Awel y Môr Offshore Wind Farm

Category 6: Environmental Statement

Volume 3, Chapter 9: Traffic and Transport

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Glossary of terms

TERM	DEFINITION
AyM	The Awel y Môr Offshore Wind Farm.
The Applicant	Awel y Môr Offshore Wind Farm Limited.
Development Consent Order	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP) from the Secretary of State (SoS) for Business, Energy and Industrial Strategy (BEIS).
EIA	Environmental Impact Assessment (the process of evaluating the likely environmental impacts of a proposed project or development)
ES	Environmental Statement (the documents that collate the processes and results of the EIA).
Evidence Plan	A non-statutory, voluntary process to help agree the information to supply to the Planning Inspectorate (PINS) as part of a Development Consent Order (DCO) application.
Export Cable Corridor (ECC)	The area(s) where the export cables will be located.

TERM	DEFINITION
First principles	A method based on the quantities of materials required for the construction of AyM and the corresponding number of heavy goods vehicles (HGVs) required and the number of expected construction workers.
Haul Roads	Temporary access roads used by construction traffic to access the construction work areas.
Maximum Design Scenario (MDS)	The maximum design parameters of the combined project assets that result in the greatest potential for change in relation to each impact assessed.
Mitigation	Mitigation measures are commitments made by the project to reduce and/or eliminate the potential for significant effects to arise as a result of the project. Mitigation measures can be embedded (part of the project design) or secondarily added to reduce impacts in the case of potentially significant effects.
Onshore Export Cable Corridor (onshore ECC)	The proposed cable route which represents a corridor, typically 40 m to 60 m wide, within which the cable trenching, haul road and stockpiling areas associated with

TERM	DEFINITION
	cable construction, will be located.
PEIR	Preliminary Environmental Information Report. The PEIR was written in the style of a draft Environmental Statement (ES) for the statutory consultation.
Route section	A defined section of the onshore ECC route
Shuttle working	One-way traffic operation on a highway link to allow construction works in part of the carriageway.
STOP/ GO Boards	Manually operated temporary traffic control system
OnSS Construction Area	The area within which the substation construction would take place. This area incorporates both the Substation Footprint and areas of cut and fill required to construct the substation platform.
OnSS Access Zone	The area which will contain final substation access route (both construction and operational) – The route of the construction and operational access will be confirmed following detailed design (post consent)
OnSS Cable Corridor Zone	The area which will contain the final cable connection into and out of the substation. The route of the cable connections to the

TERM	DEFINITION
	substation will be confirmed following detailed design (post consent). The cable route will be either east or west of the pond located immediately south of the substation.
Town and County Panning (Environmental Impact Assessment) Regulations 2017.	The regulations that govern the process of Environmental Impact Assessment in the context of town and country planning.
Wheelbase	The distance between the front and rear axles of a vehicle.
400 kV connection	400 kV cable connection between the proposed AyM substation and the grid connection point

Abbreviations and acronyms

TERM	DEFINITION
AADT	Annual Average Daily Traffic
AIL	Abnormal Indivisible Load
ALAR	Abnormal Load Assessment Report
ATC	Automatic Traffic Count
ATRs	Active Travel Routes
AyM	Awel y Môr Offshore Wind Farm
CCBC	Conwy County Borough Council
CoCP	Code of Construction Practice

TERM	DEFINITION
CTMP	Construction Traffic Management Plan
DCC	Denbighshire County Council
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
ES	Environmental Statement
ESDAL	Electronic Service Delivery for Abnormal Loads
ETG	Expert Topic Group
GEART	Guidelines on the Environmental Assessment of Road Traffic
GyM	Gwynt y Môr Offshore Wind Farm
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
IEMA	Institute of Environmental Management and Assessment
LDP	Local Development Plan
LGV	Light Goods Vehicle
LRN	Local Road Network
LTP	Local Transport Plan
MDC	Maximum Design Scenario
MLHC	Ministry for Levelling Up, Housing and Communities
NCN	National Cycle Network
NMWTRA	North and Mid Wales Trunk Road Agent

TERM	DEFINITION
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Projects
NTM	National Transport Model
OGV	Other Good Vehicle
Onshore ECC	Onshore Export Cable Corridor
OnSS	Onshore Substation
PAMP	Public Access Management Plan
PEIR	Preliminary Environmental Information Report
PIA	Personal Injury Accident
PINS	The Planning Inspectorate
PRoW	Public Right of Way
SDP	Strategic Development Plan
SRN	Strategic Road Network
TAN	Technical Advice Note
TEMPRO	Trip End Model Presentation Program
TJB	Transition Joint Bay
TP	Travel Plan
WCH	Walkers, Cyclists and Horse-riders

Units

UNIT	DEFINITION
km	Kilometre
M	Metre

9 Traffic and Transport

9.1 Introduction

1 This chapter considers the likely significant effects associated with the onshore elements of the Awel y Môr Offshore Wind Farm (AyM) on traffic and transport.

2 In particular it considers the construction, operational and decommissioning onshore activities.

3 The chapter is complemented with the following technical annexes:

- Volume 5, Annex 9.1 Baseline Technical Report (application ref: 6.5.9.1);
- Volume 5, Annex 9.2 Trip Generation and Distribution Calculations (application ref: 6.5.9.2);
- Volume 5, Annex 9.3 Percentage Impact Calculations and Assessment Screening (application ref: 6.5.9.3);
- Outline Code of Construction Practice (CoCP) (application ref: 8.13), Appendix 7: Outline Construction Traffic Management Plan (Outline CTMP) (application ref: 8.13.7);
- Outline Code of Construction Practice (CoCP), Appendix 8 Outline Public Access Management Plan (PAMP) (application ref: 8.13.8); and
- Outline Code of Construction Practice (CoCP), Appendix 9 Outline Travel Plan (TP) (application ref: 8.13.9);

4 The chapter has also been informed by the following ES chapter:

- Volume 3, Chapter 1: Onshore Project Description (application ref: 6.3.1)

9.2 Statutory and policy context

5 This section sets out the legislation, policy and guidance that are of relevance to traffic and transport and have informed the development of the ES.

9.2.1 Legislation

Active Travel (Wales) Act 2013

6 The Active Travel (Wales) Act 2013 is a document developed as landmark Welsh legislation to make it easier for people to walk and cycle in Wales with a focus on walking and cycling for transport rather than leisure. The Act sets out Welsh Government's intention to seek to enable more people to walk, cycle and travel by more active methods than by car.

7 It is intended to:

- Ensure more people can experience the health benefits of active travel;
- Reduce greenhouse gas emissions;
- Help address poverty and disadvantage; and
- Help the economy to grow by unlocking sustainable economic growth.

8 The Active Travel (Wales) Act 2013 requires planning authorities to make provision for, map and promote 'Active Travel Routes' (ATRs) for pedestrians and cyclists. It is then the developer's responsibility to acknowledge the existing local ATRs and ensure that there are sufficient connections from the development to the existing network, so that future residents have a clear, direct and safe route from their homes to the wider active travel network.

9 The ATRs that are likely to be impacted by the onshore elements of AyM have been identified through discussions with Denbighshire County Council (DCC) through the Evidence Plan process (see Section 3.3 and Section 3.4.2 of Volume 1, Chapter 3: EIA Methodology (application ref: 6.1.3)) at Traffic and Transport Expert Topic Group (ETG) meetings, as set out in Table 2.

9.2.2 National policy

National Policy Statements

10 The assessment of the potential traffic and transport impacts of the onshore elements of AyM has been made with reference to the UK Government's National Policy Statements (NPSs). Key policies for traffic and transport are listed in Table 1.

11 NPSs set out policies or circumstances that the UK Government considers should be taken into account in decisions on Nationally Significant Infrastructure Projects (NSIPs). Those relevant to AyM are:

- Overarching NPS for Energy (EN-1) (DECC 2011a);
- NPS for Renewable Energy Infrastructure (EN-3) (DECC 2011b); and
- NPS for Electricity Networks Infrastructure (EN-5) (DECC 2011c).

12 In addition to the current NPS, draft NPSs were consulted on between September and November 2021. The draft NPSs have been reviewed to determine the emerging expectations and changes from previous iterations of the NPSs. This includes the Draft Overarching NPS EN-1 (DECC, 2021a), EN-3 (DECC, 2021b) and EN-5 (DECC, 2021c).

The National Development Framework: Future Wales – the National Plan 2040

13 The Planning (Wales) Act 2015 requires Welsh Ministers to produce and keep up-to-date the National Development Framework (Future Wales). Future Wales must cover a 20 year period accommodating Welsh Government priorities into a single, coherent direction, indicating the land use implications of key goals and objectives.

14 Future Wales sets out the Welsh Government's land use priorities and provides a national land use framework for Strategic Development Plans (SDPs) and Local Development Plans (LDPs). Future Wales concentrates on development and land use issues of national significance, indicating areas of major opportunities and change, highlighting areas that need protecting and enhancing and helping to co-ordinate the delivery of Welsh Government policies to maximise positive outcomes.

15 Future Wales forms part of the statutory development plan. SDPs and LDPs must be in general conformity with Future Wales. This is tested through the examination process.

16 Future Wales states that the planning system should enable people to access jobs and services through shorter, more efficient and sustainable journeys, by walking, cycling and public transport. By influencing the location, scale, density, mix of uses and design of new development, the planning system can improve choice in transport and secure accessibility in a way which supports sustainable development, increases physical activity, improves health and helps to tackle the causes of climate change and airborne pollution by:

- "Enabling More Sustainable Travel Choices – measures to increase walking, cycling and public transport, reduce dependency on the car for daily travel;
- Network Management – measures to make best use of the available capacity, supported by targeted new infrastructure; and
- Demand Management – the application of strategies and policies to reduce travel demand, specifically that of single-occupancy private vehicles."

17 During the construction phase of AyM, the above objectives would be supported as follows:

- The implementation of measures to encourage sustainable travel for construction workers are set out in the Outline TP (Appendix 9 of the Outline CoCP (application ref: 8.13.9)), including the promotion of car sharing;
- The majority of vehicle movements associated with the construction workforce would be outside of the highway peak hours, as identified in Section 9.8.2; and

18 The management of AyM construction traffic is set out in the Outline CTMP in (Appendix 7 of the Outline CoCP (application ref: 8.13.7)).

Llwybr Newydd: The Wales Transport Strategy 2021

19 The Wales Transport Strategy was published in 2021 and sets out the Welsh Government's vision for how Wales's transport system can help deliver the following priorities:

- Bring services to people in order to reduce the need to travel;
- Allow people and goods to move easily from door to door by accessible, sustainable transport; and

- Encourage people to make the change to more sustainable transport.

20 In order to meet the above priorities, the Welsh Government will invest in improving road safety, addressing congestion and adapting transport infrastructure to a changing climate and upgrade it to support modal shift.

21 The Wales Transport Strategy sits between Future Wales - the National Plan 2040 and Regional Transport Plans (see Section 9.2.3) and supports local authorities in Wales for the planning of, and delivering, transport services and networks in local areas, including improving bus services, supporting active travel, COVID-19 recovery and community transport initiatives.

22 Section 4.5 of the Wales Transport Strategy identifies existing transport policy, such as Technical Advice Note (TAN) 18: Transport (see paragraphs 28 to 33) which will be updated, in addition to trunk road maintenance standards and the Road Safety Framework for Wales (2013) Additionally, a review of the approach the Welsh Government takes to local speed limits will be undertaken.

23 The Wales Transport Strategy is supported by the following mini-plans:

- Active Travel;
- Bus;
- Rail;
- Road, streets and parking;
- Third sector;
- Taxis and private hire vehicles;
- Freight and logistics;
- Ports and maritime transport; and
- Aviation

24 Some of the priorities and ambitions set out on the mini plans would be supported during the construction of AyM:

"Active travel networks are well maintained and managed"

25 The ATRs that are impacted by the construction of AyM will be managed through the implementation of measures set out in in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8))).

"Fewer car and private vehicles journeys have resulted in better air quality and contribute to decarbonisation"

26 The principles that will be used to guide the implementation of sustainable travel measures for the construction workforce are provided in the Outline TP (Appendix 9 of the Outline CoCP (application ref: 8.13.9)) to ensure the number of car journeys associated with the AyM construction phase are minimised.

Planning Policy Wales

27 Planning Policy Wales (PPW) Edition 11 was published in February 2021. It sets out the land use planning policies of the Welsh Government and its commitment to sustainable development. PPW is supported by topic based Technical Advice Notes (TANs).

28 TAN 18 Transport, published in March 2007, sets out the Welsh Government's aim for integration of land use planning and transport in order to achieve a sustainable pattern of development. TAN 18 places emphasis on sustainability and the need for sustainable development patterns. Integration is identified as a means of helping the Welsh Government achieve its wider sustainable development policy objectives by:

- "promoting resource and travel efficient settlement patterns;
- ensuring new development is located where there is, or will be, good access by public transport, walking and cycling thereby minimising the need for travel and fostering social inclusion;
- managing parking provision;
- ensuring that new development and major alterations to existing developments include appropriate provision for pedestrians (including those with special access and mobility requirements), cycling, public transport, and traffic management and parking/servicing;
- encouraging the location of development near other related uses to encourage multiple-purpose trips;
- promotion of cycling and walking;

- supporting the provision of high quality, inclusive public transport;
- supporting provision of a reliable and efficient freight network;
- promoting the location of warehousing and manufacturing developments to facilitate the use of rail and sea transport for freight;
- encouraging good quality design of streets that provide a safe public realm and a distinct sense of place; and
- ensuring transport infrastructure or service improvements necessary to serve new development allow existing transport networks to continue to perform their identified functions."

29 Section 6 of TAN 18 focuses on the needs of walkers and cyclists and the requirement to safeguard routes for walkers, cyclists and horse-riders. Whilst the construction phase of the onshore elements of AyM would require temporary closure or management of a number of ATRss and PRoWs, these temporary closures would be discussed and agreed with DCC and managed accordingly through the approval of a final Public Access Management Plan (PAMP) (an outline version is provided in Appendix 8 of the Outline CoCP (application ref: 8.13.8)).

30 The construction phase of AyM would require a number of temporary access and haul road crossing points (currently anticipated to be around 22 locations).

31 The requirements for new accesses are set out within Section 9.16 of TAN 18. In accordance with the visibility standards detailed within Annex B of TAN 18, speed surveys have been undertaken along the road links where new or improved access junctions would be required, to inform the visibility requirements.

32 The location and design of the construction and permanent access points will be confirmed via detailed design and provided for approval by DCC through the final Construction Traffic Management Plan (CTMP) that will form part of the final CoCP. The type of traffic management measures that will be implemented during construction of AyM are set out in the Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7)). Specific traffic management measures for each construction access location will be developed and agreed with DCC, or for two of the proposed construction access locations that connect to the strategic road network (SRN), the North and Mid Wales Trunk Road Agent (NMWTRA) prior to the commencement of construction.

33 Annex D of TAN 18 focuses specifically on 'Transport Assessment' and emphasises the importance of undertaking early scoping discussions with local authorities. As described within Volume 5, Annex 9.1, consultation has been undertaken with DCC, Conwy County Council (CCBC) and the NMWTRA (on behalf of the Welsh Government) to discuss the scope of the transport assessment, which is incorporated within this chapter.

9.2.3 Local policy

North Wales Regional Transport Plan (Taith, 2009)

34 This document sets out the transport plan for the six North Wales Local Authorities in Taith (the North Wales Regional Transport Consortium).

35 Taith's vision is to deliver safe sustainable and efficient transport networks to support the economic and social activities of North Wales' diverse communities and businesses having regard to its strategic European role.

36 The priorities include:

- Efficiently meeting North Wales' diverse transport needs;
- Reducing congestion and journey times;
- Supporting development;
- Safe, efficient, sustainable transport networks;
- Smart traffic planning and management; and
- Sustainable transport

37 The vehicular access strategy for the construction of AyM has taken into account the need to minimise congestion on the highway network as the majority of vehicle movements associated with the construction workforce would be outside of the highway peak hours, as identified in Section 9.8.2. The management of AyM construction traffic in order to minimise the number of vehicle movements in the highway peak hours is set out in the Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7)).

38 The promotion of sustainable travel for the AyM construction workforce including the promotion of car sharing, is set out in the Outline TP (Appendix 9 of the Outline CoCP (application ref: 8.13.9)).

North Wales Joint Local Transport Plan (2015)

39 The Local Transport Plan (LTP) has been jointly produced by the six North Wales Local Authorities. The document covers a detailed programme from 2015-2020 and a framework for schemes until 2030. The LTP is a statutory document that sits alongside the Local Development Plans and other policies and plans of each of the Local Authorities.

40 The outcomes of the LTP include:

- Connections to key destinations and markets: support for economic growth through an improvement in the efficiency, reliability, resilience, and connectivity of movement;
- Access to services: promotion of social inclusion and well-being through inclusive and affordable access to education;
- Increasing levels of walking and cycling: for both necessary travel and recreation, by residents and visitors;
- Improved safety and security: of both actual and perceived safety of travel by all modes; and
- Benefits and minimised impacts on the environment: the potential for transport improvements to positively affect the local and global natural and built environment will have been maximised and negative impacts minimised, including adaptation to the effects of climate change.

DCC Local Development Plan (LDP) 2006-2021

41 The DCC LDP 2006-2021 was adopted in 2013 and sets out the broad approach that will be taken in addressing DCC's development needs in a sustainable manner. It takes account of other local, regional and national policies, key issues facing DCC and the LDP Vision and objectives.

42 DCC is preparing a new LDP to replace the adopted plan, which expired in December 2021. At the time of writing (April 2022), the LDP remains under preparation. In lieu of the replacement LDP reference has instead been made to the existing LDP and supplemented by consultation with DDC through the AyM Evidence Plan, as detailed in Table 1.

43 Sustainable development lies at the heart of the LDP as it underpins the objectives of the LDP and has been applied to the land use policies and land allocations that form the detail of the LDP. The sustainability of the LDP has been thoroughly tested via the Sustainability Appraisal process (incorporating Strategic Environmental Assessment), details of which can be found in the Sustainability Appraisal report that accompanies the LDP.

44 Policy RD 1 - Sustainable development and good standard design sets out that development proposals will be supported providing a range of criteria are met including:

"Does not have an unacceptable effect on the local highway network as a result of congestion, danger and nuisance arising from traffic generated and incorporates traffic management/ calming measures where necessary and appropriate. A transport assessment and travel plan will be required where appropriate."

45 The specific assessment requirements for traffic and transport are summarised in Table 1 together with an indication of where each requirement is addressed.

46 Where a requirement has not been followed within the assessment, an explanation as to why the requirement was not deemed relevant, or has been met in another manner, is provided.

Table 1: Key Policy requirements.

POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
NPS EN- 1	Paragraph 5.13.3 (EN-1) states: *"If a project is likely to have significant transport implications, the applicant's ES should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport (DfT) guidance, or any successor to such methodology."*	This chapter of the ES and supporting annexes have been produced in accordance with current transport guidance and this is evidenced throughout.
Draft NPS EN-1	Paragraph 5.14.3 states: *"If a project is likely to have significant transport implications, the applicant's ES should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport (DfT) guidance, or any successor to such methodology."*	This chapter of the ES and supporting annexes have been produced in accordance with current transport guidance and this is evidenced throughout.
NPS EN- 1	Paragraph 5.13.4 states: *"Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to*	Section 9.9 outlines the embedded traffic and transport mitigation measures for the construction phase of AyM, such as the Outline TP (Appendix 9 of the Outline CoCP (application ref: 8.13.9)) The Outline TP will

POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
	reduce the need for parking associated with the proposal and to mitigate transport impacts."	include demand management measures to be adopted.
Draft NPS EN-1	Paragraph 5.14.4 states: *"Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts."* *"The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports)."*	Section 9.9 outlines the embedded traffic and transport mitigation measures for the construction phase of AyM, such as the Outline TP (Appendix 9 of the Outline CoCP (application ref: 8.13.9)) The Outline TP will include demand management measures to be adopted. Section 9.10 sets out the assessment of the likely effects on the roads within the study area as a result of the construction phase of AyM. Table 2 sets out how the assessment of disruption to the railway has been scoped out.
NPS EN-1	Paragraph 5.13.6 states: *"A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC*	Section 9.10 sets out the assessment of the likely traffic and transport effects as a result of the construction phase of AyM. With the

POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
	should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below"	mitigation identified in this chapter (Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7), Outline PAMP (Appendix 8 of the Outline CoCP (Application ref 8.13.8) and Outline TP (application ref: 8.13.9)), the impact on the transport infrastructure is considered to be at acceptable levels with no additional mitigation required.
Draft NPS EN-1	Paragraph 5.14.6 states: *"A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider requirements to mitigate adverse impacts on transport*	Section 9.10 sets out the assessment of the likely traffic and transport effects as a result of the construction phase of AyM. With the mitigation identified in this chapter (Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7), Outline PAMP (Appendix 8 of the Outline CoCP (Application ref 8.13.8) and Outline TP (application ref: 8.13.9)), the impact on the transport infrastructure is considered to be

POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
	networks arising from the development, as set out below"	at acceptable levels with no additional mitigation required.
Draft NPS EN-1	Paragraph 5.14.8 states: *"The Secretary of State should only consider preventing or refusing development on highways grounds if there would be an unacceptable impact on highway safety, or residual cumulative impacts on the road network would be severe."*	The assessment of road safety in relation to the additional traffic associated with the construction phase of AyM is set out in Section 9.10.3. It is concluded that there are no significant road safety effects, with any impacts further reduced by the types of traffic management measures that would be implemented as set out in the Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7) and therefore considered to be an acceptable impact. No cumulative impact assessment has been undertaken (the justification is set out in Section 9.12.)
NPS EN-3	Paragraph 2.6.4 states: *"The extent to which generic impacts set out in EN-1 are relevant may depend upon the phase of the*	This chapter does not include an assessment of the traffic impacts associated with operation and maintenance or the

POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
	proposed development being considered. For example, land-based traffic and transport and noise issues may be relevant during the construction and decommissioning periods only, depending upon the specific proposal."	decommission phase of AyM as set out in Section 9.4.3 and 9.4.4.
Draft NPS EN-3	Paragraph 2.20.4 states: "*The extent to which generic impacts set out in EN-1 are relevant may depend upon the phase of the proposed development being considered. For example, land-based traffic and transport and noise issues may be relevant during the construction and decommissioning periods only, depending upon the specific proposal.*"	This chapter does not include an assessment of the traffic impacts associated with operation and maintenance or the decommission phase of AyM as set out in Section 9.4.3 and 9.4.4.
PPW	Section 4.1.56 states: *"Planning applications for developments, including changes of use, falling into the categories identified in TAN 18: Transport must be accompanied by a Transport Assessment"* *and*	A Transport Assessment is incorporated into this chapter and Volume 5, Annex 9.1, Volume 5, Annex 9.2 and Volume 5, Annex 9.3.

POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
	"They (Transport Assessments) should cover the transport impacts during the construction phase of the development, as well as when built and in use"	The potential transport impacts during the construction and operation of AyM have been assessed in this chapter.
DCC LDP	Policy RD-1 sates: *"A transport assessment and travel plan will be required where appropriate"*	A Transport Assessment is incorporated into this chapter and Volume 5, Annex 9.1, Volume 5, Annex 9.2 and Volume 5, Annex 9.3 An Outline TP is provided in Appendix 9 of the Outline CoCP (application ref: 8.13.9))

9.3 Consultation and scoping

47 To date, consultation with regards to the scope of the traffic and transport assessment has been undertaken via the Scoping Report (Innogy, 2020) and via the AyM Evidence Plan (Traffic and Transport ETG) process. The Evidence Plan process has comprised discussions with DCC, CCBC and NMWTRA and a Traffic and Transport Technical Note provided to ETG members setting out the proposed baseline data sources and parameters (see Appendix A of Volume 5, Annex 9.1).

48 A Scoping Opinion for AyM was sought from the Secretary of State (SoS) in June 2020. The Scoping Opinion was received in July 2020, which includes responses from Network Rail and Royal Mail, identifies areas of the assessment methodology for further consideration.

49 The AyM statutory consultation, under Section 42 of the Planning Act 2008, ran from 31 August to 11 October 2021, a period of six weeks. A Preliminary Environmental Information Report (PEIR) was published as part of formal consultation which provided preliminary information on Traffic and Transport within Volume 3, Chapter 9: Traffic and Transport.

50 Further statutory consultation was undertaken in February 2022 on areas where the Order Limits (OL) extend beyond those included in the PEIR that were consulted on in Autumn 2021.

51 Table 2 provides a summary of consultation comments received to date relating to traffic and transport, and associated responses.

Table 2: Summary of consultation relating to traffic and transport.

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
PINS Scoping Opinion July 2020	PINS is not in agreement that disruption to the railway can be scoped out of the traffic and transport chapter unless it can be shown that Horizontal Directional Drilling (HDD) under the railway would not have a likely significant effect.	As reported in Volume 3, Chapter 1, HDD (or another trenchless technique) will be used to install the cable connection approximately 20 m below the railway. HDD is the same technique used to install the Burbo Bank Extension cable connection beneath the railway within 250 m of the proposed HDD (or another trenchless technique) crossing point for AyM. In addition, the Gwynt y Môr offshore wind farm cable connection has been successfully installed beneath the railway between Belgrano and Pensarn approximately 10 km to the west. Both of these previous crossings have been installed using HDD without any significant effect on the railway. Protective provisions will be included in the DCO to protect the relevant interests at this crossing.
PINS Scoping Opinion July 2020	PINS is in agreement that traffic noise can be scoped out from the traffic and transport section of the ES	The assessment of traffic noise is in Volume 3, Chapter 10: Noise and Vibration (application ref: 6.3.10)

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
PINS Scoping Opinion July 2020	PINS is in agreement that operational and maintenance traffic effects can be scoped out from assessment.	In agreement with the PINS Scoping Opinion operation and maintenance phase traffic effects have been scoped out from this assessment. For completeness the following provides confirmation that the effect has remained under review and remains unlikely to result in a significant effect. In relation to likely operational vehicle movements, it is anticipated that at a maximum, there would be approximately four to eight traffic movements per day; however, limited to a two week period for annual testing. Outside of this period, there are likely to be approximately four to eight traffic movements per week. In addition, there is expected to be one visit to each cable joint pit per year.
PINS Scoping Opinion July 2020	The likely routes that would be used by construction traffic especially Abnormal Indivisible Loads (AIL) and explain how this information has been used to define the	An assessment of the proposed construction traffic access routes from the Strategic Road Network (SRN), which is defined as the A55, is provided in Volume 5, Annex 9.1. An Abnormal Load Assessment Report (ALAR) will be prepared post consent; however, a preliminary review of the likely AIL route has been undertaken from the A55 to the Onshore substation (OnSS) in Section 9.10.5

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	affected transport network within the study area.	
PINS Scoping Opinion July 2020	Explain how the Public Rights of Way (PRoW)and ATRs that would be indirectly impacted have been identified and assess any likely significant effects.	The methodology for identifying the PRoW and ATRs that would be directly and indirectly impacted is set out in paragraphs 58 and 86.
PINS Scoping Opinion July 2020	The key assessment assumptions (timing, frequency and distribution of movement) need to be identified in the context of the worst-case scenario for driver severance and delay.	The assessment assumptions are defined in Volume 5, Annex 9.2 and summarised in Section 9.8 of this chapter.
PINS Scoping Opinion July 2020	The consideration of whether traffic flows are heavier during the peak holiday period and the worst	The Covid-19 pandemic has restricted the ability to obtain any comparison traffic flow data between typical months and peak holiday periods; however, as the assessment within the ES does not include any junction capacity assessments,

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	case scenario should reflect any peak traffic flows.	the use of lower baseline flows associated with a typical month would result in a robust assessment in terms of percentage impacts. See Volume 5, Annex 9.3.
Traffic and Transport ETG	DCC requested that a 10 to15% uplift of any new traffic counts to take account of the implications of Covid-19.	A 15% uplift has been added to new traffic data collected in April 2021 – see Volume 5, Annex 9.1.
PINS Scoping Opinion July 2020 (late consultation response from Network Rail)	An assessment of the impact the development would have on nearby PRoW should be included within any Transport Statement and/ or Transport chapter of the submitted ES. The assessment should include any suggested mitigation.	The assessment of the impact of the construction traffic associated with AyM on PRoW is provided in Section 9.10. The likely management measures to be implemented for those PRoW that are impacted, is described in an Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)).

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
PINS Scoping Opinion July 2020 (late response from Network Rail)	Any pedestrian and vehicular movements over the railway, including any proposed new assets crossing the railway and the use of existing level crossings, should be assessed.	No pedestrian or vehicle movements are proposed to cross the railway or use existing level crossings.
PINS Scoping Opinion July 2020 (late response from Network Rail)	The ES should demonstrate that the railway infrastructure will not be compromised and be adequately protected during construction and operation.	As reported in Volume 3, Chapter 1, HDD (or another trenchless technique) will be used to install the cable connection approximately 20 m below the railway. HDD (or another trenchless technique) is the same technique used to install the Burbo Bank Extension cable connection beneath the railway within 250 m of the proposed HDD (or another trenchless technique) crossing point for AyM. In addition, the Gwynt y Môr Offshore Wind Farm(GyM)cable connection has been successfully installed beneath the railway between Belgrano and Pensarn approximately 10 km to the west. Both of these previous crossings have been installed using HDD (or another trenchless technique) without any significant effect on the railway. Ground Investigation surveys to inform

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
		detailed design of the HDD (or another trenchless technique) crossing beneath the railway will be undertaken prior to the commencement of works to confirm that the railway infrastructure will not be compromised. Protective provisions will be included in the DCO to protect the relevant interests at this crossing.
PINS Scoping Opinion July 2020 (late response from Royal Mail)	The Traffic and Transportation section of the ES should include information on the needs of major road users (such as Royal Mail) and acknowledges the requirement to ensure that major road users are not disrupted though full consultation at the appropriate time in the DCO and development process.	Driver severance and delay is assessed at Section 9.10.2

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
PINS Scoping Opinion July 2020 (late response from Royal Mail)	Royal Mail requests that it be fully pre-consulted by the applicant and its contractors on any proposed road closures / diversions / alternative access arrangements, hours of working and the content of any Construction Traffic Management Plan. The ES should acknowledge the need for this consultation with Royal Mail and other relevant local businesses / occupiers	A requirement for pre-construction consultation with the Royal Mail is included in the Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7)).
Section 42 Response November 2021 (Welsh Government)	We would value sight of your detailed Transport Assessment which includes traffic figures and capacity values. Welsh Government	The traffic figures associated with the construction of AyM are provided in this chapter at Table 24 and Table 25 and Volume 5, Annex 9.2. The Scoping Report and the Traffic and Transport Technical Note provided to ETG members (see Appendix A of Volume 5, Annex 9.1) stated that peak hour

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	would be willing to comment on such an Assessment in advance of formal submission	junction capacity analysis would only be undertaken at sensitive junctions with known capacity issues identified through the Evidence Plan process. As discussed at paragraph 68, no junction within the study area has been identified by ETG stakeholders as sensitive and since no approach to a junction is forecast to either experience an increase of greater than 10% in a peak hour or greater than 30 two-way vehicle movements on the highway network (see Table 25 and Table 29), no junction capacity assessments have been undertaken.
Section 42 Response November 2021 (Welsh Government)	Promoting sustainable forms of travel should be encouraged including detail on how the workforce will travel in a sustainable manner and on the design and location of provision as well as logistical movements during construction.	The implementation of measures to encourage sustainable travel for construction workers is set out in the Outline TP (Appendix 9 of the Outline CoCP (application ref: 8.13.9)), including the promotion of car sharing.

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
Section 42 Response November 2021 (Welsh Government	When providing the evidence in relation to transporting parts relating to the project it would be useful to understand what sustainable options have been considered and how these could push us towards zero carbon. Detail on whether rail freight for example has been considered would also be useful to minimise impact on the highways in the region.	The Port that would be used for transporting the offshore components has yet to be identified, however consideration will be given to sustainable options for transportation of components, along with potential impacts on the highways network in the vicinity of ports under consideration, when this decision is being made.
Section 42 Response November 2021 (Flintshire County Council)	The traffic and transport implications of the offshore works do not appear to have been considered. It is understood that a decision hasn't yet been made on	The Port that would be used for transporting the off-shore components has yet to be identified and therefore has not been included within the assessment in this chapter. RWE would seek to engage with local authorities when making a decision regarding port selection.

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	which Port would be used for transporting the off-shore components. If the Port of Mostyn continues to be used as a construction base for offshore construction works, there is potential for any associated increase in vehicular movements or the transport of long loads, to generate highway impacts within Flintshire. That also brings a wider question about whether Mostyn Docks will act as a wider base for these works. There may also be indirect highways impacts and traffic generation as a result of the Port of Mostyn being used in association with the offshore	

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	assembly of the windfarm. Therefore, the Council respectfully requests further information regarding the number/frequency/size of additional vehicular movements to/from the Port of Mostyn in association with the direct and indirect vehicular movements associated with this proposed development and would welcome further engagement and discussions relating to this matter	
Section 42 Response November 2021 DCC	It is not clear from the plans if any paths are to be stopped up permanently. The Council would object to	The Applicant has committed to not stopping up any PRoWs permanently, as set out in an Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)).

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	any proposal to permanently stop up any right of way.	
	Even temporary closures will have a significant effect of the local network, although it is accepted the indicative onshore cable corridor proposed seems to have done its best to avoid public paths, the construction phase will still impact on some key rights of way. This is of particular significance with the bridleways which are in extreme short supply in this area and stopping up even temporarily should be avoided or kept to the shortest possible period. As	Any PRoW to be temporarily stopped up will be subject to adequate alternatives which will need to be to the reasonable satisfaction of the local highway authority (see Article 12). Any restrictions or temporary stopping up of PRoW will be for the minimum time necessary. The assessment of the impact of the construction traffic associated with AyM on PRoW is provided in Section 9.10.6. The likely management measures to be implemented for those PRoW that are impacted, is described in an Outline PAMP(Appendix 8 of the Outline CoCP (application ref: 8.13.8)). The final PAP will be subject to approval from DCC through agreement of the CoCP that is secured through the DCO.

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	such, the Council has concerns with the proposed streetworks powers proposed to be embedded in the DCO, as it would remove control from the Council to carefully manage right of way closures at a strategic level.	
Section 42 Response November 2021 DCC	The Council would want to see the paths reinstated as soon as possible after any excavation and kissing or hand gates to be erected with no stiles on any temporary boundaries crossed by the cable corridor and that authorisation for any such new fences receives consent from the	Any PRoW to be temporarily stopped up will be subject to adequate alternatives which will need to be to the reasonable satisfaction of the local highway authority (see Article 12). PRoW will be reinstated as soon as set out in an Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). Any new fences to be erected within the OL will be subject to approval by DCC post consent.

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	highway authority under S147 of the Highways Act 1980 or will be treated as unlawful and removed once any temporary traffic restriction order closing the path expires.	
Section 42 Response November 2021 DCC	The Council has concerns that, streetworks powers proposed in the draft DCO would not require rights of way to be brought back into use as soon as practical to do so, and paths may remain closed until all construction works have been completed, which will have a significant impact on the	The Outline PAMP includes reference to temporary disruptions/ diversions to any ATR or PRoW during the construction phase being kept to a minimum (para 10). The need to keep PRoW closed during construction works for safety reasons will need to take priority and in any event the final PAMP must accord with the Outline PAMP and will need to be approved by DCC (req 11).

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	users during the construction phase.	
Section 42 Response November 2021 DCC	The Wales Coastal Path and National Cycle Network Route 5 run along the coastal promenade which is not a public highway. Whilst there appears no obvious mechanism in the DCO to suspend these routes, it should be avoided and it appears to be the case as the cable will be thrust bored through the sea front under the defence structure and that access along the top will not need to be controlled by restriction other than in exceptional circumstances. Preference would be for rights of way to not be used	The number of AyM construction vehicles requiring access to the beach is negligible (maximum two-way 22 Heavy Good vehicles (HGVs) per day in Month 7 and Month 15, with significantly less HGV movements for the remaining construction period) The assessment of likely effects of vehicles crossing the Wales Coast Path / National Cycle Network Route 5 is provided in Table 31. AyM construction vehicles would cross (or in one case, follow) other PRoW and the assessment of the impact of the construction traffic on these PRoW is provided in Section 9.10.6. The likely management measures to be implemented for those PRoW that are impacted, is described in an Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)).

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	for construction or operational site access, and instead easements with private landowners away from rights of way should be pursued.	
Section 44 Response November 2021	The land is situated adjacent to Junction 26 of the A55 Expressway, a significant primary junction which serves the St Asaph Business Park. A crossing of the A55 at this location will cause considerable unnecessary disruption to existing businesses.	The use of HDD (or another trenchless technique) technology is to be utilised under the A55 for the construction of AyM and therefore no direct disruption to the operation of the A55 junction would occur.
Section 47 Response November 2021	Within the documentation there are several references to the 30 mph speed limit along Glascoed Rd B5381. Unfortunately, this	The reference to the 30 mph speed limit was for the change in speed limit to the east of St. Asaph Business Park in the vicinity of the access for the existing National Grid substation, in Volume 5, Annex 9.1.

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	assumption is incorrect, upon leaving St Asaph Business Park (heading West) the limit changes to a national speed limit (clearly signed) 60mph and remains so beyond the crematorium as well as the houses adjacent to the proposed substation access points (now called OnSS Access Zone).	

9.4 Scope and methodology

52 This Chapter takes an appropriate and topic specific approach to the assessment of AyM during the construction phase based on the design parameters set out in Volume 3, Chapter 1. Impacts during the operational and decommissioning phases have been scoped out.

53 The approach for the assessment of traffic and transport effects has been to define the level of traffic anticipated to access each construction site associated with AyM during the construction phase, calculated from first principles. The first principles approach is a method based on the quantities of materials required for the construction of AyM and the corresponding number of HGVs and the number of expected construction workers) which has been distributed over an anticipated construction programme of 18 months for the onshore Export Cable Corridor (ECC) and 27 months for the OnSS (as shown in Figure 2 of Volume 3, Chapter 1.

54 In addition to the anticipated increase in vehicle movements associated with the construction phase of AyM, this chapter also considers the disruption to existing users of PRoW, ATRs and roads that would be potentially impacted by the construction works.

9.4.1 Study area

55 The onshore traffic and transport highway study area (as shown in Figure 1 has been informed by determining the most probable routes for traffic, for both the movement of materials and employees. The study area incorporates probable routes for the construction, operational and decommissioning phases of AyM and includes the non-motorised user (walkers, cyclists and horse-riders (WCH)) infrastructure and roads that would be impacted by the construction works associated with AyM (directly or indirectly). The construction phase of AyM will generate higher levels of traffic than the operational and decommissioning phases and so definition of the study area is predominantly based on anticipated construction traffic volumes and routeing.

