land was required to:
- accommodate proposals to create or enhance wetland sites across Anglesey as Ecological Compensation Sites;
 - create two new ecological mitigation areas, and minor changes to the connection to the national grid at the Wylfa Newydd Development Area; and
 - update the order limits for the A5025 Off-Line Highway Improvements, and minor refinements to the boundaries of the Off-Site Power Station Facilities and Logistics Centre.
- 3.3.8 The feedback from the consultation has been reviewed and the following issues were raised by the IACC with respect to the wetland creation sites:

- Horizon shall be required to adequately assess the potential effects of both the additional traffic movements due to transporting workers and plant to site as well as the additional movements as a result of the option selected for spoil management on the highway network as a consequence of these works and identify suitable mitigation. Horizon will be required to submit a fully comprehensive and robust Construction Traffic Management Plan for approval prior to any commencement of works.
- HGV traffic associated with National Grid’s North Wales Connection Project will be utilising both the B5109 and B5110. Horizon shall be required to assess the cumulative effects should both projects impose additional traffic on these highway networks.

Appendix D1-2 (Ecological Compensation Sites: Assessment of Environmental Effects) (Application Reference Number: 6.4.18) provides an assessment of traffic and transport for each of the Ecological Compensation Sites and considers the likely increase in HGV movements across the road network for spoil export within assumed construction windows. Intra-project and inter-project cumulative effects are considered within Volume I, chapters I4 (Application Reference Number: 6.9.4) and I5 (Application Reference Number: 6.9.5) respectively, of the Environmental Statement.

Non-statutory consultation

Environmental Impact Assessment Progress Report

- 3.3.9 An EIA Progress Report was provided to the IACC and NRW in February 2016 with updated information on the design development and associated environmental assessment. Table B3-8 outlines how key issues raised in feedback from these stakeholders have been considered in the assessment.

Table B3-8 Key issues raised in response to the EIA Progress Report

Key issue raised	Action taken
Welsh Government requested more information on how legacy will be reflected in the ITTS.	The purpose of appendix C2-4 (Application Reference Number: 6.3.20) is not to address legacy but to provide a detailed overview of the strategy for managing both construction and operational traffic for the Wylfa Newydd Project. Legacy would comprise the A5025 Off-line Highway Improvements.
Welsh Government request that an assessment of all options is undertaken before a preferred option is identified in accordance with WelTAG. Additionally, 1,000 parking spaces are proposed at the Wylfa Newydd Development Area and	Numerous options were identified and assessed prior to the proposed development being chosen. The options considered are discussed in appendix C2-4 (Application Reference Number: 6.3.20). The resultant overarching transport

Key issue raised	Action taken
<p>therefore Welsh Government seek clarification of how traffic will travel to the site with an assessment of the potential impact on the road network and confirmation of how this would align with sustainable travel proposals.</p>	<p>strategy is contained in appendix C2-4 (Application Reference Number: 6.3.20) and covers all modes of travel by the required construction workforce. Stakeholders (including the IACC, Welsh Government and Gwynedd Council) were consulted on appendix C2-4 (Application Reference Number: 6.3.20) through monthly Transport Focus Group meetings and weekly detailed meetings in between.</p>
<p>Welsh Government strongly recommends that consideration should be given to utilising facilities on the mainland to reduce the impact of increased traffic on Britannia Bridge and the A55. Measures could comprise a Logistics Centre and Park and Ride in addition to those on the island to overcome closure of Britannia Bridge due to high winds.</p>	<p>Mainland facilities were considered as part of appendix C2-4 (Application Reference Number: 6.3.20) options. However, no mainland facilities were progressed as part of the proposed development, with mitigation being provided through dedicated shuttle bus services from the mainland to reduce the volume of Wylfa Newydd Project traffic travelling across the A55 Britannia Bridge. A traffic model assessment, which has formed the basis of consultation with Welsh Government, has demonstrated that this mitigation is sufficient.</p> <p>Consultation was also undertaken to confirm the approach to management of traffic during incidents with both Welsh Government and the IACC.</p>
<p>With regard to the MOLF, Welsh Government would like to discuss contingency plans in the event of delays to construction/bad weather, the ability to accommodate Abnormal Indivisible Loads and whether Holyhead Port would be required during the construction stage.</p>	<p>Management of traffic incidents was discussed during consultation meetings with Welsh Government and the IACC (see table B3-10). Consultation has also included discussion of construction traffic management to consider the use of the MOLF and Abnormal Indivisible Loads.</p> <p>The development of appendix C2-4 appendix F (Application Reference Number: 6.3.20) has considered the potential for the use of Holyhead</p>

Key issue raised	Action taken
	Port, and it has been concluded that the port does not have suitable facilities for the Wylfa Newydd Project. This analysis has been shared with Welsh Government and the IACC during consultation.
Although discounted at PAC 1 [Pre-Application Consultation Stage One], consideration should be given to rail freight to reduce the number of HGV deliveries to the Wylfa Newydd Development Area.	The development of appendix C2-4 (Application Reference Number: 6.3.20) has considered the potential for the use of rail for the delivery of materials. The analysis has concluded that there are unsuitable rail facilities for the transportation of construction materials. This analysis was shared with Welsh Government and the IACC during consultation.
Welsh Government would appreciate confirmation of whether air travel will be utilised for transport of workers and/or freight.	Air travel forms a component of appendix C2-4 (Application Reference Number: 6.3.20) for the movement of workers returning to their permanent homes at weekends. The movement of materials by air was considered as part of appendix C2-4 (Application Reference Number: 6.3.20).
The IACC requested that arrangements for Abnormal Indivisible Loads should be set out in an 'outline' Construction Traffic Management Strategy.	The Wylfa Newydd CoCP (Application Reference Number: 8.6) was produced as part of the application for development consent and covers the principles of construction traffic management, including the movement of Abnormal Indivisible Loads.

Draft Environmental Statement

- 3.3.10 During September 2017, draft Environmental Statement chapters were provided to statutory and key non-statutory stakeholders. Table B3-9 outlines key issues raised and how these have been addressed within the Environmental Statement.