56 The extent of the onshore highway study area has been discussed with DCC, CCBC and NMWTRA (on behalf of the Welsh Government) through the Evidence Plan process. The onshore highway study area is illustrated in Figure 1 and comprises the following highway links (see Figure 2 and Figure 3):

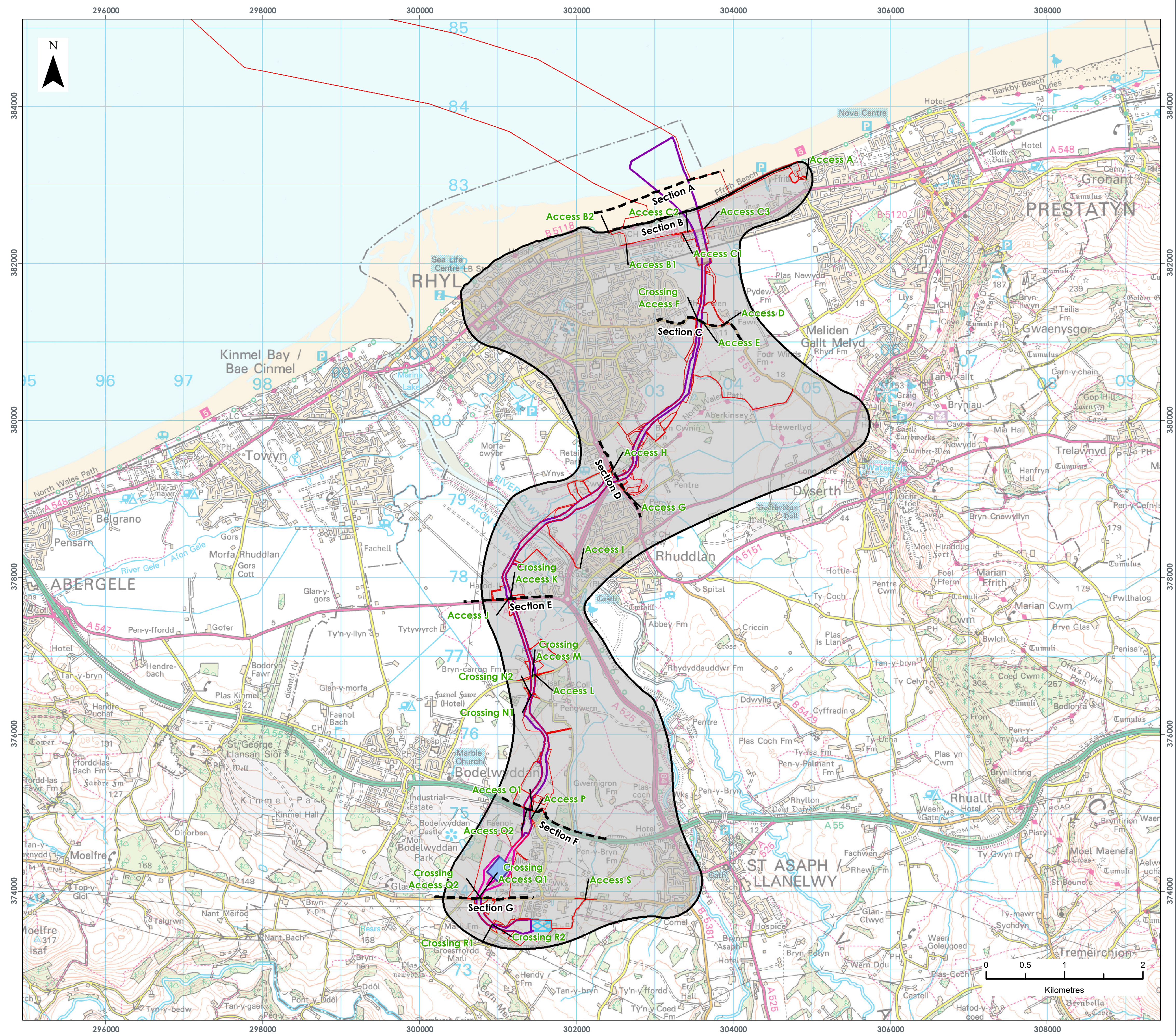
- A548 Rhyl Coast Road/ Victoria Road West;
- B5119;
- A525 between Rhyl and the A55 Junction 27;
- A547 between Abergele Road and the junction with the B5119 Dyserth Road;
- Station Road and Tan-Yr-Eglwys Road (Rhuddlan);
- Bodelwyddan Road (between the onshore ECC and the junction with the A525);
- B5381 Glascoed Road (between the onshore ECC and the junction with Ffordd William Morgan);
- Ffordd William Morgan; and
- A55 Junctions 26 and 27

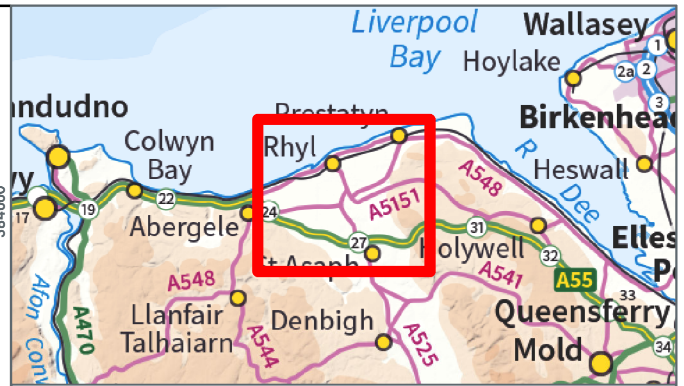
57 Although construction traffic associated with AyM will use the wider highway network outside of the study area i.e. the routes listed above, it is considered that construction traffic volume will have dissipated such that significant impacts on the highways network are not anticipated and so these wider routes are not included in the study area. In addition, roads with negligible sensitive receptors (e.g. the A55), have not been included in the study area, as set out during the Evidence Plan process.

58 In addition to construction routes on the public highway, the study area also includes all PRoW and ATRs that are directly and indirectly impacted by the construction works (crossed by a construction access, Temporary Construction Compound (TCC) or haul road) for the onshore ECC or those that form part of a specific route within the PRoW and ATRs network that would be directly or indirectly impacted.

59 Finally, the study area includes the roads that could be impacted should open trenching technology be utilised to install the ECC (i.e. where temporary lane or road closures may be required). A description of the following Route Sections is provided in Volume 3, Chapter 1: Onshore Project Description:

- B5119 Dyserth Road (Between Route Sections B and C);
- A547 Abergele Road (Between Route Sections D and E);
- Nant -Y-Faenol Road (Route Section E);
- B5381 Glascoed Road (Between Route Sections F and G); and
- Unnamed rural road (Route Section G)





LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Proposed Onshore Export Cable Corridor
- Proposed Substation Cable Corridor Zone
- Proposed Transition Joint Bay Construction Compound
- Proposed Access Location
- Proposed Crossing Location
- Proposed Onshore Substation (OnSS) Footprint
- Unlicenced Work Zone
- Traffic and Transport Study Area

Data Source:

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE:

TRAFFIC AND TRANSPORT STUDY AREA

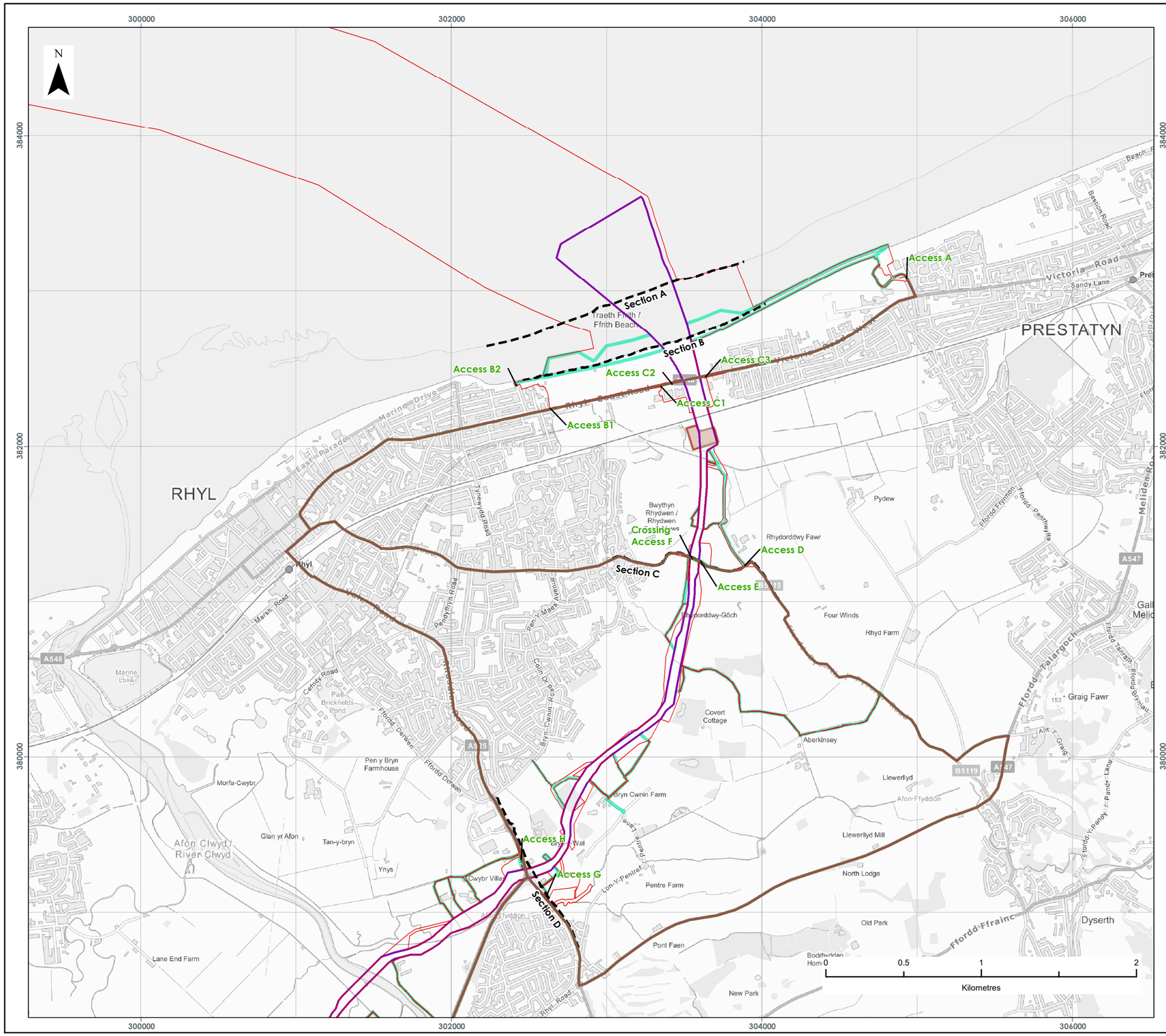
VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

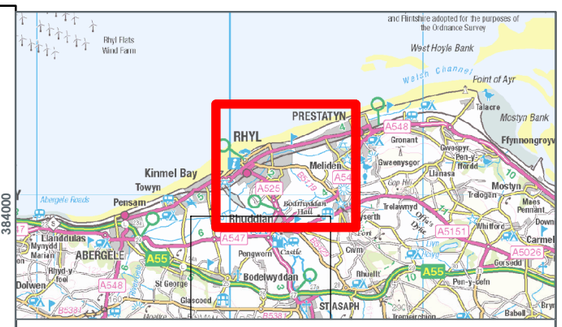
FIGURE NUMBER:

FIGURE 1

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:50,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth AWEL Y MÔR Offshore Wind Farm





LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Proposed Onshore Export Cable Corridor
- Proposed Substation Cable Corridor Zone
- Proposed Transition Joint Bay Construction Compound
- Proposed Access Location
- Proposed Crossing Location
- Proposed Operational Access Route
- Proposed Onshore Substation (OnSS) Footprint
- Unlicenced Work Zone
- Proposed Construction Access Route

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE:

CONSTRUCTION ACCESS ROUTES

VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

FIGURE NUMBER:

FIGURE 2

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:25,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

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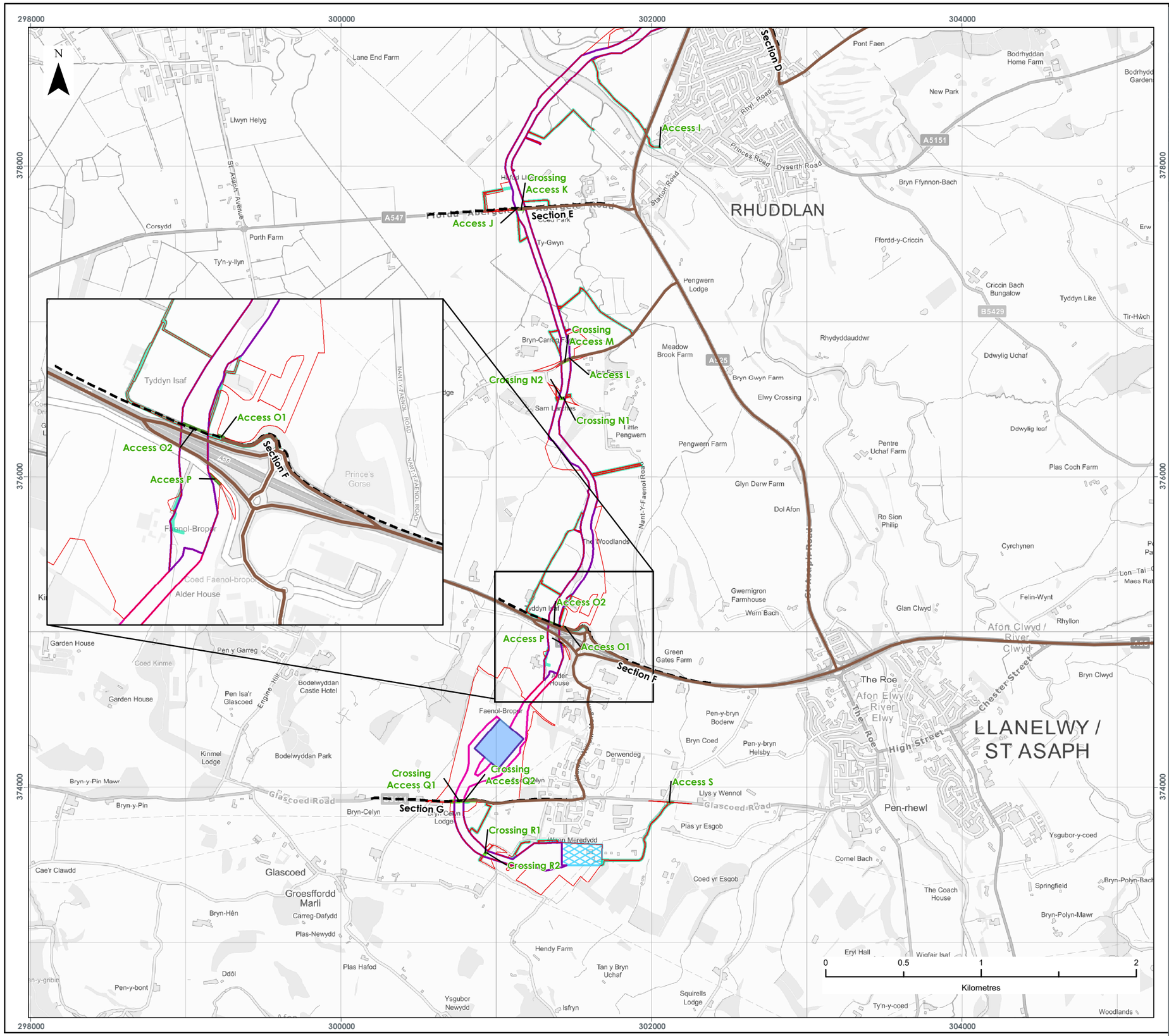

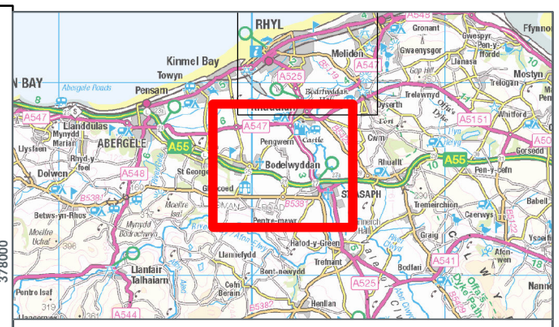

LEGEND

- Order Limits
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- Proposed Substation Cable Corridor Zone
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- Proposed Access Location
- Proposed Crossing Location
- Proposed Operational Access Route
- Proposed Onshore Substation (OnSS) Footprint
- Unlicenced Work Zone
- Proposed Construction Access Route

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE:

CONSTRUCTION ACCESS ROUTES

VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

FIGURE NUMBER:

FIGURE 3
Page 2 of 2

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:25,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

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9.4.2 Construction activities

60 This chapter provides a reasonable worst case assessment of the likely significant traffic and transport effects of the construction phase of AyM, based on the Maximum Design Scenario (MDS) as follows:

- The maximum expected number of total vehicle movements in one month at each construction access; and
- The maximum expected number of HGV movements in one month at each construction access

61 The effects of the forecast construction phase traffic have been assessed against the measured future baseline in terms of existing traffic levels and then compared to standard practice criteria as set out in paragraphs 66 to 86 and Table 3 and Table 4.

62 A number of baseline data sources (existing and new) have been used to inform this chapter and the design of AyM. The data sources which are described in detail in Volume 5, Annex 9.1, have been discussed and agreed through the Evidence Plan process, and are summarised below:

- Existing data
  - A desktop appraisal of the traffic and transport aspects of the study area (Google Earth);
  - Annual Average Daily Traffic (AADT) flows and speed for the local Road Network (LRN) (Department for Transport (DfT) National Road Statistics);
  - STATS19 accident data for the LRN (DCC);
  - PRoW maps (DCC);
  - ATRs maps (DCC);
  - Cycleway counts (DCC); and
  - Accident data for the SRN (Crashmap)
- New data
  - Automatic Traffic Counters (ATCs) installed at seven locations across the study area to collect traffic flow and speed data.

63 The assessment of traffic and transport and the potential traffic impacts in relation to AyM has been undertaken with reference to the following key guidance documents, as set out in Table 2:

- Ministry of Levelling Up, Housing and Communities (MLHC), Planning Practice Guidance - Overarching Principles on Travel Plans, Transport Assessments and Statements, 2014);
- Institute of Environmental Management and Assessment (IEMA), Guidelines for Environmental Assessment of Road Traffic (GEART), 1993; and
- Design Manual for Roads and Bridges (DMRB), LA 112 Population and Human Health

64 The MLHC guidance sets out how the transport impacts of a proposed development on the highway and public transport networks should be assessed within a Transport Assessment. The MLHC guidance also states that a Transport Assessment should include measures to promote sustainable travel through the preparation of a Travel Plan and identify mitigation measures to address any impacts. These are also the requirements for assessment as set out in the Overarching National Policy Statement for Energy (EN-1) and therefore the assessment will take account of this guidance.

65 Based on the guidance in GEART, the following factors have been identified as being the most discernible potential environmental effects likely to arise from changes in traffic movements. These are considered in the assessment as potential effects which may arise from changes in traffic flows resulting from AyM:

- Driver severance and delay - the potential delays to existing drivers and their potential severance from other areas;
- Community severance – the potential severance to communities and the delays to movements between communities;
- Vulnerable road users and road safety – the potential effect on the safety of users of the road, particularly pedestrians and cyclists;
- Dust and Dirt - The potential effect of dust, dirt and other detritus being brought onto the road; and
- Dangerous loads – the potential effect on road users and local residents and users of the highway network caused by the movement of AILs.

Driver severance and delay

66 GEART recommends the use of proprietary software packages to model junction delay and therefore estimate increased vehicle delays. However, it is noted that vehicle delays are only likely to be significant when the surrounding highway network is at, or close to, capacity.

67 During consultation with DCC, CCBC and NMWTRA, no sensitive junctions have been identified that would automatically require an assessment of potential delays for drivers during periods when baseline traffic flows are at their greatest (the highway peak hours).

68 As discussed during ETG meetings, 30 two-way vehicle movements on an approach arm to a junction is typically the threshold for the consideration for the requirement to undertake a junction capacity assessment, primarily if a junction has known existing capacity issues. However, as no sensitive junctions (with known capacity issues) have been identified by ETG stakeholders, a threshold of 10% against base traffic has been adopted to trigger the consideration of the need for a junction capacity assessment.

69 For the potential delay to users of the highway links that may require a temporary closure to enable open trenching technology to be utilised for the onshore ECC (as set out in paragraph 49), the assessment is based on the relative importance of each link and the availability of an alternative route, using professional judgement.

Community severance

70 Severance is the perceived division that can occur within a community when it becomes separated by a major traffic artery. The term is used to describe a complex series of factors that separate people from places and other people.

71 Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by the road itself. It can also relate to relatively minor traffic flows if they impede pedestrian access to essential facilities. Severance effects could equally be applied to residents, motorists, cyclists or pedestrians.

72 GEART suggests that changes in total traffic flow of 30%, 60% and 90% are considered to be slight, moderate and substantial respectively. However, GEART states that these figures should be used cautiously, and the assessment should pay full regard to specific local conditions.

73 In addition to the GEART guidance, DMRB LA 112 provides guidance to both the direct effects of a new scheme, and to effects caused by increases in traffic levels on existing roads. The guidance provides example definitions of where severance could be experienced and notes that for pedestrians crossing at-grade (i.e. on the same level), AADT flows of 4,000 or less, 4,000 to 8,000, 8,000 to 16,000 and 16,000 plus the relative sensitivity would be low, medium, high and very high respectively.

Vulnerable road users and road safety

74 GEART states the following in terms of the assessment of road safety:

"Where a development is expected to produce a change in the character of traffic (e.g. HGV movements on rural roads), then data on existing accidents levels may not be sufficient. Professional judgement will be needed to assess the implications of local circumstances, or factors which may elevate or lessen the risk of accidents, e.g. junction conflicts."

75 In this context, an examination of the existing collisions occurring within the onshore highway study area has been undertaken to identify any areas of the highway with concentrations of collisions, or roads with collision rates that are higher than the national average. These locations are considered to be sensitive to changes in traffic flows (sensitive receptors) and therefore a more detailed analysis of significance has been undertaken in the context of AyM.

Dust and dirt

76 Certain types of development, particularly construction sites, can give rise to deposition of dust and dirt on surrounding roads. The overall impact of this phenomenon normally depends to a large extent on the management practices adopted at the site in question, such as vehicle sheeting and wheel washing.

77 Problems with dust and dirt are unlikely to occur at distances greater than 50 m from the road (IEMA, March 1993). Where relevant, the effects relating to dust and dirt are considered within this chapter and the magnitude of impact identified using professional judgement and the advice provided in the above guidance document.

78 The impact of dust associated with the construction of AyM on air quality is provided in Volume 3, Chapter 11: Air Quality (application ref: 6.3.11)

Dangerous loads

79 The transportation of large AILs may lead to delays on the highway network. The construction of the OnSS would require the delivery of AILs, as summarised below:

- 4 for transformer;
- 8 for oversized indivisible plant;
- 8 for 20 axle frame trailers; and
- 16 or special order vehicles

80 Initial AIL investigations have been undertaken between the A55 and the proposed OnSS to inform the project design, including a review of a previous AIL investigations report that was undertaken for the Gwynt y Môr Substation (which is located approximately 1,200 m to the south east of the OnSS), which, together with a review of any changes to the highway network since this report was produced (2006) forms the basis of the ES assessment.

Users of Public Rights of Way (PRoW) and Active Travel Routes (ATRs)

81 During scoping discussions with ETG members, DMRB GG 112 (Walking, Cycling, Horse-Riding Assessment and Review), was proposed as the method of assessment of WCH users of PRoW and ATRs. However, a more appropriate method of assessment (DMRB LA 112 Population and Human Health) has been identified.

82 The criteria in DMRB LA 112 Population and Human Health have been adopted to assess the impact of the construction works associated with AyM on these users.

83 Where a PRoW or ATRs intersects with highway links, the potential effects are considered on a traffic flow percentage increase basis. However, where PRoW or ATRs are proposed to be diverted or closed in part, these are considered on the basis of the disruption incurred to the existing route.

84 DMRB LA 112 states:

"The study area shall be based on the construction footprint/project boundary (including compounds and temporary land take) plus a 500 m area surrounding the project boundary."

85 However, it goes on to say:

"Where effects are unlikely to occur within the 500 m area surrounding the project boundary, the study area should be reduced accordingly."

86 Given the distance from the OL for potential impacts associated with PRoW and ATRs varies along the onshore ECC, the scope of assessment has been defined as all PRoW and ATRs that are directly impacted by the construction works and those that form part of a specific route with the PRoW and ATRs that are directly impacted.

Other Impacts

87 Traffic-borne noise and vibration effects and air quality effects informed by the traffic data outlined in this chapter are assessed in Volume 3, Chapter 10 Noise and Vibration (application ref: 6.3.10) and Volume 3 Chapter 11, respectively.

88 The traffic data provided to inform Volume 3 Chapter 10 and Volume 3 Chapter 11 are not reported in this chapter as the data requirements for the assessments undertaken in those chapters differ from the traffic and transport assessment; however, both the noise and air quality assessments are derived from the same dataset of forecast construction traffic for AyM.

9.4.3 Operational and maintenance activities

89 Following the PINS comments contained within the Scoping Opinion (PINS, 2020), as summarised in Table 2, it was agreed that effects associated with operational and maintenance activities could be scoped out, given that expected number of vehicle movements would be negligible.

9.4.4 Decommissioning activities

90 Decommissioning activities are not anticipated to exceed the construction phase worst case criteria assessed. In addition, it is also recognised that policy, legislation, and local sensitivities constantly evolve; which will limit the relevance of undertaking an assessment at this stage.

91 Furthermore, the decommissioning methodology would be finalised nearer to the end of the lifetime of AyM, to be in line with current guidance, policy and legislation. As such, any methodology would be agreed with the relevant authorities and statutory consultees at the appropriate time.

92 As such, in recognition of the above, a qualitative assessment of likely decommissioning activities has been undertaken, given the uncertainty of potential works.

9.5 Assessment criteria and assignment of significance

93 The magnitude of traffic impacts is a function of the existing volumes of traffic, the percentage increase and, changes in the type of traffic and the temporal distribution of traffic due to a development. The determination of magnitude has been undertaken by considering the parameters of AyM, establishing the scope of the receptors that may be affected and quantifying these effects utilising GEART, DMRB LA 112 and professional judgement.

94 Consideration is given to the composition of the traffic on the road network under both existing and proposed conditions. For example, LGVs have less impact on traffic and the road system than HGVs. Similarly, HGVs can have less impact than AIL vehicles, depending on the frequency of the AILs.

95 The magnitude of impact has been considered according to the criteria defined in Table 3.

Table 3: Impact magnitude definitions.

MAGNITUDE OF IMPACT	DRIVER SEVERANCE AND DELAY	COMMUNTIY SEVERANCE	VULNERABLE ROAD USERS AND ROAD SAFETY	DUST AND DIRT	AIL	USERS OF PROW
High	Quantitative assessment of road capacity based on existing traffic flows and predicted future traffic levels Qualitative assessment of inconvenience associated with a temporary road closure	>60% increase in traffic	Qualitative assessment of existing accident records and predicted increases in traffic	>60% increase in traffic		Increase in total traffic flows or HGV flows of 90 % and above on a link intersecting a PRoW OR >500 m increase (adverse) / decrease (beneficial) in WCH journey length.
Medium		31% to 60% increase in traffic		31% to 60% increase in traffic		Increase in total traffic flows or HGV flows of 60 to 89% (40 to 89% HGVs) on a link intersecting a PRoW. OR >250 m – 500 m increase (adverse) or decrease (beneficial) in WCH journey length.
Low		<30% increase in traffic		<30% increase in traffic		Increase in total traffic flows of 30 to 59% (or increase in HGV flows of 10% to 39% on a link intersecting a PRoW. OR

MAGNITUDE OF IMPACT	DRIVER SEVERANCE AND DELAY	COMMUNTIY SEVERANCE	VULNERABLE ROAD USERS AND ROAD SAFETY	DUST AND DIRT	AIL	USERS OF PROW
						50 m to 250 m increase (adverse) or decrease (beneficial) in WCH journey length.
Negligible	<10% increase in traffic No temporary lane or road closure	<10% increase in traffic	<10% increase in traffic	<10% increase in traffic	0% increase in traffic	Increase in total traffic flows or HGV flows of 29 % or under (or increase in HGV flows under 10 %) on a link intersecting a PRoW. OR <50 m increase (adverse) or decrease (beneficial) in WCH journey length.

96 The potential sensitivity of receptors to changes in traffic levels has been determined by considering the study area and the presence of receptors in relation to each potential impact.

97 For impacts associated with the increase in vehicle movements on the highway network, GEART provide two thresholds, whereby a full assessment of the impact is required:

- Rule 1 - Include road links where total traffic flows are predicted to increase by more than 30% or where the number of HGVs is predicted to increase by more than 30%; and
- Rule 2 - Include any other specifically sensitive areas where total traffic flows are predicted to increase by 10% or more.

98 Rules 1 and 2 are used as a screening tool to determine whether or not a full assessment of effects on routes within the study area is required as a result of intensification of road traffic. Where anticipated construction traffic volumes are not greater than 30% (or 10% at sensitive locations), a detailed assessment of effects is not necessary.

99 In this context, GEART does not define a sensitive area and, therefore, the assessor makes a professional judgement based on experience and the nature of the study area. Each receptor has been assessed individually to determine its sensitivity, between negligible and high, and the assessment criteria chosen are shown in Table 4.

100 For the impacts associated with WCH on ATRs and PROW, Table 3.11 of DMRB LA 112 sets out the sensitivities, between negligible and very high, based on the hierarchy of the route, the type of use and potential for alternatives.

101 For the assessment of potential driver severance and delay associated with the use of open trenching technology, the sensitivity of each link has been based on professional judgement and identified based on the following:

- The strategic importance of the road/ highway hierarchy;
- The existing types of users of the road; and
- Availability of suitable alternative routes.

Table 4: Sensitivity/ importance of the environment.

SENSITIVITY	IMPACT	DESCRIPTION/ REASON
Very High	WCH users of ATRs and PRoW	National trails and routes likely to be used for both commuting and recreation with frequent use with little/ no potential for substitution. Routes regularly used by vulnerable travellers such as the elderly, school children and people with disabilities, who could be disproportionately affected by small changes in the baseline due to potentially different needs. PRoW for WCH crossing roads with >16,000 vehicles per day
High	Increase in traffic	Receptors of greatest sensitivity to traffic flows: schools, colleges, playgrounds, accident black spots (with reference to accident data), retirement homes, urban/ residential roads without footways that are used by pedestrians.
	WCH users of ATRs and PRoW	Regional trails and routes (e.g. promoted circular walks) likely to be used for recreation and to a lesser extent commuting, that record frequent (daily) use. Limited potential for substitution PRoW for WCH crossing roads with >8,000 - 16,000 vehicles per day.
	Use of open trenching.	'A' Roads or any roads with no alternative route available, that serve residential properties or farms.

SENSITIVITY	IMPACT	DESCRIPTION/ REASON
Medium	Increase in traffic	Traffic flow sensitive receptors: congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, unsegregated cycleways, community centres, parks, recreation facilities.
	WCH users of ATRs and PRoW	PRoW and other routes close to communities which are used for recreational purposes (e.g. dog walking), but for which alternative routes can be taken. These routes are likely to link to a wider network of routes to provide options for longer, recreational journeys. PRoW for WCH crossing roads with >4,000 to 8,000 vehicles per day.
	Use of open trenching	Roads that are regularly used, with alternative routes available
Low	Increase in traffic	Receptors with some sensitivity to traffic flow: places of worship, public open space, nature conservation areas, listed buildings, tourist attractions, residential areas with adequate footways.
	WCH users of ATRs and PRoW	WCH routes which have fallen into disuse through past severance, or which are scarcely used because they do not currently offer a meaningful route for utility/ recreational use. PRoW for WCH crossing roads with <4,000 vehicles per day.

SENSITIVITY	IMPACT	DESCRIPTION/ REASON
	Use of open trenching	Roads that are unlikely to be regularly used, with alternative routes available
Negligible	Increase in traffic	Receptors with low sensitivity to traffic flows and those sufficiently distant from affected roads/ junctions
	WCH users of ATRs and PRoW	n/a
	Use of open trenching	n/a

102 Sensitivity and magnitude of impact as set out within the detailed criteria have then been considered collectively to determine the potential effect and its significance. The collective assessment represents a 'considered assessment' by the assessor, based on the likely sensitivity of the receptor to the change (e.g. is a receptor present which would be affected by the change), and then the magnitude of that change. Table 5 is used as a guide to determine the level of effect. 'Major' and 'moderate' effects are considered to be 'significant' in terms of the Town and County Panning (Environmental Impact Assessment) Regulations 2017.

Table 5: Matrix to determine effect significance.

		SENSITIVITY				
		VERY HIGH	HIGH	MEDIUM	LOW	NEGLIGIBLE
ADVERSE MAGNITUDE	HIGH	Major	Major	Major	Moderate	Minor
	MEDIUM	Major	Major	Moderate	Minor	Negligible
	LOW	Major/ Moderate	Moderate	Minor	Minor	Negligible
	NEGLIGIBLE	Moderate/ Minor	Minor	Minor	Negligible	Negligible
BENEFICIAL MAGNITUDE	NEGLIGIBLE	Moderate/ Minor	Minor	Minor	Negligible	Negligible
	LOW	Major/ Moderate	Moderate	Minor	Minor	Negligible
	MEDIUM	Major	Major	Moderate	Minor	Negligible
	HIGH	Major	Major	Major	Moderate	Minor

Note: Effects of 'moderate' significance or greater are defined as significant with regards to the EIA Regulations 2017[i]

[i] The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

9.6 Uncertainty and technical difficulties encountered

9.6.1 Forecast trip generation, distribution and assessment scenarios

103 A number of assumptions have been used in order to identity the vehicular trip generation (HGV and employee vehicles) anticipated during the construction phase of AyM (18 months for the ECC and 27 months for the OnSS) he assessment assumptions, which are summarised in Section 9.8.1 , and detailed in Volume 5, Annex 9.2, create the MDS (Table 26)

9.6.2 Covid-19 and the impact on baseline traffic data collection

104 The Covid-19 pandemic, and the associated periods of lockdown and travel restrictions, have impacted the ability of surveyors to collect fully representative baseline traffic data. The ATC data that informs this traffic and transport assessment was collected in April 2021 when domestic travel restrictions had been lifted in Wales; however, through the Evidence Plan process, DCC requested that any traffic flow data collected is uplifted by 10 to 15% to take account of the ongoing implications of the pandemic which has supressed the volume of traffic. A factor of 15% has been applied to the original ATC data, as shown in Table 4-4 of Volume 5, Annex 9.1 and Table 8.

9.6.3 ATC data inaccuracies

105 There are inaccuracies with the vehicle class categories used in the ATC data, in terms of the identification of HGVs and an overestimated Other Goods Vehicle 1 (OGV1) category. This is due to the method of traffic data collection using ATC equipment, which is based on wheelbase (the distance between the front and rear axles of a vehicle). Since the inception of this method of traffic flow data collection there has been an increase in wheelbase of many non-goods delivery vehicles (such as twin-cab pickup vehicles).

106 The method of compensating for the inaccuracies in the ATC data is described in Section 4.1.2 of Volume 5, Annex 9.1 and the resulting traffic flows are shown in Table 4-4 of Volume 5, Annex 9.1.

9.7 Existing environment

9.7.1 Highway network

107 A detailed description of the highway network within the study area is provided in Volume 5, Annex 9.1.

108 To reiterate, the highway links within the study area are:

- A548 Rhyl Coast Road/ Victoria Road West;
- B5119 east of Rhyl;
- B5119 Dyserth Road (west of the onshore ECC);
- B5119 Dyserth Road (east of the onshore ECC);
- A547 east of Rhuddlan;
- A547 eastern Rhuddlan bypass;
- A525 north of Rhuddlan;
- A525 western Rhuddlan bypass;
- A547 Abergele Road;
- Station Road and Tan-Yr-Eglwys Road (Rhuddlan);
- Bodelwyddan Road;
- A525 south of Bodelwyddan Road;
- B5381 Glascoed Road;
- Ffordd William Morgan;
- A55 Junction 26; and
- A55 Junction 27

109 Whilst the forecast vehicle movements associated with the construction phase of AyM using Junctions 26 and 27 of the A55 have been identified, an assessment of the impact of an increase in traffic flows for the A55 has not been undertaken. This is because there is not the potential for significant effects given the very large baseline traffic flows on the A55 (over 40,000 AADT).

110 The delivery of AILs has been considered from the A55 Junction 27 to the OnSS Access Zone only (see Section 9.10.5), as the origin of such deliveries has not yet been determined. Also, substation transformers have been delivered via the A55 Junction 27 for GyM and the SRN is unlikely to have any constraints that can't be mitigated to facilitate such deliveries.

111 Also, as the forecast and duration of the forecast vehicle movements associated with the construction phase of AyM using Station Road and Tan-Yr-Eglwys Road for Access I (see Table 6) is negligible, no assessment of these links in terms of increases in vehicle movements is undertaken in this chapter.

9.7.2 Construction access locations

112 The proposed construction access locations are listed in Table 6 alongside the relevant onshore ECC Route Section (as described in Volume 3, Chapter 1) each access relates to.

113 A detailed description of the construction access locations and route sections is also provided in Section 3.2 of Annex 9.1 and illustrated in Volume 3, Chapter 1: Project Description, Figures 4 to 16. The figures show access zones within which the precise access location will be determined, post consent, as part of detailed design.

Table 6: Construction access locations.

ACCESS	LOCATION	ECC ROUTE SECTION
A	Ferguson Avenue	A
B1	Rhyl Golf Club access (non-HGV for supervision of trenchless cable installation beneath golf club)	B
B2	Garford Road	A

ACCESS	LOCATION	ECC ROUTE SECTION
C1, C2 and C3	Existing Robin Hood Holiday Camp accesses (non-HGV for supervision of trenchless cable installation)	B
D	Existing access track from the B5119 Dyserth Road adjacent to Rhydorddwy Fawr	B
E	New access from the B5119 Dyserth Road (northern side)	B
F	New access from the B5119 Dyserth Road (southern side)	C
G	Existing or new access from the A547 eastern Rhuddlan bypass (eastern side)	C
H	Existing access from the A525 north of Rhuddlan	D
I	Existing sewage treatment works access from Tan-Yr-Eglwys Road	D
J	Existing or new access from the A547 Abergele Road (northern side)	E
L	Existing or new access from Bodelwyddan Road (northern side)	E
O1 / O2	Existing Farm access from Junction 26 of the A55	E
P	Existing or new access from a minor road to the north of St. Asaph Business Park	F
Q1/Q2	New access from the B5381 Glascoed Road (Q1northern and Q2 southern side)	F and G

ACCESS	LOCATION	ECC ROUTE SECTION
S	Existing National Grid Substation from the B5381 Glascoed Road	G

9.7.3 Haul road crossing locations

114 The proposed haul road crossing locations are listed in Table 7 and the relevant onshore ECC Route Section (as described in Volume 3, Chapter 1) each crossing relates to.