Table B3-9 Key issues raised in response to the Draft Environmental Statement

Key issue raised	Action taken
<p>The IACC raised various issues about an early year assessment to demonstrate the traffic impacts on A5025 before the operation of the MOLF.</p>	<p>An early year assessment has been undertaken in chapter C2 (Application Reference Number: 6.3.2) and appendix C2-4 (Application Reference Number: 6.3.14) and its appendices.</p>
<p>The IACC and Welsh Government raised various issues with respect to the lack of detail for construction traffic management during various stages of the project.</p>	<p>The Wylfa Newydd CoCP (Application Reference Number: 8.6) sets out the key principles for construction practice including Worker Induction and Training. The necessary documentation would be prepared prior to commencement of construction for all stages of the project. Further detail to be provided through the SoCG process.</p>
<p>The IACC raised concerns about delays in the delivery of key mitigation proposals, namely improvements to A5025, Park & Ride and MOLF.</p>	<p>If elements of the project are delayed, it is expected that traffic impacts would be kept within the envelope of the DCO consent. Any potential breaches of this envelope would be dealt with through discussions with stakeholders and the agreed planning process. Mitigation measures such as the MOLF will be secured by DCO requirements.</p>
<p>The IACC and Welsh Government have asked for clarification of the HGV weekend deliveries and any out of hours' delivery along A5025.</p>	<p>The DCO application is based on no deliveries on Saturday and Sunday. Appendix C2-4 (Application Reference Number: 6.3.21) has only assumed deliveries during Monday to Friday 07:00 to 19:00 following the completion of the A5025 bypasses. Prior to the completion of the bypasses, no deliveries would be allowed between 08:00 and 09:00, and between 15:00 and 16:00. Horizon would liaise with stakeholders for any out of hours HGV deliveries.</p>
<p>The IACC and Welsh Government have requested additional evidence</p>	<p>The car sharing targets, monitoring and implementation are addressed</p>

Key issue raised	Action taken
to support car sharing targets and implementation.	in appendix C2-4 (Application Reference Number: 6.3.14).
IACC raised various issues with respect to the Transport Assessment Scope of work	The Scope submitted is a document that records the proposed scope at a particular moment in time. The issues raised by IACC are being dealt with in other documents, namely chapters B3 (traffic and transport) (Application Reference Number: 6.2.3) and C2 (Application Reference Number: 6.3.2) and the whole of appendix C2-4 (Application Reference Number: 6.3.14).
Welsh Government and IACC have raised various concerns about the number of car parking spaces on site, and justification for these numbers.	The number of car parking spaces is clarified in appendix C2-4 (Application Reference Number: 6.3.14).
Welsh Government has questioned whether MOLF will be complete by 2020 due to timing of consents and the commitment to the cost of MOLF prior Final Investment Decision.	Any delay in the delivery of the MOLF would be addressed either through the preparation of the SoCG or during Examination.
Welsh Government has asked for clarification for the justification for using different weekday PM peak times for the junction capacity assessments.	The justification for the selection of the peak hour period for the assessment of each junction is set out in appendix C2-4 (Application Reference Number: 6.3.14) paragraph 11.2.9. The busiest hour in each morning and evening peak period has been assessed to provide a robust and conservative assessment of junction performance. This busiest hour varies from junction to junction and hence different hours are modelled at different junctions.
Welsh Government has asked for confirmation the junction capacity assessments include committed, Reasonably Foreseeable Future Project's (RFFP) and dependant development.	The junction capacity analysis is based on the outputs of the Strategic Traffic Model (Application Reference Number: 6.3.21) which includes all relevant Committed Developments. The cumulative impact of dependent development (e.g. National Grid scheme) and RFFP's has been assessed in chapter I5 (inter-project

Key issue raised	Action taken
	cumulative effects) (Application Reference Number: 6.9.5). The RFFP's are not included if the data provided is not sufficiently robust to support a valid assessment.
<p>Welsh Government has requested further clarification for the selection of the years 2020, 2023 and 2033 for assessment. They have requested an additional year of assessment between 2020 and 2023 to demonstrate the traffic impacts prior to the completion of all mitigation measures.</p>	<p>The selection of the assessment years is clarified in chapters B3 (Application Reference Number 6.2.3), C2 (Application Reference Number: 6.3.2) and appendix C2-4 (Application Reference Number: 6.2.14). Year 2020 is the peak year of construction prior to MOLF but assessed before and after the A5025 improvements are complete. Year 2023 is peak year of construction based on the maximum number of employees (The number of worker shuttle buses exceeds the number of HGVs) and Year 2033 is peak year of operation with 2 outages. If any additional year of assessment is required, this would be discussed during the preparation of SoCG.</p>
<p>Welsh Government has questioned whether the decommissioning of the Associated Development is included in the traffic impact assessment.</p>	<p>Associated Development decommissioning does not fall within any of the assessment years (2020, 2023, 2033) and therefore has not been specifically included in the model. The traffic flows for decommissioning are included in the HGV vehicle profile as set out in Appendix C2-4 (Application Reference Number: 6.3.20). But they are not modelled or assessed since the level of total construction traffic flows are significantly lower than the traffic flows during the other assessment years.</p>
<p>Welsh Government has questioned the robustness of the Strategic Traffic Model based on the concerns that the following has not been included in the model:</p> <ul style="list-style-type: none"> • On-site traffic movements 	<p>The Strategic Traffic Model (Application Reference Number: 6.3.21) is a robust spreadsheet model of the construction trip generation and distribution onto the identified road network within the area of study. The Strategic Traffic</p>