115 A detailed description of the haul road crossing locations and route sections is also provided in Section 3.5 of Annex 9.1 and illustrated in Volume 3, Chapter 1: Project Description, Figures 4 to 16. As with the access points, the figures show crossing zones within which the precise crossing location will be determined, post consent, as part of detailed design.

Table 7: Haul road crossing locations.

CROSSING	LOCATION	ECC ROUTE SECTION
E	B5119 Dyserth Road	Between B and C
K	A547 Abergele Road	Between D and E
M	Bodelwyddan Road	E
N1/ N2	Nant-Y-Faenol Road	E
Q1/Q2	B5381 Glascoed Road	Between F and GC
R1/ R2	Minor road to the south of the B5381 Glascoed Road	G

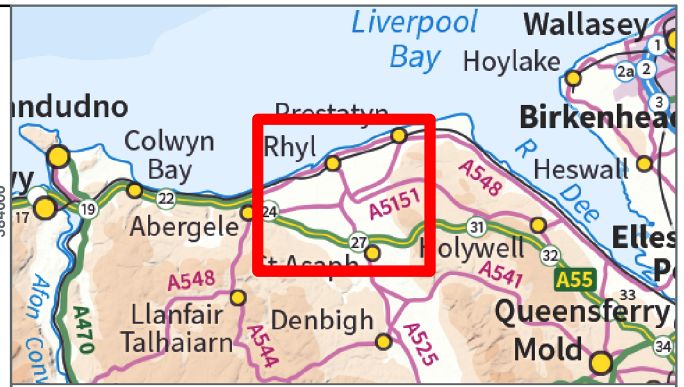
9.7.4 Traffic flows

116 An analysis of the traffic flows on the highway links within the study area (AADT and highway peak hours) is provided in Volume 5, Annex 9.1 and is summarised below.

Original data

117 The proposed highway network that is likely to be affected by the construction phase of AyM is set out in Table 8, which also sets out the AADT (total and HGV) and HGV percentage of the original data, taking into account the 15% uplift to the ATC data, 103 and the adjusted HGV flows of the ATC data, as described in 9.6.3 Section 4.1.2 of Volume 5, Annex 9.1.

118 The data locations are shown in Figure 4. For the purposes of the assessment, the ATC data has been used for the two data locations with DfT and ATC data (A547 eastern Rhuddlan bypass and A547 Abergele Road) and the links have been re-numbered, as set out in Table 8.



LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Proposed Onshore Export Cable Corridor
- Proposed Substation Cable Corridor Zone
- Proposed Transition Joint Bay Construction Compound
- Proposed Onshore Substation (OnSS) Footprint
- Unlicenced Work Zone
- Traffic Assessment Location

1 - A548 Victoria Road West
2 - B5119 east of Rhyl town centre
3 - B5119 Dyserth Road west of the onshore ECC
4 - B5119 Dyserth Road east of the onshore ECC
5 - A547 East of Rhuddlan
6 - A547 Eastern Rhuddlan Bypass
7 - A525 North of Rhuddlan
8 - A525 Western Rhuddlan Bypass
9 - A547 Abergele Road
10 - A525 South of Bodelwyddan Road
11 - Bodelwyddan Road
12 - B5381 Glascoed Road
13 - Ffordd William Morgan

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE:

TRAFFIC ASSESSMENT LOCATIONS

VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

FIGURE NUMBER:

FIGURE 4

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:50,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

P:\05356 - GoBe Consultants Ltd\00009 Awel y Mor\Tech\GIS\Dwgs\Wking\202201 Environmental Statement\Chapter 3.9 - Traffic and Transport\05356.00009.0307.0 Traffic Data Locations.mxd

Table 8: Highway Links AADT (15% uplift and adjusted HGVs for the ATC data).

HIGHWAY LINK	SOURCE	DATE	ORIGINAL DATA		ADJUSTED HGVS		FINAL FLOWS WITH 15% UPLIFT		
			TOTAL	HGV	TOTAL	HGV	TOTAL	HGV	HGV %
1. A548 Rhyl Coast Road	DfT	2019	12,311	177	12,311	177	12,311	177	1.4
2. B5119 east of Rhyl	DfT	2019	6,902	49	6,902	49	6,902	49	0.7
3. B5119 Dyserth Road (west of the onshore ECC)	ATC	2021	2,930	324	2,930	58	3,370	67	2.0
4. B5119 Dyserth Road (east of the onshore ECC)	ATC	2021	2,926	300	2,926	54	3,365	62	1.8
5. A547 east of Rhuddlan	DfT	2018	10,930	359	10,930	359	10,930	359	3.3
6. A547 eastern Rhuddlan bypass	ATC	2021	11,716	1,476	11,716	265	13,473	305	2.3
7. A525 north of Rhuddlan	DfT	2019	15,324	354	15,324	354	15,324	354	2.3
8. A525 western Rhuddlan bypass	DfT	2019	23,263	602	23,263	602	23,263	602	2.6
9. A547 Abergele Road	ATC	2021	12,756	1,698	12,756	305	14,646	351	2.4

HIGHWAY LINK	SOURCE	DATE	ORIGINAL DATA		ADJUSTED HGVS		FINAL FLOWS WITH 15% UPLIFT		
			TOTAL	HGV	TOTAL	HGV	TOTAL	HGV	HGV %
10. Bodelwyddan Road	ATC	2021	5,556	569	5,556	102	6,389	118	1.8
11. A525 south of Bodelwyddan Road	DfT	2019	16,850	563	16,850	563	16,850	563	3.3
12. B5381 Glascoed Road	ATC	2021	940	171	940	31	1,081	35	3.3
13. Ffordd William Morgan	ATC	2021	3,755	441	3,755	79	4,319	91	2.1

Base year 2021

119 The Trip End Model Presentation Program (TEMPRO) database, which determines background traffic growth on an annual basis for a specified time period, has been used to factor the DfT data to a base year of 2021.

120 Traffic growth rates have been applied to the observed traffic flows in Table 8 using the DfT software TEMPRO to create base 2021 traffic flows.

121 The TEMPRO software presents the output of the DfT's National Trip End Model which forms part of the National Transport Model (NTM). The DfT's Webtag guidance Unit 3.15.2 advises the use of NTM in preference to the National Road Traffic Forecasts (NRTF) as the NTM data is based on a more up-to-date model.

122 The TEMPRO factors are as follows:

- 2018 to 2021 – 1.0251; and
- 2019 to 2021 – 1.0228

123 The 2021 year AADT flows within the study area are shown in Table 7.

Table 9: Highway Links AADT (2021).

HIGHWAY LINK	TOTAL	HGV	HGV %
1. A548 Rhyl Coast Road	12,592	181	1.4
2. B5119 east of Rhyl	7,059	50	0.7
3. B5119 Dyserth Road (west of the onshore ECC)	3,370	67	2.0
4. B5119 Dyserth Road (east of the onshore ECC)	3,365	62	1.8
5. A547 east of Rhuddlan	11,179	367	3.3
6. A547 eastern Rhuddlan bypass	13,473	305	2.3
7. A525 north of Rhuddlan	15,673	362	2.3
8. A525 western Rhuddlan bypass	23,793	616	2.6
9. A547 Abergele Road	14,646	351	2.4

HIGHWAY LINK	TOTAL	HGV	HGV %
10. Bodelwyddan Road	6,389	118	1.8
11. A525 south of Bodelwyddan Road	17,234	576	3.3
12. B5381 Glascoed Road	1,081	35	3.3
13. Ffordd William Morgan	4,319	91	2.1

124 In order to assess the potential effects of the construction phase of AyM on driver severance and delay, the peak hours on the highway network have been identified using the existing DfT and ATC data.

125 The method used to identify the peak hours on the highway network within the study area is provided in Volume 5, Annex 9.1 and the peak hours have been identified as:

- 08:00 to 09:00; and
- 16:00 to 17:00.

126 The peak hour traffic flows on each highway link are shown in Table 10.

Table 10: Highway link two-way peak hour traffic flows (2021).

HIGHWAY LINK	08:00 - 09:00	16:00 - 17:00
1. A548 Rhyl Coast Road	1,246	1,228
2. B5119 east of Rhyl	697	687
3. B5119 Dyserth Road (west of the onshore ECC)	272	254
4. B5119 Dyserth Road (east of the onshore ECC)	275	252
5. A547 east of Rhuddlan	1,107	1,090
6. A547 eastern Rhuddlan bypass	1,021	1,021
7. A525 north of Rhuddlan	1,552	1,528

HIGHWAY LINK	08:00 - 09:00	16:00 - 17:00
8. A525 western Rhuddlan bypass	2,351	2,315
9. A547 Abergele Road	915	1,110
10. Bodelwyddan Road	573	445
11. A525 south of Bodelwyddan Road	1,706	1,680
12. B5381 Glascoed Road	96	84
13. Ffordd William Morgan	497	415

9.7.5 Road safety

127 To understand the potential for a significant road safety impact as a result of the construction phase of AyM, it is necessary to establish a baseline and identify any inherent road safety issues within the onshore highway study area.

128 The review, which is provided in detail in Volume 5, Annex 9.1 is summarised in the following sections and includes:

- Examining the rate of collisions per length of road in miles (known as collision rates); and
- Reviewing any clusters to understand any patterns or trends, especially those involving HGVs and vulnerable road users (namely cyclists and pedestrians).

Local Road Network (LRN)

129 An analysis of the Personal Injury Accident (PIA) data on the LRN in the study area has been undertaken, informed by data for a period of five years (2015 to 2019) obtained from DCC. A period of three years was proposed at scoping stage and therefore the five year assessment represents a robust assessment. The data does not include any causation factors and therefore it has not been possible to undertake an analysis of common causation factors.

130 The analysis of collision rates concluded that the following links have a significantly higher accident rate than the Welsh national average (2018), per 100 million vehicle km:[ii]

- A548 Rhyl Coast Road;
- B5119 (all sections); and
- A525 between Rhyl and Rhuddlan.

131 The analysis concluded that the following links have a marginally higher accident rate than the Welsh national average:

- A547 to the east of Rhuddlan; and
- A547 Abergele Road

132 The other highway links within the study area all have an accident rate similar to, or less than, the Welsh national average (2018).

133 PIA clusters have been identified at the following locations on the construction access routes, where AyM construction traffic could manoeuvre:

- A548 Rhyl Coast Road at Accesses C1 and C2;
- B5119 to the east of the onshore ECC (between Ffordd Ffynnon and the A547);
- B5119/ A547 junction; and
- A548/ A525 junction

134 With the exception of the B5119 to the east of the onshore ECC, the above clusters include PIAs involving pedestrians or cyclists; however only at the A548/ A525 junction has there been more than one PIA involving pedestrians or cyclists (eight involving pedestrians). This junction has controlled crossing facilities and guard railing to prevent pedestrians crossing at locations other than the controlled crossings/ protect pedestrians from vehicles, and therefore it can be surmised that the accidents are likely to have been down to driver or pedestrian error rather than a deficiency in the highway layout.

135 The analysis also identified that none of the PIAs reviewed within the five year period involved HGVs.

136 Other clusters identified across the highway network within the study area involved manoeuvres that would not be undertaken by construction traffic associated with AyM.

Strategic Road Network (SRN)

137 An analysis of the PIA data on the SRN, informed by data for a period of five years (2016 to 2020) obtained from Crashmap. Crashmap is based on official accident data reported by the Police and is approved by the National Statistics Authority and reported on by the DfT each year has been undertaken. The analysis identified two accidents at different locations within the five year period and therefore it is surmised that there are no particular road safety issues on this section of the A55, including Junction 26 and Junction 27.

9.7.6 Active Travel Routes (ATRs)

138 The ATRs within the study area (those that would be impacted directly and indirectly) are described in Volume 5, Annex 9.1 and summarised below:

- Wales Coastal Path/ National Cycle Network (NCN) 5 (Route Section B), would be impacted by AyM construction traffic using Access A and B2;
- Shared use path on A548 Rhyl Coast Road (Route Section B), would be impacted by AyM construction traffic using Accesses A, B1 and B2;
- Shared use path on Bodelwyddan Road (Route Section E), would be impacted by AyM construction traffic using Crossing M; and
- Cycle route on Tan-Yr-Eglwys Road (Route Section D), would be impacted by AyM construction traffic using Access I

139 The Wales Coastal Path/ NCN 5 is an important national route, particularly for tourism in the summer months (see Volume 3, Chapter 4: Tourism and Recreation (application ref: 6.3.4). Table 5-9 of Volume 5, Annex 9.1 identifies a maximum of 325 daily cycle movements on this ATR.

140 All accesses that would cross the shared use path on the A548 Rhyl Coast Road are existing accesses. Whilst vehicle movements would increase at these accesses as a result of the construction phase of AyM, pedestrians and cyclists currently cross at these locations safely, using the dropped kerbs and tactile paving available. Table 5-9 of Volume 5, Annex 9.1 identifies a maximum of 72 daily cycle movements on this ATR

141 The shared use path on Bodelwyddan Road is well used by commuters, particularly by cyclists travelling to and from Bodelwyddan Hospital. Table 5-9 of Volume 5, Annex 9.1 identifies a maximum of 62 daily cycle movements on this ATR.

142 The cycle route on Tan-Yr-Eglwys Road and is part of North Wales Path/ NCN 84. Table 5-9 of Volume 5, Annex 9.1 identifies a maximum of 110 daily cycle movements on NCN 84.

9.7.7 Public Rights of Way (PRoW)

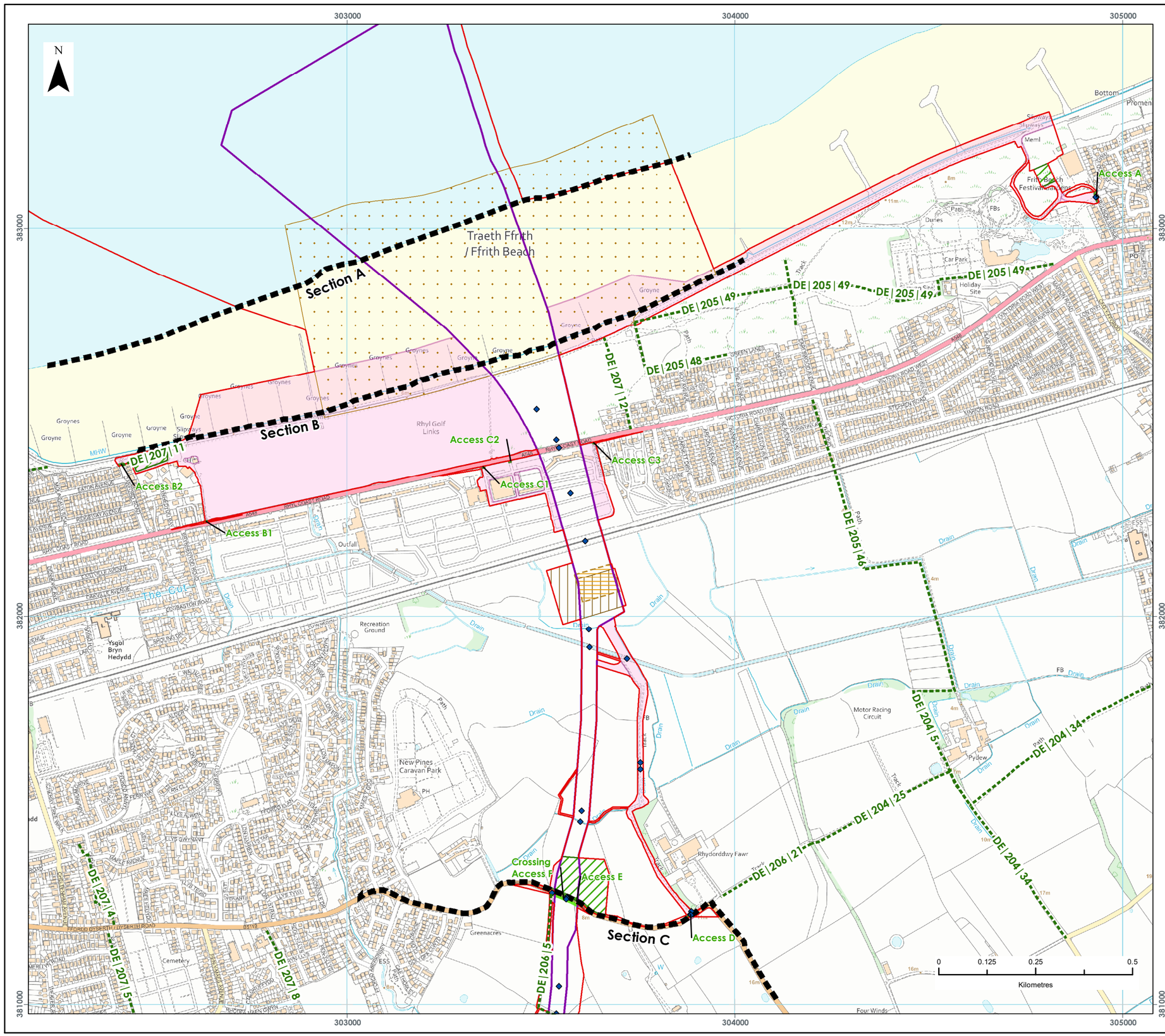
The PRoW within the study area (those that would be impacted directly and indirectly) are described in Volume 5, Annex 9.1. A summary of the PRoW is provided in Table 11 and illustrated in Figure 5 to Figure 9.

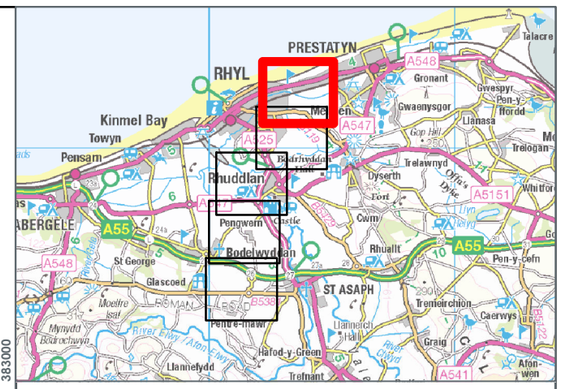
Table 11: PRoW per Route Section.