Key issue raised	Action taken
<ul style="list-style-type: none"> • Local Trips (school, shopping, leisure) • Micro-simulation modelling • Any decommissioning activities associated with the main site or Associated Development/Off site power station facilities [e.g. the removal of the temporary worker accommodation, or removal/reinstatement of Park and Ride site etc.] • Individual junction assessments • Journey times 	<p>Model (Application Reference Number: 6.3.21) includes all staff related daily commuting activity (including weekend effect) associated with all construction activity. Additionally, HGV trips associated with all construction activity are included. Leisure trips during periods off-shift for workers has not been included. All other existing local trips in the model area have been captured within base traffic counts. No allowance has been made for traffic movements retained on-site, as no traffic would enter the public highway. The following assessments were undertaken, namely; a VISSIM micro simulation for Britannia Bridge in appendix C2-4 (Application Reference Number: 6.3.23), individual junction assessments in appendix C2-4 (DCO TA Appendix H – Junctions Assessment, Application Reference Number: 6.3.22), and Journey times in appendix C2-2 (Journey Time Calculations, Application Reference Number: 6.3.12).</p>
<p>Welsh Government has questioned the differences in the commuter distances identified in the Gravity Model and Strategic Traffic Model.</p>	<p>The worker origin information used to inform the distribution in the Strategic Traffic Model (Application Reference Number: 6.3.21) has been derived directly from the gravity model. All areas associated with daily commuting staff have been included, with the widest area of influence up to and including a 90-minute drive time being represented by the Mainland Zone 2 sub-area. The reference to a 50km traffic distance in the C2-4 (Application Reference Number: 6.3.21) denotes the area from which the majority of staff would commute; however, the small number from a wider 90-minute commuting zone, as identified in the gravity model</p>

Key issue raised	Action taken
	outputs has also been captured within these figures.
<p>Welsh Government has requested clarification on the sample size of Bluetooth Surveys on Britannia Bridge westbound is lower than other locations/directions. sampling.</p>	<p>The geometric constraints limited the possible positions of the Bluetooth survey equipment to measure the Westbound trips. As a result of the chosen locations, the westbound sample rate (AM 44-49% PM 42-43%) was lower than for the eastbound direction (AM 70-72% PM 61-71%). It was not possible to identify a safe location for the Bluetooth equipment that would have resulted in a higher survey total. Nevertheless, both east and westbound sample rates meet WebTAG requirements (WebTAG M1.2 Data Sources and Surveys) that the 95% confidence level of the mean of the observations is $\pm 10\%$ or less over the route as a whole.</p>
<p>The IACC and Welsh Government have expressed concern about the cumulative impacts of the North Wales Connection project by National Grid. This is a dependant development that would be constructed at the same time.</p>	<p>Chapter 15 (Application Reference Number: 6.9.5) cumulative assessment has included the National Grid traffic data available at the time of the assessment.</p>
<p>North Wales Fire and Rescue and North Wales Police have raised concerns about the following issues:</p> <ul style="list-style-type: none"> • Car vehicle insurance to allow for car sharing; • Long Commute times leading to driver fatigue; • Foreign drivers not aware of UK laws; and • Register of private vehicles used by the Construction Workforce 	<p>The Wylfa Newydd CoCP (Application Reference Number: 8.6) identifies how worker travel would be managed.</p>
<p>North Wales Fire and Rescue and North Wales Police have raised concerns about the following issues:</p> <ul style="list-style-type: none"> • Refuelling strategy for workforce commuting, construction 	<p>The Wylfa Newydd CoCP (Application Reference Number: 8.6) identifies how delivery vehicles for construction would be managed.</p>

Key issue raised	Action taken
equipment and existing fuelling stations; and <ul style="list-style-type: none"> Abnormal Loads. 	
North Wales Police have requested that damage only collisions should be included in the traffic accident assessment	See response in table B3-4.
North Wales Police have requested that the traffic accident assessments include other routes	See response in table B3-7.

Topic-Specific stakeholder engagement

3.3.11 In addition to the three formal stages of consultation outlined above, topic-specific consultation has been undertaken with relevant stakeholders. Table B3-10 summarises the details of the consultation that has taken place with respect to the traffic and transport assessment.

Table B3-10 Key issues raised through stakeholder engagement

Date	Stakeholder	Title and format	Issues arising	Action taken
2014 to date	The IACC	Fortnightly and monthly face-to-face meetings between Horizon's and the IACC's highways/major projects officers to discuss the design and assessment of the A5025 Highway Improvements.	<ul style="list-style-type: none"> A5025 Highway Improvements design development; and traffic modelling methodology. 	No action for traffic and transport.
July 2014	The IACC	Scope of traffic surveys. Face-to-face meeting between Horizon and the IACC.	Agreeing the scope for traffic surveys to be undertaken in August and November 2014.	Traffic surveys commissioned for August and November 2014 based on the agreed scope.
October 2014	Sustrans The IACC	Cycling strategy face-to-face meeting.	<ul style="list-style-type: none"> emerging cycle strategy for the Wylfa Newydd Project and how cycling 	No action for traffic and transport.

Date	Stakeholder	Title and format	Issues arising	Action taken
			<p>provision could be included within the A5025 Highway Improvements; and</p> <ul style="list-style-type: none"> relationship of emerging cycle strategy to planning policy and potential traffic safety considerations. 	
June 2015	The IACC	Web-based PowerPoint presentation.	Present, discuss and agree the proposed assessment methodology and the role of the Integrated Traffic and Transport Strategy.	Revisions to the assessment methodology made based on comments from the meeting.
July 2015	Sustrans	Cycling strategy face-to-face meeting.	Second meeting to further explore the cycling strategy.	No action for traffic and transport.
August 2015	Welsh Government	Traffic and transport issues PowerPoint presentation.	<ul style="list-style-type: none"> provide Welsh Government with relevant Wylfa Newydd Project information; traffic model methodology; current operational issues at Britannia Bridge; and discuss the potential for a mainland Park and Ride facility with space for approximately 1,000 cars. 	A site selection study was undertaken for determining a potential site for a mainland Park and Ride, if required.

Date	Stakeholder	Title and format	Issues arising	Action taken
August 2015	The IACC	Pre-planning application advice. Face-to-face meeting including PowerPoint presentation.	Assumptions adopted in the traffic modelling and assessment work undertaken to date.	No action for traffic and transport.
January 2016	The IACC Gwynedd Council Welsh Government	Pre-planning application advice. Face-to-face meeting.	Discuss and agree the scope of the traffic and transport micro-simulation model at Britannia Bridge.	VISSIM model of Britannia Bridge produced based on agreed scope.
May 2016	Gwynedd Council	Level 3 transport meeting.	Arrange a series of detailed Level 4 meetings on traffic and transportation issues.	Level 4 meetings set up monthly as agreed.
May 2016	Welsh Government Gwynedd Council Natural Resources Wales The IACC	Pre-planning application advice. Face-to-face meeting.	Review themes raised from informal consultation and to arrange a future series of detailed meetings.	Issues raised in consultation incorporated into traffic and transport assessments.
June 2016	The IACC Welsh Government Gwynedd Council	Pre-planning application advice on Britannia Bridge. Face-to-face meeting.	Discuss and agree the scope of the traffic and transport micro-simulation model at Britannia Bridge.	Scope of Britannia Bridge VISSIM model expanded to include Menai Bridge.
August 2016	The IACC Welsh Government	Associated Development highways infrastructure meeting.	Highways issues associated with the Associated Development facilities.	No action for traffic and transport.
September 2016	The IACC Welsh Government	Integrated Traffic and Transport Strategy meeting.	Integrated Traffic and Transport Strategy.	No action for traffic and transport.
9 December 2016	The IACC Welsh Government	Transport Focus Group (Level 3).	Inception Meeting.	