PROW	DESIGNATION	ROUTE SECTION	RELATIONSHIP TO THE ONSHORE ECC
DE/207/11	Footpath	B	At Landfall/ onshore ECC Access B2 and is currently temporarily closed until July 2022 due to the Rhyl East Coastal Defence Works.
DE/206/5	Footpath	C	Crosses onshore ECC haul roads (used by construction traffic to access the construction work areas). Likely to be used by residents of the adjacent residential areas to the west.
DE/206/3	Footpath	C	Crosses onshore ECC haul roads. Likely to be used by residents of the adjacent residential areas to the west.
DE/ 206/ 44	Footpath	C	Crosses ECC haul roads for Route Section C
DE/ 206/ 18	Footpath	C	Not directly impacted by the onshore ECC.
DE/ 206/ 17	Footpath	C	Crosses ECC haul roads for Route Section C
DE/ 206/ 46	Footpath	C	
DE/ 206 /20 (short section	Footpath	C	Crosses short section of ECC haul road and access to ecology mitigation

PROW	DESIGNATION	ROUTE SECTION	RELATIONSHIP TO THE ONSHORE ECC
from DE/ 206/ 46)			
DE/ 206/ 42	Footpath	D	Shared with construction access, so pedestrians walking along the lane.
DE/ 206/ 23	Footpath	D	Does not appear to connect anywhere. Unlikely to be highly used
DE/ 206/ 24	Footpath	D	Crosses ECC haul roads. Only links to DE/ 206/ 23. Unlikely to be highly used.
DE/ 206/ 31	Footpath	D	Not directly impacted by the onshore ECC as interaction is with operational access route.
DE/ 206/ 29	Footpath	D	North Wales Path. Not directly impacted by the onshore ECC as cables installed via HDD (or another trenchless technique) beneath PROW. NCN 84. Key integrated transport route, popular walking and cycling route.
DE/ 201/ 12	Footpath	D	Not directly impacted by the onshore ECC as cables installed via HDD (or another trenchless technique) beneath PROW. This is an aspirational integrated transport route, DCC has confirmed no firm plans for its development.
DE/ 206/ 14	Footpath	E	Not well used

PROW	DESIGNATION	ROUTE SECTION	RELATIONSHIP TO THE ONSHORE ECC
DE/ 206/ 40	Footpath	E	Crosses ECC haul roads. Not well used. Alternative route options to connect to Bodelwyddan Road (Bridleway DE/ 201/ 11) but would require 150 m walk on Abergele Road with minimal verge.
DE/ 206/ 41	Footpath	E	Not directly impacted by the onshore ECC. Alternative option to DE/ 206/ 14 and DE/ 206/ 40
DE/ 206/ 4	Footpath	E	Crosses ECC haul roads.
DE/ 201/ 8	Footpath	E	Not directly impacted by the onshore ECC. Alterative option to DE/ 206/ 4 to access DE/ 206/ 41
DE/ 201/ 7	Footpath	E	Crosses ECC haul roads and TCC. Alternative route via a shared foot/ cycle path to the east of the junction connecting to Nant-Y-Faenol Road.
DE/ 201/ 9	Bridleway	F	Crosses ECC Route Section F / the OnSSCable Corridor Zone. Well used. Crosses Ffordd William Morgan which is a construction access route.
DE/ 208/ 16	Footpath	G	Follows Access S, but segregated
DE/ 208/ 32	Bridleway	G	Crosses Access S





LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Crossing Schedule
- Proposed Onshore Export Cable Corridor
- Proposed Indicative Trenchless Crossing Compound
- Proposed Temporary Construction Compound
- Proposed Transition Joint Bay Construction Compound
- Proposed Access Location
- Proposed Crossing Location
- Proposed Construction Access Area
- Anchoring Zone
- Public Right of Network (PRoW)

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

DRAWING TITLE:

PROW
(ROUTE SECTIONS A AND B)

VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

FIGURE NUMBER:

FIGURE 4
Page 1 of 5

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:10,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

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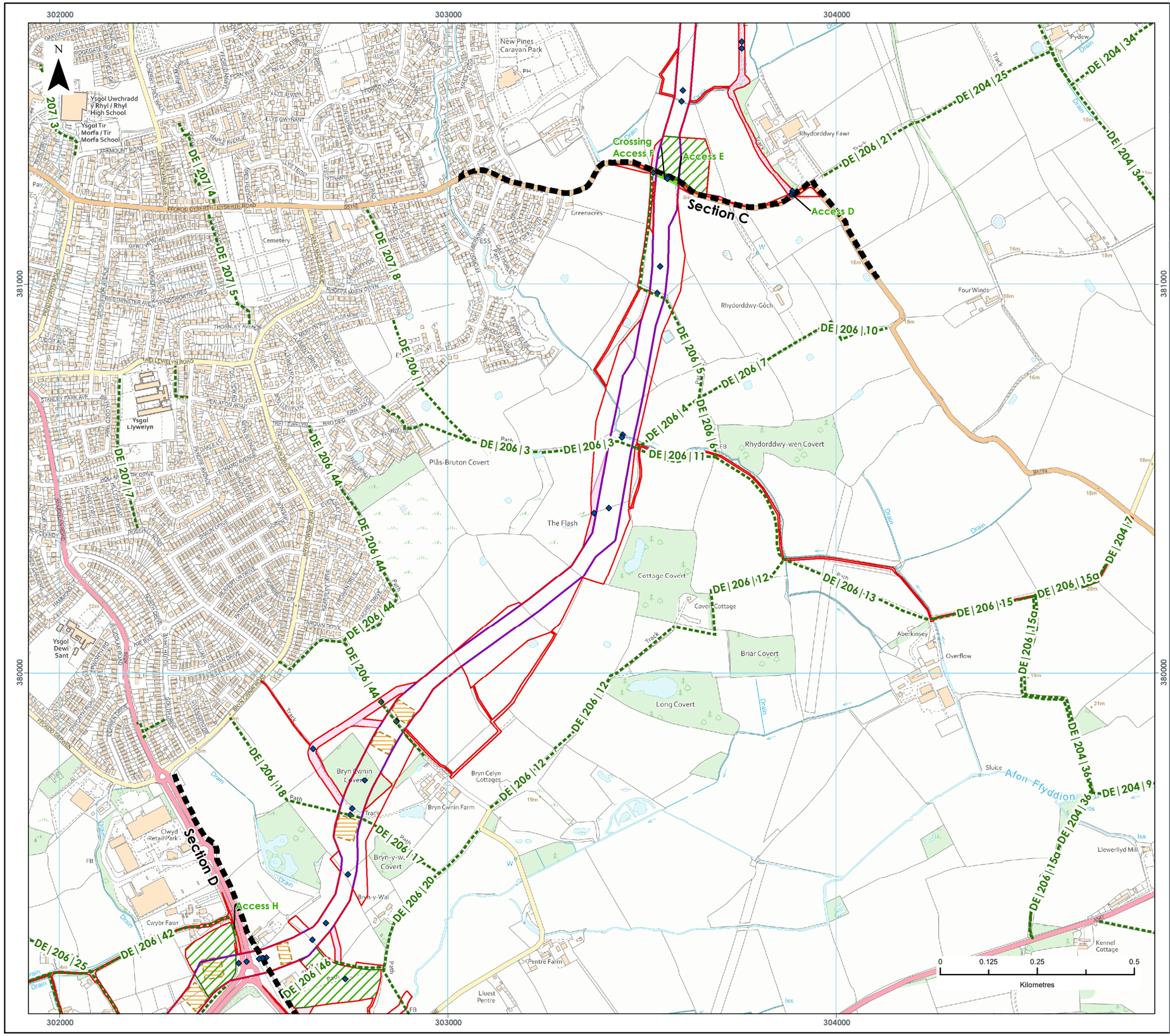
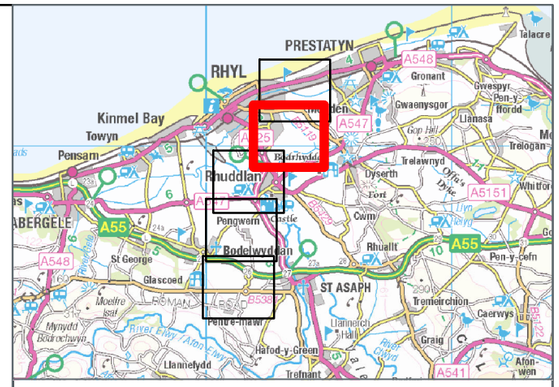




LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Crossing Schedule
- Proposed Onshore Export Cable Corridor
- Proposed Indicative Trenchless Crossing Compound
- Proposed Temporary Construction Compound
- Proposed Access Location
- Proposed Crossing Location
- Proposed Construction Access Area
- Public Right of Network (PRoW)

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

DRAWING TITLE:

PROW (ROUTE SECTION C)

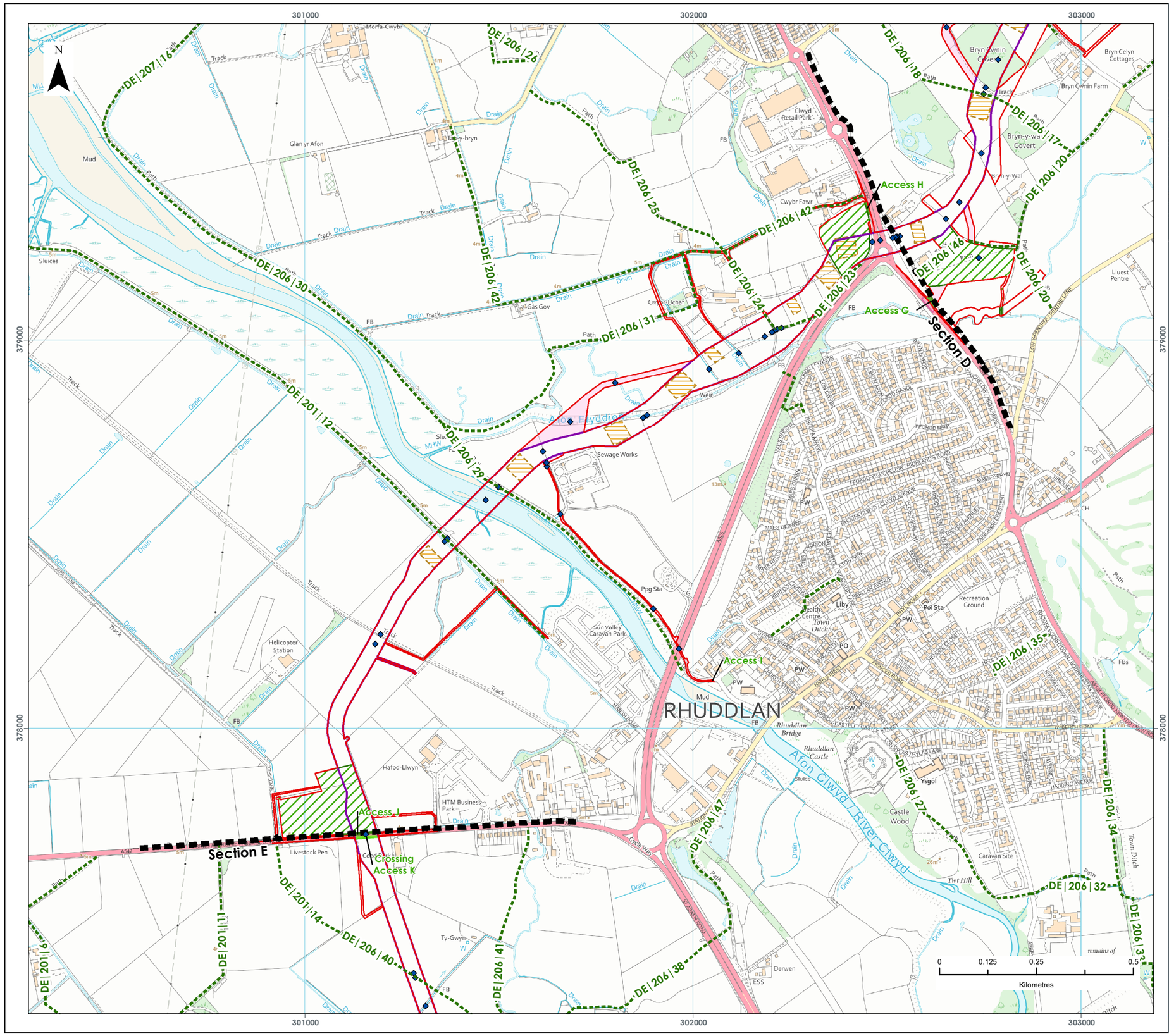
VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

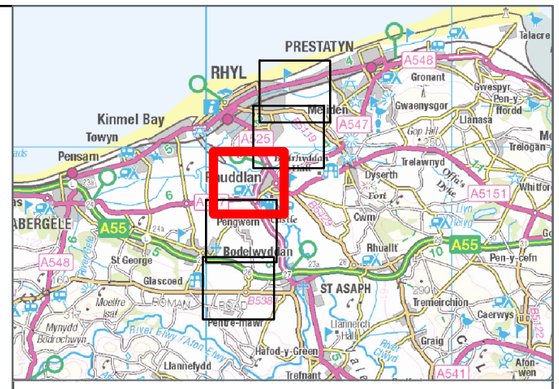
FIGURE NUMBER:

FIGURE 5

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:10,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm





LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Crossing Schedule
- Proposed Onshore Export Cable Corridor
- Proposed Indicative Trenchless Crossing Compound
- Proposed Temporary Construction Compound
- Proposed Access Location
- Proposed Crossing Location
- Proposed Construction Access Area
- Public Right of Network (PRoW)

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

DRAWING TITLE:

PROW (ROUTE SECTION D)

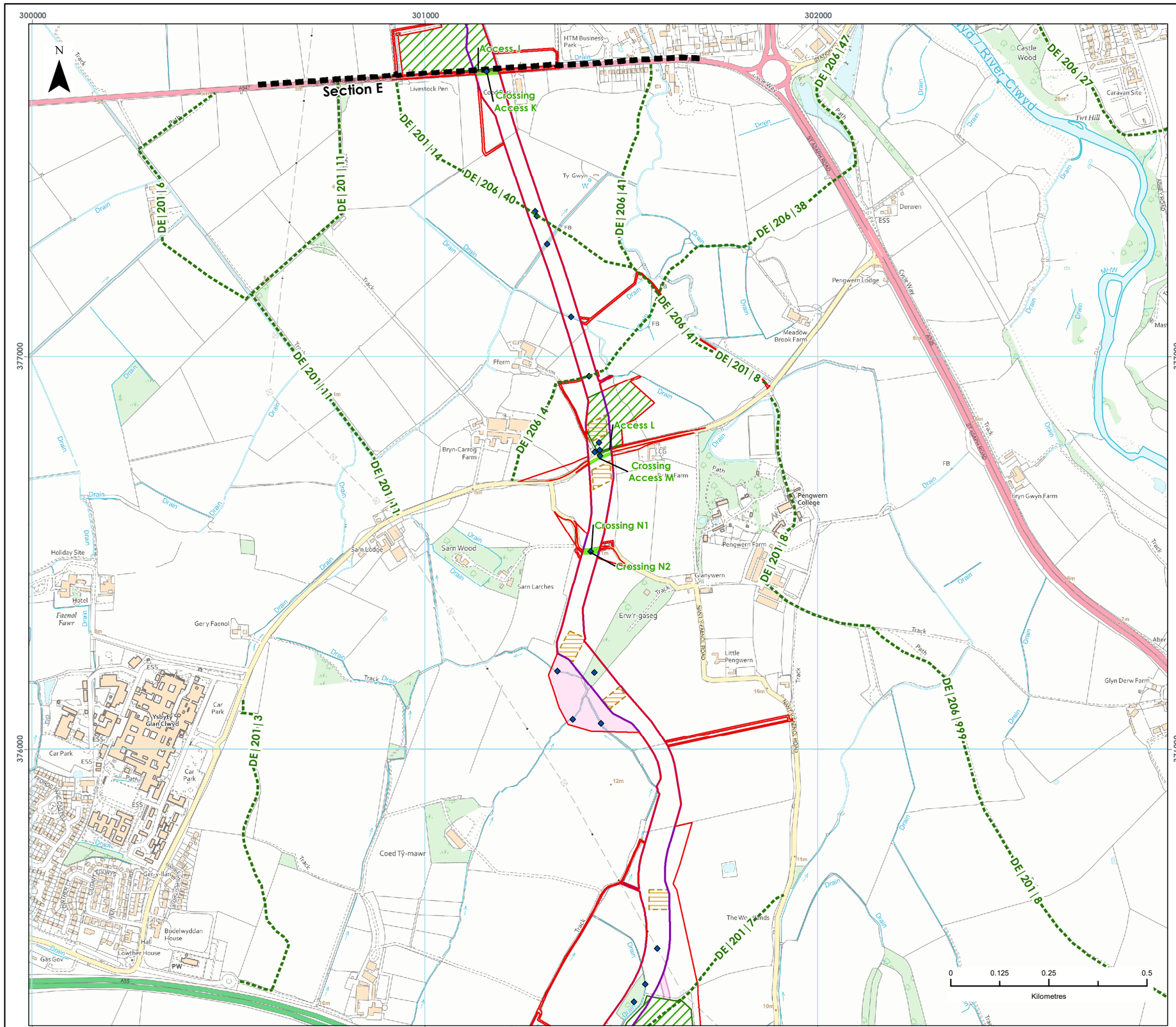
VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

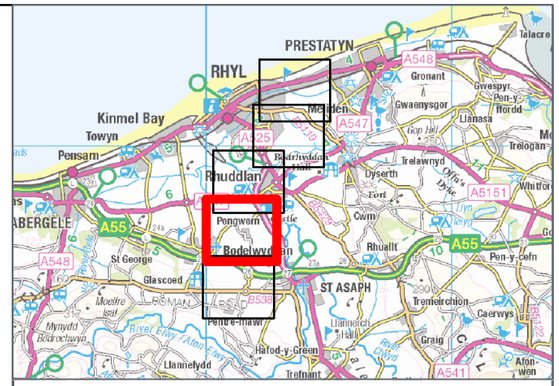
FIGURE NUMBER:

FIGURE 6

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:10,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm





LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Crossing Schedule
- Proposed Onshore Export Cable Corridor
- Proposed Indicative Trenchless Crossing Compound
- Proposed Temporary Construction Compound
- Proposed Access Location
- Proposed Crossing Location
- Proposed Construction Access Area
- Public Right of Network (PRoW)

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

DRAWING TITLE:

PROW (ROUTE SECTION E)

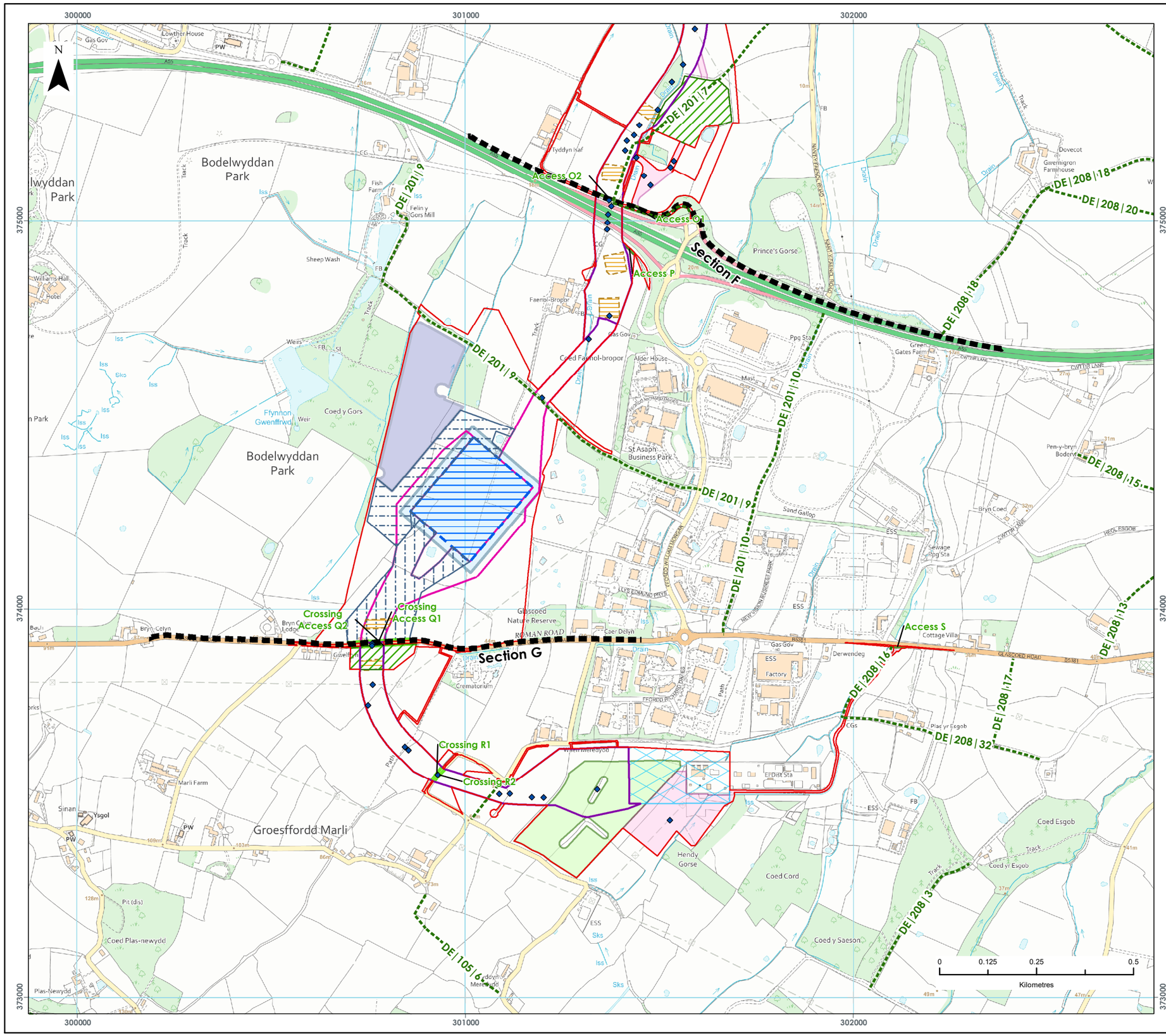
VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

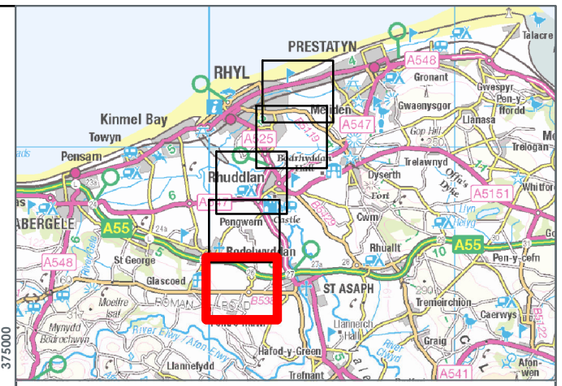
FIGURE NUMBER:

FIGURE 7

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:10,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm





LEGEND

- Order Limits
- Onshore Cable Route Section Breaks
- Crossing Schedule
- Proposed Onshore Export Cable Corridor
- Proposed Substation Cable Corridor Zone
- Proposed Indicative Trenchless Crossing Compound
- Proposed Temporary Construction Compound
- Proposed Temporary Construction Compound Zone
- Proposed Access Location
- Proposed Crossing Location
- Proposed Construction Access Area
- Unlicenced Work Zone
- Proposed Onshore Substation (OnSS) Footprint
- Proposed Substation Construction Area
- Substation Construction Access Zone
- Substation Temporary Construction Access Zone
- Proposed Substation Indicative Temporary Construction Compound Area
- Public Right of Network (PRoW)

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

DRAWING TITLE:

PROW (ROUTE SECTIONS F AND G)

VER	DATE	REMARKS	Drawn	Checked
1	08/04/2022	ES Issue	JRS	MF

FIGURE NUMBER:

FIGURE 8
Page 5 of 5

SCALE:	PLOT SIZE:	DATUM:	COORDINATE SYSTEM:
1:10,000	A3	ODN	British National Grid

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

9.7.8 Sensitive receptors

Highway links

143 Using the review of the construction access routes in Volume 5, Annex 9.1, including the summary of road safety in Section 9.7.5 of this chapter, Table 12 identifies the sensitivity of each highway link to changes in the volume of traffic, based on the criteria in Table 4 and professional judgement (medium and high sensitivity shown only).

Table 12: Highway link sensitivity.

HIGHWAY LINK	SENSITIVITY	
	MEDIUM	HIGH
A548 Rhyl Coast Road	Queen Alexandra Hospital	Various Care Homes
B5119 (west of the onshore ECC)	Rhyl Football Club, Botanical Gardens, local facilities	Rhyl High School, a care home and retirement homes, high accident rate
B5119 (east of the onshore ECC)		High accident rate
A547 east of Rhuddlan	None	
A547 eastern bypass	None	
A525 north of Rhuddlan	Local facilities with roadside frontages	Ysgol Gynradd Dewi Sant (School), high accident rate
A525 western Rhuddlan bypass	None	
A547 Abergele Road	None	
Bodelwyddan Road		Pengwern College

HIGHWAY LINK	SENSITIVITY	
	MEDIUM	HIGH
A525 south of Bodelwyddan Road	None	
B5381 Glascoed Road	Crematorium and Residential properties to the east of OnSS Access Zone and Crossing Points Q1 / Q2	
Ffordd William Morgan	None	

Active Travel Routes (ATRs)

144 Using the review of the ATRs in Volume 5, Annex 9.1 including the summary in Section 9.7.6 of this chapter, Table 13 identifies the sensitivity of each ATRs, based on the criteria in Table 4 and professional judgement.

Table 13: ATRs Sensitivity.

ATR	SENSITIVITY		
	LOW/ MEDIUM	HIGH	VERY HIGH
NCN 5	None		National route, regularly used
Shared use path on A548 Rhyl Coast Road		Commuter and leisure route, regularly used	
Shared use path on Bodelwyddan Road		Key commuter route, regularly used	

ATR	SENSITIVITY		
	LOW/ MEDIUM	HIGH	VERY HIGH
Cycle route on Tan-Yr-Eglwys Road (NCN84)			National Route, regularly used

Public Rights of Way (PRoW)

145 Using the review of the PRoW in Volume 5, Annex 9.1, Table 14 identifies the sensitivity of each PRoW, based on the criteria in Table 4 and professional judgement.

Table 14: PRoW Sensitivity.

PROW	ROUTE SECTION	SENSITIVITY			
		LOW	MEDIUM	HIGH	VERY HIGH
DE/207/11	B		Recreational route, link to wider network		
DE/206/5 and DE/206/3	C		Recreational route, link to wider network		
DE/206/44, DE/206/18, DE/206/17, DE/206/46 and DE/206/20 (between DE/206/46 and DE/206/20 North Wales Path)	C		Recreational route, link to wider network		
DE/206/20 (Short section from DE/206/46)	C			Regional route, regularly used	
DE/206/42 and DE/206/31	D		Recreational route, link to wider network		

PROW	ROUTE SECTION	SENSITIVITY			
		LOW	MEDIUM	HIGH	VERY HIGH
DE/206/23 and DE/206/24	D	Unlikely to be well used			
DE/206/29	D				National route, regularly used
DE/201/12	D		Recreational route, link to wider network		
DE/206/14	E	Unlikely to be well used			
DE/206/40, , DE/206/4 and DE/201/7	E	Recreational route, but suitable alternatives			
DE/201/8 and DE/206/41	E	Alternatives for DE/206/40, DE/206,4 and DE/206/14			

PROW	ROUTE SECTION	SENSITIVITY			
		LOW	MEDIUM	HIGH	VERY HIGH
DE/201/9	F		Well used, no bridleway alternative for the same route		
DE/208/16 and DE/208/32	G		Recreational route, link to wider network		

Highway links (lane or road closure)

146 Using the review of the highway network in Volume 5, Annex 9.1, the sensitivity of each highway link to a temporary lane closure (the worst case scenario for these links), based on the criteria in Table 4 and professional judgement are as follows:

- A547 Abergele Road (Between ECC Route Sections D and E) – medium; and
- Ffordd William Morgan (Route Section F) - medium

147 Using the review of the highway network in Volume 5, Annex 9.1, the sensitivity of each highway link to a temporary road closure (the worst case scenario for these links), based on the criteria in Table 4 and professional judgement are as follows:

- B5119 Dyserth Road (Between ECC Route Sections B and C) – low;
- Nant -Y-Faenol Road (ECC Route Section E) - high;
- B5381 Glascoed Road (Between ECC Route Sections F and G) - medium; and
- Unnamed rural road (ECC Route Section G) – low

9.7.9 Evolution of the baseline

148 The future baseline position assumes year on year background traffic growth from the base year of 2021. As a result, the baseline AADT traffic flows on construction traffic routes in Table 9 have been increased (using TEMPRO) to account for the future year scenario of 2026, as shown in Table 15.

149 The TEMPRO factor is:

- 2021 to 2026 – 1.0407

Table 15: Highway link two-way AADT (2026).

HIGHWAY LINK	TOTAL	HGV	HGV %
1. A548 Rhyl Coast Road	12,592	188	1.4
2. B5119 east of Rhyl	7,059	51	0.7

HIGHWAY LINK	TOTAL	HGV	HGV %
3. B5119 Dyserth Road (west of the onshore ECC)	3,370	70	2.0
4. B5119 Dyserth Road (east of the onshore ECC)	3,365	65	1.8
5. A547 east of Rhuddlan	11,179	382	3.3
6. A547 eastern Rhuddlan bypass	13,473	318	2.3
7. A525 north of Rhuddlan	15,673	377	2.3
8. A525 western Rhuddlan bypass	23,793	630	2.6
9. A547 Abergele Road	14,646	366	2.4
10. Bodelwyddan Road	6,389	123	1.8
11. A525 south of Bodelwyddan Road	17,234	599	3.3
12. B5381 Glascoed Road	1,081	37	3.3
13. Ffordd William Morgan	4,319	95	2.1

150 The baseline highway peak hour traffic flows on the construction traffic access routes in Table 10 have been increased (using TEMPRO) to account for the future year scenario of 2026, as shown in Table 16.

Table 16: Highway link two-way peak hour traffic flows (2026).

HIGHWAY LINK	08:00 - 09:00	16:00 - 17:00
1. A548 Rhyl Coast Road	1,271	1,245
2. B5119 east of Rhyl	700	686
3. B5119 Dyserth Road (west of the onshore ECC)	278	260
4. B5119 Dyserth Road (east of the onshore ECC)	279	256
5. A547 east of Rhuddlan	1,129	1,105

HIGHWAY LINK	08:00 - 09:00	16:00 - 17:00
6. A547 eastern Rhuddlan bypass	1,033	1,033
7. A525 north of Rhuddlan	1,582	1,550
8. A525 western Rhuddlan bypass	2,361	2,312
9. A547 Abergele Road	925	1,119
10. Bodelwyddan Road	579	450
11. A525 south of Bodelwyddan Road	1,740	1,704
12. B5381 Glascoed Road	121	109
13. Ffordd William Morgan	504	422

9.8 Key parameters for assessment

151 The trip generation and distribution parameters are described in detail in Volume 5, Annex 9.2 and the associated appendices and summarised in Section 9.8.1 below.

9.8.1 Trip generation parameters

152 The key trip generation parameters are:

- Core working hours – 07:00 to 19:00 (Monday to Saturday):
  - 80% arriving and departing outside of the peak hours;
  - 20% arriving and departing during the peak hours;
- Core HGV deliveries - 07:00 to 19:00;
- The definition of two-way HGV movements in this assessment assumes a vehicle arriving at a construction access and TCC, uploading and departing at the same access;
- Car occupancy – 2 construction workers per vehicle; and
- The definition of two-way employee movements in this assessment assumes a vehicle arriving at a construction access and TCC in the morning and leaving in the evening, from the same location.

9.8.2 Trip distribution parameters

153 In terms of the traffic distribution parameters, all HGV traffic associated with the construction phase of AyM is assumed to arrive from and depart to the A55, at Junction 26 or Junction 27. For the purposes of the assessment, HGVs and construction worker vehicles will use the same routes, to ensure a robust assessment along these highway links and junctions.

9.8.3 Assessment scenarios and MDS

154 A number of specific assessment scenarios (1a to 7b) based on the maximum trip generation forecast for each onshore ECC Route Section and using worst case parameters for the assignment of construction vehicle movements to each construction access, are described in Volume 5, Annex 9.2.

155 The specific assessment scenarios are:

- 1a - Maximum vehicle movements for ECC Route Section A (B5119 via Rhyl);
- 1b - Maximum vehicle movements for ECC Route Section A (B5119 via A547);
- 2a - Maximum vehicle movements for ECC Route Section B and ECC Route Section C (no ECC Route Section C vehicle movements on the B5119);
- 2b - Maximum vehicle movements for ECC Route Section B and ECC Route Section C (maximum likely vehicle movements on the B5119);
- 3 - Maximum vehicle movements for ECC Route Section D (maximum likely vehicle movements to Access H and I);
- 4a - Maximum vehicle movements for ECC Route Section E (maximum likely vehicle movements to Access K);
- 4b - Maximum vehicle movements for ECC Route Section E (maximum likely vehicle movements to Access L – peak month for total vehicles);
- 4c - Maximum vehicle movements for ECC Route Section E (maximum likely vehicle movements to Access L – peak month for HGVs) as identified in Section 3.2 of Volume 5, Annex 9.3;
- 5 - Maximum vehicle movements for ECC Route Section F at Access Q1);
- 6 - Maximum vehicle movements for the proposed OnSS at Access Q1;
- 7a - Maximum vehicle movements for ECC Route Section G including existing National Grid substation (no 400kV Route vehicle movements at Access S); and
- 7b - Maximum vehicle movements for ECC Route Section G including existing National Grid substation (maximum 400kV Route vehicle movements at Access S);

156 The assignment parameters for each assessment scenario are presented in Table 17 to Table 22.

Table 17: Traffic impact assessment scenarios 1a/ 1b (maximum vehicle movements for ECC Route Section A).

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS	
	SCENARIO 1A (B5119 VIA RHYL)	SCENARIO 1B (B5119 VIA A547)
A	100% to Access A	
B	100% to Access D	
C	50% to Access E, 50 % to Access G	
D	100% to Access H	
E	50% to Access J, 50% to Access O1/ O2	
F	100% to Access Q1	
OnSS	100% to Access Q1	
G	100% to Access Q2	
Existing National Grid Substation	100% to Access S	

Table 18: Traffic impact assessment scenarios 2a/ 2b (maximum vehicle movements for ECC Route Sections B and C).

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS	
	SCENARIO 2A	**SCENARIO** 2B
A	Same as Scenario 1A	
B	100% to Access D	
C	100% to Access G	50% to Access E, 50 % to Access G

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS	
	SCENARIO 2A	SCENARIO 2B
D, E, F, OnSS, G and Existing National Grid Substation	Same as Scenario 1A	

Table 19: Traffic impact assessment scenario 3 (maximum vehicle movements for ECC Route Section D).

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS
	SCENARIO 3
A, B and C	Same as Scenario 1A
D	100% to Access H
E, F including OnSS, G including existing National Grid Substation	Same as Scenario 1A

Table 20: Traffic impact assessment scenarios 4a/ 4b/ 4c (maximum vehicle movements for Route Section E).

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS	
	SCENARIO 4A	SCENARIO 4B/4C
A, B, C and D	Same as Scenario 1A	
E	50% to Access K, 50% to Access O1/ O2	50% to Access L, 50% to Access O1/ O2
F including OnSS, G including existing National Grid Substation	Same as Scenario 1A	

Table 21: Traffic impact assessment scenario 5 (maximum vehicle movements for Route Section F).

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS
	SCENARIO 5
A, B, C, D and E	Same as Scenario 1A
F	100% to Access Q1
G, proposed OnSS and existing National Grid substation	Same as Scenario 1A

Table 22: Traffic impact assessment scenario 6 (maximum vehicle movements for OnSS).

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS
	SCENARIO 6
A, B, C, D, E, and F	Same as Scenario 1A
OnSS	100% to Access Q1
G and existing National Grid substation	Same as Scenario 1A

Table 23: Traffic impact assessment scenarios 7a/ 7b (maximum vehicle movements for ECC Route Section G and existing National Grid Substation).

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS	
	SCENARIO 7A	SCENARIO 7B
A, B, C, D, E, F and OnSS	Same as Scenario 1A	
G	100% to Access Q2	100% to Access S

ONSHORE ECC ROUTE SECTION	ASSIGNMENT PARAMETERS	
	SCENARIO 7A	SCENARIO 7B
Existing National Grid substation	100% to Access S	

157 Using from the assessment scenarios presented in Volume 5, Annex 9.2 and in Table 17 to Table 25 above, the maximum daily two-way vehicle movements forecast during the construction of AyM for each link is presented in Table 26Table 24.

Table 24: Maximum two-way daily vehicle movements on each highway link.

HIGHWAY LINK	MAXIMUM TWO-WAY DAILY VEHICLE MOVEMENTS		
	CAR/ LGV	HGV	TOTAL
1. A548 Rhyl Coast Road	26	22	48
2. B5119 east of Rhyl	53	57	107
3. B5119 Dyserth Road (west of the onshore ECC)	53	57	107
4. B5119 Dyserth Road (east of the onshore ECC)	50	57	107
5. A547 east of Rhuddlan	41	33	74
6. A547 eastern Rhuddlan bypass	85	83	159
7. A525 north of Rhuddlan	86	66	148
8. A525 western Rhuddlan bypass	126	92	203
9. A547 Abergele Road	57	39	96
10. Bodelwyddan Road	34	29	63

HIGHWAY LINK	MAXIMUM TWO-WAY DAILY VEHICLE MOVEMENTS		
	CAR/ LGV	HGV	TOTAL
11. A525 south of Bodelwyddan Road	167	130	292
12. B5381 Glascoed Road	143	119	262
13. Ffordd William Morgan	146	130	276

158 The maximum peak hour (morning or evening) two-way vehicle movements forecast during the construction of AyM for each link, using from the assessment scenarios presented in Volume 5, Annex 9.2 and in Table 17 to Table 22 is presented in Table 25.

Table 25: Maximum two-way peak hour vehicle movements on each highway link.

HIGHWAY LINK	MAXIMUM TWO-WAY PEAK HOUR VEHICLE MOVEMENTS		
	CAR/ LGV	HGV	TOTAL
1. A548 Rhyl Coast Road	2	3	4
2. B5119 east of Rhyl	5	5	10
3. B5119 Dyserth Road (west of the onshore ECC)	5	5	10
4. B5119 Dyserth Road (east of the onshore ECC)	5	5	10
5. A547 east of Rhuddlan	3	4	7
6. A547 eastern Rhuddlan bypass	7	9	15
7. A525 north of Rhuddlan	5	9	14

HIGHWAY LINK	MAXIMUM TWO-WAY PEAK HOUR VEHICLE MOVEMENTS		
	CAR/ LGV	HGV	TOTAL
8. A525 western Rhuddlan bypass	8	13	21
9. A547 Abergele Road	3	6	9
10. Bodelwyddan Road	3	4	7
11. A525 south of Bodelwyddan Road	11	17	28
12. B5381 Glascoed Road	12	12	24
13. Ffordd William Morgan	12	13	25

159 The MDS is summarised in Table 26.

Table 26: Maximum design scenario.

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
CONSTRUCTION		
All effects considered as set out in Section 9.4.2	The maximum number of total vehicles/ HGVs expected at each construction access location and highway link, as set out in Table 24 and Table 25. Where open trenching technology is an option for the export cable to be installed under a road Table 8 it is assumed that there	The maximum forecast vehicle movements at each construction access will not occur simultaneously. The assessment does not consider 24-hour working (that may be required for HDD (or another trenchless technique) activities in exceptional circumstance, which would spread employee vehicle movements over a wider time period, although this would only involve construction worker movements associated with different shift times, not HGV movements.

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
	would be a temporary lane or road closure (the worst case for each).	The assessment uses a conservative estimate of car sharing and does not take into account the implementation of measures within the Outline TP (Appendix 9 of the Outline CoCP (application ref: 8.13.9)). The assessment includes a sensitivity test of a proportion of employee vehicle movements (20%) in the morning and evening highway peak hours.
DECOMMISSIONING		
All effects considered	Assumed to be no worse than the construction phase	
CUMULATIVE EFFECTS		
All effects considered	Planned developments within a 5 km radius of the site have been considered, concluding no cumulative assessment is required	n/a.