Date	Stakeholder	Title and format	Issues arising	Action taken
		Face-to-face meeting.		
22 December 2016	The IACC Welsh Government Gwynedd CC	Transport Focus Group (Level 4). Face-to-face meeting.	VISSIM Model.	Model issued for verification by Welsh Government.
9 January 2017	The IACC Welsh Government Gwynedd CC	Transport Focus Group (Level 4). Face-to-face meeting.	Freight.	Refinements to the ITTS for clarity.
19 January 2017	The IACC Welsh Government	Transport Focus Group (Level 3). Face-to-face meeting.	VISSIM Freight Management Strategy Travel Demand Management Car Share Strategy	Informed refinement of the ITTS and resulted in later sensitivity testing in the VISSIM Model.
9 February 2017	The IACC Welsh Government Gwynedd CC	Transport Focus Group (Level 3). Face-to-face meeting.	Park & Share Update on freight Menai Crossing cumulative impact	Informed refinement of the ITTS.
2 March 2017	The IACC Welsh Government	Transport Focus Group (Level 4). Face-to-face meeting.	Traffic Model methodology A5025 North & East Safety Study Scope B5111/B5112 safety studies scope Traffic Incident Management Strategy (TIMS) scope VISSIM update Freight update	Refined scope of the studies to take on board stakeholder comments.
9 March 2017	The IACC Welsh Government	Transport Focus Group (Level 3). Face-to-face meeting.	Project Optimisation Update	No actions, confirmation of outcome from

Date	Stakeholder	Title and format	Issues arising	Action taken
	Gwynedd CC		A5025/B5111/B5112 scoping Traffic model methodology VISSIM model update Freight evidence base TIMS scoping Cycling strategy	previous meetings.
16 March 2017	The IACC Welsh Government Gwynedd CC	Transport Focus Group (Level 4). Face-to-face meeting.	Car sharing/Park and Ride	Informed refinement of the ITTS.
6 April 2017	The IACC Welsh Government Gwynedd CC Police Ambulance Fire	Transport Focus Group (Level 4). Face-to-face meeting.	TIMS workshop Construction Traffic Management Strategy (CTMS) – scope Transport Assessment scope Operational Travel Plan (OTP) – scope	Informed refinement of strategies and scope.
13 April 2017	The IACC Welsh Government Gwynedd CC	Transport Focus Group (Level 3). Face-to-face meeting.	A5025/B5111/B5112 assessment methodologies Strategic Traffic model method statement Transport Assessment Scope CTMS scope VISSIM model update Freight Management Strategy OTP Scope TIMS methodology Cycle strategy	Informed ongoing development of strategies.

Date	Stakeholder	Title and format	Issues arising	Action taken
			Street Works Permit Scheme	
27 April 2017	The IACC Welsh Government Gwynedd CC	Transport Focus Group (Level 4). Face-to-face meeting.	Gravity model Worker travel A55 J2 assessment TA Scoping	No actions, confirmation of outcome from previous meetings.
3 May 2017	The IACC Welsh Government Gwynedd CC	Transport Focus Group (Level 3). Face-to-face meeting.	SoCG review Baseline Methodology TA scope Key outstanding issues: Mainland park and ride Park and share Approach to management plans Holyhead Port	No actions.
19 May 2017	The IACC Welsh Government Gwynedd CC	Transport Focus Group (Level 4). Face-to-face meeting.	TIMS Worker travel update HGV profile	
16 June 2017	Welsh Government	Transport Focus Group (Level 2). Face-to-face meeting.	Traffic and Transport update	No actions.
4 October 2017	The IACC / Welsh Government	Transport Focus Group face-to-face meeting.	Traffic and Transport update	Horizon to issue draft Transport Assessment and all appendices by 13 October 2017.
12 December 2017	The IACC	Transport Assessment meeting.	Discussion of IACC comments on Transport Assessment	Further review meeting required.
12 December 2017	Welsh Government	Transport Assessment meeting.	Discussion of Welsh Government comments on	Further review meeting required.

Date	Stakeholder	Title and format	Issues arising	Action taken
			Transport Assessment	

3.4 Topic-specific methodologies and assessment criteria

Introduction

3.4.1 The overarching approach to the EIA, including the approach to the assessment of cumulative effects, is provided in chapter B1 (introduction to the assessment process) (Application Reference Number: 6.2.1). This section outlines the specific methodology used to assess the project-wide effects of the Wylfa Newydd Project on traffic and transport. It outlines the methods and criteria used to:

- define the study area and identify topic receptors;
- establish the environmental baseline for topic receptors; and
- determine the value/sensitivity of receptors, the magnitude of change and significance of effect.

Assessment of parameters

3.4.2 As outlined in chapter B1 (Application Reference Number: 6.2.1), the approach adopted for the design of the WYDA Development, Off-Site Power Station Facilities and Associated Development is to set parameters, where necessary, for the extent of the development and key aspects of that development. The final design and construction methodology would be limited to these parameters and limits of deviation. The flexibility afforded by the parameters has been taken into consideration in the derivation of traffic movements for the construction and operation of the Wylfa Newydd Project. The project-wide traffic and transport assessment is presented in chapter 2 within Volume C (Application Reference Number: 6.3.2).

Identification of study areas

3.4.3 The study area in figure B3-1 (Application Reference Number: 6.2.22) was defined based on an understanding of likely changes in traffic volumes on the existing road network, to focus the assessment on those routes and locations likely to experience significant effects.

3.4.4 Reference was made to the IEA guidelines to help guide the process of identifying the study area. These state that a 30% increase in traffic represents a reasonable threshold for including a section of highway within an assessment. Sensitive areas (e.g. where traffic would pass schools, hospitals, churches) should be assessed where traffic on a section of highway would increase by at least 10%, or if there is a significant increase in HGVs on a section of highway.

3.4.5 The extent of the study area was also informed by consideration of Committed Developments, which comprise developments unrelated to the Wylfa Newydd

Project that have a valid planning consent, and Reasonably Foreseeable Future Projects, which are those developments that are less certain, both of which have the potential to affect future traffic flows.

- 3.4.6 The following sections of the road network on Anglesey and on the mainland were accordingly identified as comprising the study area. These include the likely routes that would be used for both the movement of materials and workers as part of the Wylfa Newydd Project:
- A5025 from Valley Crossroads (A5/B4545/A5025) to the Wylfa Newydd Development Area;
 - A5025 from the Wylfa Newydd Development Area to A55 Junction 8, including Menai Bridge;
 - A55 Junction 1 to Junction 11 (Bangor/Bethesda/A5/A4244), including A55 Britannia Bridge;
 - A5114 at Llangefni;
 - B5111 and B5112 that could be used as an alternative to the A5025; and
 - minor roads that could be used as an alternative to the A5025.
- 3.4.7 For assessment purposes, the study area was subdivided into 48 sections as shown in figure B3-1 (Application Reference Number 6.2.22).

Identification of receptors

- 3.4.8 The receptors for this topic were selected based on the potential for direct or indirect effects from construction and operation of the Wylfa Newydd Project. The groups of receptors are as follows:
- car drivers/passengers using the existing transport network;
 - public transport users on the road network; and
 - non-motorised users using or crossing the road network.
- 3.4.9 Chapter C2 (Application Reference Number: 6.3.2) assesses the potential effects that car drivers/passengers and public transport users may experience during the Wylfa Newydd Project.
- 3.4.10 Chapter C3 (Application Reference Number: 6.3.3) assesses the potential effects that non-motorised users using the highway may experience during the Wylfa Newydd Project.

Identification of baseline conditions

- 3.4.11 In order to establish the current traffic levels within the study area, a programme of data collection was undertaken in August and November 2014, which was agreed with the IACC in July 2014.
- 3.4.12 Manual classified turning count data were originally collected at 35 junctions on the A5025 and western extent of the A55 on Anglesey. Automatic traffic count data were also collected at a number of locations on the A55 to supplement the manual classified turning count data. In the early stages of the original model development, these routes and junctions were identified as

those most likely to witness a material change in traffic flow as a result of the Project.

- 3.4.13 The manual classified turning count surveys were completed for a 14-hour period, from 06:00 to 20:00, over four days in August and November 2014. The surveys were undertaken on:
- Thursday 28 August 2014;
 - Saturday 30 August 2014;
 - Thursday 27 November 2014; and
 - Saturday 29 November 2014.
- 3.4.14 Undertaking traffic surveys on a Tuesday, Wednesday or Thursday is industry-standard practice and is considered to be representative of a typical weekday. Saturday is considered to be representative of a typical weekend day due to longer shopping hours and people travelling to holiday destinations.
- 3.4.15 Traffic surveys were undertaken in August and November, as August is considered to be representative of a peak month for traffic (i.e. peak tourist season) whilst November is considered to be representative of a neutral month for traffic (i.e. 'normal' traffic conditions).
- 3.4.16 As the Project evolved, additional traffic surveys comprising manual classified turning counts and automatic traffic counts were required to capture a wider scope of junctions and links (lengths of road). These additional surveys were undertaken in August and September 2015, March 2016, June 2016, July 2016 and April 2017. Full details of all the surveys are provided in appendix C2-4 (Application Reference Number: 6.3.14).
- 3.4.17 The baseline year used for all traffic assessments was 2016. Growth factors were applied to the traffic data collected in 2014 and 2015 to provide a consistent 2016 baseline. Comparison of traffic data collected in 2016 and 2017 showed there was no significant variation between the two years; therefore, no reverse growth was applied to the 2017 data.
- 3.4.18 Traffic data were incorporated into a Strategic Traffic Model (Application Reference Number: 6.3.21) of the study area and further details are provided in a following section.
- 3.4.19 Personal injury accident data (STATS19) were obtained for the study area for the period 1 January 2011 to 31 December 2015.
- 3.4.20 Link speed data were based on posted speed limits on the road network, but were calibrated to ensure that baseline journey times were representative of existing conditions.
- 3.4.21 Link lengths were derived using OS Open data (OS Open Roads data), which are based on geographical reference points.
- 3.4.22 Further details on data collection can be found in appendix C2-4 (Application Reference Number: 6.3.14). The Transport Assessment also includes information on public transport services and usage.

Technical methodology

- 3.4.23 Quantitative methodologies and techniques were applied in the assessment to identify and evaluate potential effects relating to traffic and transport matters, using a combination of best practice guidance and, as advised in guidance, professional judgement.
- 3.4.24 Based on these judgements the following list specifies the items which have been assessed and the location of the resulting analysis:
- Traffic flows – chapter C2 (Application Reference Number: 6.3.2);
 - Journey times – chapter C2 (Application Reference Number: 6.3.2);
 - Accidents and safety – chapter C2 (Application Reference Number: 6.3.2);
 - Driver stress – chapter C2 (Application Reference Number: 6.3.2);
 - Pedestrian severance and amenity – chapter C3 (Application Reference Number: 6.3.3); and
 - Driver severance and delay – chapter G4 (public access and recreation) (Application Reference Number: 6.7.4).
- 3.4.25 These items relate to the DMRB and IEA guidelines for environmental assessment. In addition, appendix C2-4 (Application Reference Number: 6.3.14) provides a full analysis of the impacts of the Wylfa Newydd Project on the operation of the nearby road and public transport networks (i.e. it provides an assessment of junction performance and the capacity of bus networks).
- 3.4.26 The following years were considered as part of the traffic and transport assessment for the Wylfa Newydd Project:
- 2016 – surveyed flows (baseline);
 - 2020 – opening year of the A5025 Off-line Highway Improvements;
 - 2023 – year for peak construction traffic; and
 - 2033 – year for peak operation traffic.
- 3.4.27 The year 2020 (i.e. Year 2 of the construction programme) was chosen because, based upon the assumed programme, it represents the opening year of the A5025 Off-line Highway Improvements. To provide an assessment of peak project trip generation that assesses the effect of the A5025 Off-line Highway Improvements a 2020 assessment both with and without the A5025 Off-line Highway Improvements in place was completed. 2020 is also the year before opening of the MOLF.
- 3.4.28 The 2023 assessment year (i.e. Year 5 of the construction programme) was selected as it represents the peak year for project trip generation. This includes the maximum project vehicle trip generation incorporating the maximum of Heavy Duty Vehicles and Light Vehicles.
- 3.4.29 Assessment of 2033 (i.e. Year 15 from the start of construction) was included as it represents peak vehicle trip generation associated with operation of the power station. This is because it includes normal operation, two outages (one for each unit) and, although they are not included in the Development Consent Order application, construction of radiological waste buildings.

- 3.4.30 The years assessed represent a snapshot in time for the purposes of assessment and use background traffic growth factors from the 2016 baseline to these future years. As with any assessment it is based on assumptions, consequently the resulting traffic flows are forecasts. The nature of the Project means that in practice there is potential for activities to move forwards or backwards in time. However, the overall programme and phasing is likely to remain broadly similar and as a consequence the use of the years outlined above, and the relatively low year-on-year annual traffic growth (see appendix C2-4, Application Reference Number 6.3.21), means that the conclusions of the assessment would not materially change.
- 3.4.31 The years listed above were assessed by comparing their respective baselines, which include Committed Developments, with Wylfa Newydd Project scenarios. The baseline scenario in each year represents conditions without the additional traffic associated with the Wylfa Newydd Project. A Reference Case incorporating background growth and Committed Developments was assessed for comparison with the Wylfa Newydd Project scenario. The full set of assumptions used to prepare the transport analysis is provided in appendix C2-4 (Application Reference Number: 6.3.14).
- 3.4.32 The AM and PM peak hours used for traffic and transport analysis were those adopted in the appendix C2-4 (Application Reference Number: 6.3.14).

Traffic modelling methodology

- 3.4.33 Underpinning all the analysis of traffic effects of the Wylfa Newydd Project is a Strategic Traffic Model (Application Reference Number: 6.3.21). This was developed to understand the effects that additional traffic associated with the construction and operation of the Wylfa Newydd Project would have on the road network within the study area. The modelling methodology was presented and agreed with the IACC and Welsh Government, and is outlined below. Further details of the modelling methodology are contained within appendix C2-4 (Application Reference Number: 6.3.21).
- 3.4.34 The Strategic Traffic Model (Application Reference Number: 6.3.21) represents an extensive and complex macro-based model developed in Microsoft Excel. Traffic flows for roads and junctions for existing and future traffic scenarios were calculated to inform the traffic assessments (i.e. changes in traffic flows, accidents and safety and driver stress). The Strategic Traffic Model (Application Reference Number: 6.3.21) also provided inputs to the junction assessments contained in appendix C2-4 (Application Reference Number: 6.3.14) and provided traffic inputs to chapters C4 (air quality effects of traffic) (Application Reference Number: 6.3.4) and C5 (noise and vibration effects of traffic) (Application Reference Number: 6.3.5) assessments undertaken as part of the EIA.
- 3.4.35 In summary, the purpose of the model is to inform the technical analysis and support the technical assessments required for the application for development consent.

Change in traffic flows

- 3.4.36 As mentioned in paragraph 3.4.4, IEA guidelines were used to develop the methodology used for assessing changes in traffic flows. These guidelines state that highway links should be separately assessed when:
- traffic flows increase by more than 30%;
 - other sensitive areas are affected by traffic increases of at least 10%; or
 - HGV flows increase significantly.
- 3.4.37 The IEA guidelines state that changes in traffic flows in non-sensitive areas should be assessed as significant if they increase by 30% (slight), 60% (moderate) or 90% (high). There is no specific guidance for the assessment of HGVs, therefore these thresholds, were also used. Where HGVs were close to triggering a threshold, the percentage increase in Heavy Duty Vehicles, comprising HGVs and buses, was also reviewed to provide a worst case assessment.

Journey times

- 3.4.38 Delays to motorised users and public transport users can occur on the road network due to changes in traffic flows.
- 3.4.39 The IEA guidelines note that where roads affected by a new development are at or near capacity, traffic associated with a new development can cause or add to vehicle delays through changes in speeds, flows and/or composition. Changes in motorised journey times can occur because of new speed limits enforced by the local highway authority, and because of temporary traffic management measures on the road network. Based on IEA guidelines and DMRB Volume 11, changes in journey times are assessed as significant if they increase by 30% (slight), 60% (moderate) or 90% (high).
- 3.4.40 Motorised users potentially affected by changes in journey times comprise those making private and work-related journeys in vehicles and passengers of vehicles. Public transport users potentially affected by changes in journey times are those reliant on public transport, in this case bus services.
- 3.4.41 Based on a worst-case assumption that vulnerable drivers (i.e. novice drivers, elderly drivers, mopeds/motorcyclists [RD21]) may be affected by changes in journey times, all drivers are considered to be of a high sensitivity to delays.
- 3.4.42 As delays can affect bus passengers along routes within the study area, these users are considered to be of high sensitivity to delays given their reliance on the set journey times and patterns associated with public transport.
- 3.4.43 The scope of the assessment has focused on identifying changes to existing journey times for drivers and public transport users within the defined study area using quantitative techniques. Emphasis was placed on evaluating effects where there is a predicted change in delay.
- 3.4.44 A spreadsheet was produced to calculate journey times, using the speed, distance and time calculation outlined below. Junction delays were calculated for each development scenario. The change in journey times on a link was determined by adding the junction delay to the baseline journey time on that link. Further details on journey time calculations can be found in chapter C2

(Application Reference Number: 6.3.2). The formula for calculating the journey time is:

- Journey Time = $\frac{\text{Link Length (m)}}{\text{Link Speed (m/s)}} + \text{Junction Delay}$

3.4.45 The journey time calculations were based on the following information:

- link speed – speeds were assigned to links based on the posted speed limit. The speeds were then adjusted to account for carriageway geometry and the general composition of the traffic flow (i.e. to allow for bends in the road and the HGV and buses/coaches mix on the section of road). This provides a more representative assessment of actual vehicle speeds. For example, links with bends would have the link speed reduced by 10mph or 15mph depending on the severity of the bend. The following assumptions were made:
 - the speed along the A55 was assigned as 65mph;
 - HGV and buses/coaches speed along all 'A' roads and B5111/B5112 was assigned as 45mph (unless the speed limit of the road was less). The maximum speed of 45mph reflects the slow acceleration of HGVs and buses/coaches after negotiating bends.
 - HGV and buses/coaches speed along the new bypasses were assigned based on speed restrictions for HGVs and buses (50mph) on single carriageway roads;
 - HGV and buses/coaches speeds along minor roads were assigned as 35mph (unless speed limit of road was less) due to narrow roads and poor visibility; and
 - Links with a speed of 30mph were not assigned 'Sharp' or 'Slight'. HGVs and buses/coaches were assumed to travel at 30mph on links with a speed of 30mph
- junction delay – junction assessment results taken from industry-standard software (Junctions 9, ARCADY and PICADY and LinSig v3) for the baseline and Wylfa Newydd Project scenarios. Junction assessment results provide the total delay, in seconds, for vehicles travelling through the junction and full details are provided in the appendix C2-4 (Application Reference Number: 6.3.14); and
- link lengths – derived using OS Open data (OS Open Roads data) – [RD22]. The length of the link was derived in kilometres using geographical reference points.

3.4.46 The merge and diverge arrangements of the A55 on the approaches to the Britannia Bridge mean that a VISSIM traffic model has been used to provide a more accurate estimate of vehicle journey times in this part of the study area. Full details of the VISSIM model are provided in appendix C2-4 (Application Reference Number: 6.3.23).

3.4.47 It should be noted that the VISSIM model was used to provide two slightly different estimates of journey times across A55 Britannia Bridge. The journey

time estimates used in appendix C2-4 (Application Reference Number: 6.3.23) consider the wider network around the bridge. The journey time estimates used in chapter C2 (Application Reference Number: 6.3.2) are only for A55 Britannia Bridge itself.

Accidents and safety

- 3.4.48 The risk of personal injury accidents on the road network is related to several factors including traffic flows and vehicle speeds.
- 3.4.49 As traffic flows could increase on some roads as a result of the Wylfa Newydd Project, an increase in accident risk could occur within the study area during periods when there would be an increase in traffic. Those potentially affected by increased accident risk comprise vehicle drivers and passengers, public transport users and non-motorised users using or crossing the road network.
- 3.4.50 Data were extracted from publicly available STATS19 data [RD18] for records covering a five-year period from 1 January 2011 to 31 December 2015 for the study area. This is the most recent complete five-year calendar period for which data were available at the time the assessment was completed. The data were interrogated as part of the assessment to establish the nature, location and frequency of recorded accidents in order to identify any accident clusters and/or emerging patterns of accident types, and any factors contributing to their occurrence. The criterion used to identify a potential accident cluster site requires that there are at least four personal injury accidents in a three-year period within a 100-metre diameter [RD23].
- 3.4.51 As there are no general thresholds for determining the significance of increased traffic on highway safety, quantitative assessment techniques were used to determine the likely changes in accident risk and safety. The assessment was undertaken using information contained within the accident records, a review of the characteristics of the study area, and the type and volume of traffic likely to be generated by the construction and operation of the Wylfa Newydd Project.
- 3.4.52 The use of industry standard software (e.g. COBA-LT) was considered; however, accident rates were much higher in the software than the observed accident history in the study area. Future accident levels are assumed to be commensurate with existing levels adjusted for changes in traffic flow. Therefore, increases in accidents were derived by calculating percentage changes between the AADT traffic flows in the baseline and baseline plus the Wylfa Newydd Project scenarios. The percentage changes were then applied to the existing accident data on the road network within the study area. For the A5025 Off-line Highway Improvements, accident rates were assigned; as standard accident rates are higher than local accident rates along the existing A5025 between Valley and Tregel, an adjustment was made to account for this. The approach to accident rates is described in appendix C2-4 (DCO TA Appendix E - Accident Analysis) (Application Reference Number: 6.3.19). For these sections only, the accident analysis undertaken was based on the method set out in Reported Road Casualties Great Britain [RD24] Accident clusters were also identified and common causes reviewed.

Driver stress

- 3.4.53 The driver stress assessment was undertaken based on the methodology outlined in DMRB [RD16].
- 3.4.54 Driver stress is defined as the adverse mental and physiological effects experienced by a driver traversing a road network; such stress can be caused by frustration and route uncertainty [RD16].
- 3.4.55 The driver stress assessment uses available traffic flow data and site visit observations.
- 3.4.56 The scope of the assessment has focused on identifying the likely levels of driver stress currently experienced by motorised users on the road network within the study area, compared with the likely levels of driver stress for each Wylfa Newydd Project scenario.
- 3.4.57 The methodology has applied different criteria for dual carriageways and single carriageway roads. Hourly traffic flows are examined together with typical vehicle speeds to characterise each assessed link as providing 'high', 'moderate' or 'low' levels of driver stress.

Other Assessed Items

- 3.4.58 The methodologies associated with other assessed items are provided in the following locations of the Environmental Statement:
- Pedestrian severance and amenity – chapter C3 (Application Reference Number: 6.3.3);
 - Driver severance – chapter G4 (Application Reference Number: 6.7.4); and
 - Transport assessment (including assessment of junction performance etc.) – appendix C2-4 (Application Reference Number: 6.3.14).

Assessment of effects

- 3.4.59 The following section describes the criteria specific to this chapter used for evaluating the environmental effects associated with traffic and transport.
- 3.4.60 For the purposes of this assessment, the following periods were defined based on professional judgement:
- short-term – activities and/or effects lasting for a duration of up to two-years;
 - medium-term – activities and/or effects lasting for a duration of between two to five-years; and
 - long-term – activities and/or effects lasting for a duration of longer than five-years.

Value or sensitivity of receptors

- 3.4.61 Sensitivity is generally focused on the vulnerability of receptors and the degree to which they can tolerate, adapt to or recover from changes in transport conditions.
- 3.4.62 The assessment criteria presented in tables B3-11 and B3-12 were used to guide the identification and assessment of the potential effects on transport-related areas, locations and receptors within the study area. This is based on the generic criteria presented in table B1-1, chapter B1 (Application Reference Number: 6.2.1).
- 3.4.63 Professional judgement was applied when ascribing overall sensitivity/value and magnitude of change ratings in instances where more than one value may apply.

Table B3-11 Criteria for determining the value of traffic and transport receptors

Value (sensitivity)	Traffic and transport-specific criteria
High	<p>Locations of highest sensitivity or vulnerability to change. These can comprise congested junctions and routes, routes with high levels of accidents or collision clusters, or roads without footways or cycleways.</p> <p>Users of highest sensitivity or vulnerability to change. These can comprise drivers, pedestrians, cyclists and equestrians who are inexperienced, young, elderly or disabled.</p>
Medium	<p>Locations of moderate sensitivity or vulnerability to change. These can comprise junctions and carriageway sections prone to queuing and congestion, routes with moderate levels of recorded accidents, or roads with narrow/intermittent footways or unsegregated cycleways.</p> <p>Users of moderate sensitivity or vulnerability to change. These can comprise drivers, pedestrians, cyclists and equestrians who may be unfamiliar with existing routes or who make infrequent journeys.</p>
Low	<p>Locations with low sensitivity or vulnerability to change. These can comprise junctions and carriageway sections that suffer from occasional congestion, roads with low levels of recorded accidents or roads with adequate footways or cycleways.</p> <p>Users with low sensitivity or vulnerability to change. These can comprise drivers, pedestrians, cyclists and equestrians who are frequent users of rural roads and Public Rights of Way.</p>
Negligible	<p>Locations of limited sensitivity or vulnerability to change. These can comprise free-flowing sections of carriageway and junctions that operate within capacity,</p>

Value (sensitivity)	Traffic and transport-specific criteria
	<p>routes with limited incidence of accidents and roads with clearly defined segregation for non-motorised users.</p> <p>Users of limited sensitivity or vulnerability to change. These can comprise experienced drivers, pedestrians, cyclists and equestrians with considerable knowledge of the locality, and professional drivers.</p>

Magnitude of change

3.4.64 The magnitude of change is a measure of the scale or extent of the change in the baseline condition, irrespective of the value of the receptor(s) affected. The criteria used to determine the magnitude of change are set out in table B3-12 with regard for the generic criteria outlined in table B1-2, chapter B1 (Application Reference Number: 6.2.1).

Table B3-12 Criteria for determining magnitude of change for topic receptors

Magnitude of change	Topic-specific criteria
Large	<ul style="list-style-type: none"> • substantial or total loss of capability for movement or improvement in movement along or across transport corridors; • change in traffic flows, journey times, accidents or driver stress of 90% or greater; • substantial reductions or improvements in highway safety due to increased or reduced accident risk; • substantial delays or improvements to vehicle and non-motorised user journeys; and • alteration to existing driver stress levels, such that the driving experience is substantially affected or improved.
Medium	<ul style="list-style-type: none"> • moderate loss of capability for movement or improvement in movement along or across transport corridors; • change in traffic flows, journey times, accidents or driver stress of 60% or greater; • moderate reductions or improvements in highway safety due to increased or reduced accident risk; • moderate delays or improvements to vehicle and non-motorised user journeys; and • alteration to existing driver stress levels, such that the driving experience is moderately affected or improved.
Small	<ul style="list-style-type: none"> • minor loss of capability for movement or improvement in movements along and across transport corridors;

Magnitude of change	Topic-specific criteria
	<ul style="list-style-type: none"> • change in traffic flows, journey times, accidents or driver stress of 30% or greater, or a change of 10% or greater is in a sensitive area (e.g. outside a school, home or workplace); • minor reductions or improvements in highway safety due to increased or reduced accident risk; • minor delays or improvements to vehicle and non-motorised user journeys; and • alteration to existing driver stress levels, such that there would be a measurable change, but one where the driving experience is not noticeably diminished or improved.
Negligible	<ul style="list-style-type: none"> • very little appreciable change to loss of capability for movement or improvement in movement along and across transport corridors; • very little appreciable change to reductions or improvements in highway safety due to increased or reduced accident risk; • very little appreciable change to delays or improvements to vehicle and non-motorised user journeys; and • very little appreciable change to existing driver stress levels, not considered enough to diminish or improve the driving experience.

Assessment of significance

3.4.65 The degree of significance is influenced by the value of a receptor and the magnitude of the predicted change from the baseline condition as described in chapter B1, section B1.4 (Application Reference Number: 6.2.1). The traffic and transport assessment was based on the significance criteria outlined in table B3-13, based on guidance set out in [RD17].

Table B3-13 Criteria for determining significance

Significance Category	Topic-specific criteria
Major	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor

Significance Category	Topic-specific criteria
Minor	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project.
Negligible	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

3.4.66 The determination of the significance of effect has taken account of identified embedded and good practice mitigation measures that would be put in place to reduce adverse effects, and was undertaken by way of combining the above criteria using the methodology presented above.

3.4.67 Chapter B1 (Application Reference Number: 6.2.1) provides further explanation of the types of mitigation undertaken.

Limitations

3.4.68 Scope, methodology or data limitations of the traffic and transport assessment are:

- Accident data analysis has been based on data from 2015 which were the latest data available at the time of assessment; and
- Allowance for traffic associated with Committed and Dependent Developments is based on information available at the time of assessment.

3.5 References

Table B3-14 Schedule of references

ID	Reference
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RD3	Welsh Assembly Government. 2008. <i>The Wales Transport Strategy</i> . [Online]. [Accessed: 15 November 2016]. Available from: http://gov.wales/docs/det/publications/140909-transport-strategy-en.pdf .

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RD5	Welsh Assembly Government. 2007. <i>Technical Advice Note 18: Transport</i> . [Online]. [Accessed: 15 November 2016]. Available from: http://gov.wales/docs/desh/publications/070301tan18en.pdf .
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	island-news/new-nuclear-build-at-wylfa-supplementary-planning-guidance/123426.article .
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