9.9 Mitigation

160 Mitigation measures that were identified and adopted as part of the evolution of the project design (embedded into the project design) and that are relevant to traffic and transport are listed in Table 27. The mitigation includes embedded measures such as design changes, and applied mitigation, which is subject to further study or approval of details; these include avoidance measures that will be informed by pre-construction surveys, and necessary additional consents where relevant. The composite of embedded and applied mitigation measures apply to all parts of the AyM development works, including pre-construction, construction, operation and maintenance and decommissioning.

161 General mitigation measures, which would apply to all parts of the project, are set out first. Thereafter mitigation measures that would apply specifically to traffic and transport issues associated with the Landfall, onshore ECC and OnSS.

Table 27: Mitigation relating to traffic and transport.

PARAMETER	MITIGATION MEASURES
CONSTRUCTION	
Outline Construction Traffic Management Plan (Outline CTMP)	An Outline CTMP has been prepared (Appendix 7 of the Outline CoCP (application ref: 8.13.7)) which sets out the key principles and types of measures to be implemented during construction of AyM.
Outline Travel Plan (Outline TP)	An Outline TP is provided as an appendix 9 to the outline CoCP (application ref: 8.13.9) and includes a range of demand management measures including a target car share ratio. The Outline TP also provides details of how compliance with targets will be measured, monitored and reported upon.
Outline Public Access Management Plan (Outline PAMP)	An Outline PAMP has been prepared (Appendix 8 of the Outline CoCP (application ref: 8.13.8))which sets out the anticipated mechanisms for managing the use of ATRs and PRoW.

PARAMETER	MITIGATION MEASURES
Strategy for access	The strategy for access has selected routes that where possible, seek to reduce the impact of traffic upon local communities.
No roads to be fully closed to install cables under the public highway (Other than roads where the width of the carriageway is unlikely to permit one lane to be kept open)	HDD (or another trenchless technique) (or other trenchless crossing technique) will be utilised for the installation of the export cable under the A55 and the A525 (and others where this is considered appropriate). Where feasible, for the roads where the open trenching method is to be adopted to remain open at all times and minimise disruption, it is proposed that: • The road crossings would be completed in two stages maintaining one traffic lane in each direction; • Traffic would be controlled through temporary traffic signals; • A safe route would be maintained for pedestrians through the works areas; • advanced signing would be implemented to assist drivers in finding alternative routes; and The works would be staggered so that multiple roads would not be closed at the same time, minimising the potential impact to users of the highway network.
Use of temporary haul roads.	Maximising the length of temporary haul roads at construction sites, to remove as much HGV traffic from the local highway network as possible.
DECOMMISSIONING	
Best practice construction measures	Decommissioning works would be undertaken in accordance with best practice measures at the relevant time.

9.10 Environmental assessment: construction phase

162 This section considers the site clearance and construction phase impacts of AyM on traffic and transport, through reference to the MDS presented in Table 26.

9.10.1 AADT percentage impact screening

163 A screening process has been undertaken for each link to identify routes that are likely to have sufficient changes in traffic flows and therefore require further impact assessment for:

- Community severance;
- Vulnerable road users and highway safety; and
- Dust and dirt

164 The screening process has been undertaken in accordance with GEART (Rule 1 and Rule 2):

- Rule 1 - Include road links where total traffic flows are predicted to increase by more than 30% or where the number of HGVs is predicted to increase by more than 30%; and
- Rule 2 - Include any other specifically sensitive areas where total traffic flows are predicted to increase by 10% or more

165 Based on this screening process, using the daily trip generation which shows the maximum predicted total and HGV traffic increases on each highway link (Volume 5, Annex 9.3), the following highway links that require assessment due to the percentage increases of HGVs are:

- B5119 (increase in HGVs of between 81.8% and 111.2%);
- Bodelwyddan Road (39.6% increase in HGVs);
- B5381 Glascoed Road (387.9% increase in HGVs); and
- Ffordd William Morgan (153.9% increase in HGVs)

166 Further impact assessment for community severance; vulnerable road users and highway safety; and dust and dirt for these highway links is provided in Section 9.10.2, Section 9.10.3 and Section 9.10.4.

167 The assessment of dangerous loads (AIL) has been undertaken for any highway link that is predicted to be impacted.

9.10.2 Driver severance and delay

Peak hours on the highway network

168 The consideration of potential driver severance and delay has been assessed across the highway network in the study area based on the forecast peak hour trip generation of AyM during the construction phase, using the worst case assumptions set out in the MDS.

169 Table 28 and Table 29 show the forecast two-way highway peak hour (08:00 to 09:00 and 16:00 to 17:00) vehicle movements on any link (and therefore on any arm of a junction) in the study area against the 2026 future year traffic flows with the percentage impact.

Table 28: Forecast two-way morning peak hour total construction traffic flows against future baseline traffic flows (2026).

HIGHWAY LINK	08:00 – 09:00		
	2026 BASELINE	AYM	AYM %
A548 Rhyl Coast Road	1,271	4	0.3
B5119 east of Rhyl	700	10	0.6
B5119 Dyserth Road (west of the onshore ECC)	278	10	3.6
B5119 Dyserth Road (east of the onshore ECC)	279	10	3.5
A547 east of Rhuddlan	1,129	7	0.9
A547 eastern Rhuddlan bypass	1,033	15	1.5
A525 north of Rhuddlan	1,582	14	0.9
A525 western Rhuddlan bypass	2,361	20	0.9
A547 Abergele Road	925	9	1.0
Bodelwyddan Road	579	6	1.0

HIGHWAY LINK	08:00 – 09:00		
	2026 BASELINE	AYM	AYM %
A525 south of Bodelwyddan Road	1,740	28	1.6
B5381 Glascoed Road	121	24	19.6
Ffordd William Morgan	504	25	5.0

Table 29: Forecast two-way evening peak hour total construction traffic flows against 2026 future baseline traffic flows (2026).

HIGHWAY LINK	16:00 – 17:00		
	2026 BASELINE	AYM	AYM %
1. A548 Rhyl Coast Road	1,245	4	0.4
2. B5119 east of Rhyl	686	10	1.5
3. B5119 Dyserth Road (west of the onshore ECC)	260	10	3.9
4. B5119 Dyserth Road (east of the onshore ECC)	256	10	3.8
5. A547 east of Rhuddlan	1,105	7	0.6
6. A547 eastern Rhuddlan bypass	1,033	15	1.5
7. A525 north of Rhuddlan	1,550	14	0.9
8. A525 western Rhuddlan bypass	2,312	20	0.9
9. A547 Abergele Road	1,119	9	0.8
10. Bodelwyddan Road	450	6	1.3
11. A525 south of Bodelwyddan Road	1,704	28	1.6

HIGHWAY LINK	16:00 – 17:00		
	2026 BASELINE	AYM	AYM %
12. B5381 Glascoed Road	109	24	22.0
13. Ffordd William Morgan	422	25	5.9

170 As Table 28 and Table 29 show, the percentage impact of the forecast highway peak hour construction phase traffic of AyM is significantly less than 10% on all highway links, with the exception of the B5381 Glascoed Road.

171 Using Table 3, percentage impacts less than 10% would be a **negligible** magnitude of impact and with **medium** sensitivity, the resulting adverse effect on driver severance and delay on all highway links (other than B5381 Glascoed Road) and associated junctions would result in a ***minor significance*** which is not significant in terms of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

172 The percentage impact on the B5381 Glascoed Road is 19.6% in the morning peak hour and 22.0% in the evening peak hour; however, the base flow is very low, resulting in a higher percentage change. Using professional judgement and taking the following points into consideration, the magnitude of impact is considered to be **negligible** for the following reasons:

- The very low baseline traffic flow and spare capacity on the highway link;
- the forecast number of two-way vehicle movements in the peak hours on this link are less than 30;
- Employee vehicle movements are likely to be less in the peak hours in reality due to the core working hours; and
- The implementation of a Travel Plan including the promotion of car sharing.

173 Therefore, this results in an adverse effect that would be ***minor in significance*** which is not significant in terms of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and no further assessment of driver severance and delay on the B5318 Glascoed Road has been undertaken.

Impact of open trenching on highway links

174 The other aspect of driver severance and delay would be as a result of the installation of the export cable across roads using open trenching technology, as set out in paragraph 59.

175 Where possible, the affected roads would be kept open with traffic management measures in place to ensure minimal disruption to existing vehicles on the highway network. In this scenario (known as shuttle working) there would be a slight delay as a result of temporary traffic lights or manually operated 'STOP/ GO' boards to keep one lane open; however, the works for crossing these roads will be for a short period, no longer than seven days. For some of the roads where the width of the carriageway is unlikely to permit one lane to be kept open, an assessment has been undertaken on the assumption that a temporary road closure would be required.

176 It is assumed that any temporary road closure would be for a maximum of seven days and should more than one temporary road closure be required during the construction of AyM, these would not be simultaneous unless agreed with DCC in advance or via approval of the Final CTMP.

177 Table 30 provides the assessment of driver severance and delay on the highway links as a result of a temporary road or lane closure (the worst case scenario forecast for each link).

178 For the identified magnitude of impact for each link, the use of traffic management measures in the Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7)) such as suitable signage warning users of the temporary road closures and diversions available, have been considered and will be developed as part of the final CTMP, which would need to be approved by DCC. Where direct access would be affected by a temporary road closure, the Applicant would liaise with those users directly to ensure minimal disruption as possible whilst an access is temporarily closed, which could include 24 hour working and/ or providing alternative crossing, where appropriate. This would include liaising with the emergency services, to ensure access could be maintained during the closure.

Table 30: Assessment of severance and delay on the highway links as a result of a temporary lane or road closure.

HIGHWAY LINK	IMPACT (WORST CASE)	SENSITIVITY	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
B5119 Dyserth Road	Temporary road closure	Regularly used route but rural 'B' road with alternative routes available - **low** sensitivity.	**Low**	***Minor Adverse*** (not significant)
A547 Abergele Road	Temporary lane closure	'A' Road, with alternative routes available - **medium** sensitivity.	**Negligible**	***Minor Adverse*** (not significant)
Nant -Y-Faenol Road	Temporary road closure	Direct access implications for a small number of users, with no alternative routes available - **high** sensitivity	**Negligible**	***Minor Adverse*** (not significant)
Ffordd William Morgan (north of Access P)	Temporary lane closure	Regularly used route, suitable alternatives available, minor delays during the morning and evening peak hours, would need to ensure no queueing back to the A55 – **low** sensitivity	**Low**	***Minor Adverse*** (not significant)

HIGHWAY LINK	IMPACT (WORST CASE)	SENSITIVITY	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
B5381 Glascoed Road	Temporary road closure	Regularly used route, rural 'B' road providing access to St Asaph Business Park, the crematorium and St Asaph local facilities, alternative routes available - **medium** sensitivity.	**Low/ Medium**	***Minor/ Moderate Adverse*** (not significant)
Unnamed rural road (south of B5381 Glascoed Road)	Temporary road closure	Minor rural road with alternative routes available - **low** sensitivity.	**Negligible**	***Negligible*** (not significant)

179 Based on the analysis in Table 30, for all highway links, with the exception of the B5381 Glascoed Road, the temporary adverse effects on driver severance and delay would be ***negligible*** or ***minor in significance***, which is not significant in terms of the EIA Regulations.

180 The magnitude of impact for the B5381 Glascoed Road has been identified as being borderline low/ medium, as whilst there is a suitable alternative route, the potential for re-routing a funeral procession is likely to have a greater impact than other traffic. However, there are not many populated areas that are accessed by the B5381 Glascoed Road to the west of the crematorium and given any road closure would likely be for a maximum of a few days only, the relative impact to the crematorium would be **low** rather than medium. Any planned temporary closures will be communicated at the earliest opportunity, as set out in the communication strategy in the Outline CoCP (Appendix 12 Outline Construction Communication Plan (application ref: 8.13.12). Therefore, the temporary adverse effect on driver severance and delay would be ***minor in significance***, which is not significant in terms of the EIA Regulations.

Community severance

181 The percentage increase of total forecast construction traffic flows derived for the MDS against the 2026 baseline, on each of the highway links requiring assessment are:

- 1.5 – 3.1% on the B5119;
- 0.9% on Bodelwyddan Road
- 23.2% on the B5381 Glascoed Road; and
- 6.1% on Ffordd William Morgan

182 For the B5119 and Bodelwyddan Road, which have **high** sensitivity, a **negligible** adverse change in traffic flow would result in an adverse effect that is ***minor in significance*** which is not significant in terms of the EIA Regulations.

183 For the B5381 Glascoed Road, which has **medium** sensitivity, a **low** adverse change in traffic flow would result in an effect that has ***minor significance***, which is not significant in terms of the EIA Regulations.

184 For Ffordd William Morgan, which has **low** sensitivity, a **negligible** adverse change in traffic flow would result in an adverse effect that is ***negligible in significance*** which is not significant in terms of the EIA Regulations.

9.10.3 Vulnerable road users and road safety

185 According to **Table 3**, the change in traffic flow of between 0.9% and 3.1% (as set out in paragraph 181) is a **negligible** adverse magnitude of impact for the B5119 and Bodelwyddan Road that both have **high** sensitivity. The resulting adverse effect on vulnerable road users i.e. WCH and road safety on these highway links would be ***minor in significance*** which is not significant in terms of the EIA Regulations.

186 Notwithstanding the above, the mitigation including the Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7))will ensure any potential impacts of vulnerable road users and road safety would be considered fully.

187 The change in traffic flow on the B5381 Glascoed Road is greater than 10% and according to Table 3, a qualitative assessment of the accident records is required to identify the adverse magnitude of impact. There has only been one PIA between Access and Crossing Points Q1 / Q2 and the junction with Ffordd William Morgan within the five year period assessed, which was slight in severity and did not involve a WCH.

188 The B5381 Glascoed Road is considered a highway link with **medium** sensitivity and taking the very low accident rate into account and with the embedded mitigation including the Outline CTMP, the magnitude of impact of vulnerable road users and road safety is considered to be **negligible**, which would result in an adverse effect that is ***minor in significance*** which is not significant in terms of the EIA Regulations.

189 The change in traffic flow on Ffordd William Morgan is 6.1%, which, according to Table 3 has a **negligible** adverse magnitude of impact. Ffordd William Morgan has **low** sensitivity and therefore, the resulting adverse effect on vulnerable road users and road safety would be ***negligible in significance*** which is not significant in terms of the EIA Regulations.

9.10.4 Dust and dirt

190 According to **Table 3**, the change in total traffic flow as a result of the AyM construction traffic is **negligible** adverse for the B5119 and Bodelwyddan Road (0.9% to 3.1%) and with **high** sensitivity, the resulting adverse effect would be ***minor in significance*** and therefore not significant in terms of EIA regulations.

191 The change in traffic flow on the B5381 Glascoed Road (23.2%) would be **low** adverse magnitude of impact according to Table 3 and with **medium** sensitivity, the resulting level of effect would be ***minor in significance*** and therefore not significant in terms of EIA regulations.

192 The change in traffic flow on Ffordd William Morgan is 6.1%, which, according to Table 3 has a **negligible** adverse magnitude of impact. Ffordd William Morgan has **low** sensitivity and therefore, the resulting adverse effect would be ***negligible in significance*** which is not significant in terms of the EIA Regulations.

193 Notwithstanding the above, measures set out in the Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7)) including wheel washing facilities will control the deposition of dust and dirt onto the public highway, reducing the level of effect on these highway links even further.

9.10.5 Dangerous loads

194 The delivery of AILs will be required for the construction of the OnSS. Access for construction (including for the AILs) is via Access Q1.

195 The AIL report prepared for the GyM offshore wind farm substation (which is located to the south of the B5381 Glascoed Road, adjacent to the existing National Grid substation) identified a route from Junction 26 of the A55 to the site via the B5381 Glascoed Road. Given the proposed route for the AIL associated with the construction of AyM is also via the B5381 Glascoed Road, it is concluded that there are unlikely to be any access issues that cannot be mitigated, for the delivery of the AIL.

196 An ALAR will be prepared post-consent, as part of the final CTMP, to confirm the routeing and any modifications to the highway network that might be required between the port of origin for delivery of the substation transformers (once this has been identified) and the route to the site.

197 Using Table 3, the number of expected AIL vehicle movements would be a **negligible** adverse magnitude of impact. The AIL delivery route would require the use Ffordd William Morgan, which has **low** sensitivity and therefore, the resulting adverse effect would be ***negligible in significance*** which is not significant in terms of the EIA Regulations.

198 The AIL delivery route would also use the B5381 Glascoed Road, which has **medium** sensitivity and therefore, the resulting adverse effect would be ***minor in significance*** which is not significant in terms of the EIA Regulations.

199 To ensure that delays are managed and co-ordinated, prior to the movement of any AIL, the contractor would be required to submit notifications to the relevant authorities (police, highway authorities and bridge / structure owners) through the Electronic Service Delivery for Abnormal Loads (ESDAL). The ESDAL process would ensure the timing of AIL movements would be co-ordinated and (including the issuing of the required advanced notification to stakeholders).

9.10.6 Users of Active Travel Routes (ATRs) and Public Rights of Way (PRoW)

200 The assessment of the potential impacts of users of ATRs and PRoW is presented in Table 31 to Table 34 for the onshore ECC Route Sections B to G. There are no ATRs or PRoW in ECC Route Section A.

Table 31: Assessment of users of ATRs and PRoW (ECC Route Section B).

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
Wales Coastal Path / NCN 5	Very High	Temporary crossing by AyM construction traffic	The route would be kept open using a manned crossing (see proposed management measures in the appended Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). Appropriate signage would be provided advising of an alternative route (shared use path on the A548). The frequency of the vehicle movements associated with the construction phase of AyM that would cross this ATRs would be negligible (maximum 22 HGV two-way vehicle movements per day, therefore very short delays.	**Negligible**	***Minor*** or ***Moderate Adverse*** ***Minor Adverse*** (not significant) selected given the very low number of vehicle movements and delays likely.

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
Shared use path on the A548	Medium	Temporary crossing by AyM construction traffic	The crossing of this route will be via an existing or new access and therefore, management is unlikely to be required; however, the Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7)) sets out the measures that will assist in warning users of construction traffic, such as signage.	**Negligible**	***Negligible*** (not significant)

Table 32: Assessment of users of ATRs and PRoW (ECC Route Section C).

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
DE/206/5	Medium	Temporary crossing by onshore ECC and AyM construction	The route would be kept open using a gated or manned crossing (see proposed management measures in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)).	**Negligible**	***Minor Adverse*** (not significant)

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
		traffic on haul road	The frequency of the vehicle movements associated with the construction phase of AyM that would cross this route would be negligible (maximum 30 two-way HGV movements per day, therefore very infrequent and short delays.		
DE/206/3	Medium	Temporary closure	It is proposed that this route would be temporarily closed, with alternative routes identified and set out in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). Whilst the additional distance using alternative routes range in length is between 200 m and over 500 m, as the use of these routes is likely to be either local residents walking dogs, or to connect to the North Wales Path as part of a much longer route, taking into account the PRoW that are proposed to be kept open within Route Section 1, the	**Low**	***Minor Adverse*** (not significant)

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
			overall magnitude of impact of the temporary closure of these routes can be considered low.		
DE/206/44	Medium	Temporary crossing by onshore ECC and AyM construction traffic on haul road	The route would be kept open using a manned crossing (see proposed management measures in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). The frequency of the vehicle movements associated with the construction phase of AyM that would cross this route would be low (maximum 59 two-way HGV movements per day, therefore fairly infrequent and short delays.	**Negligible**	***Minor Adverse*** (not significant)
DE/206/17	Medium	Temporary closure	It is proposed that this route would be temporarily closed, with alternative routes identified and set out in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)).	**Low**	***Minor Adverse*** (not significant)

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
			Whilst the additional distance using alternative routes range in length between 200 m and over 500 m, as the use of these routes is likely to be either local residents walking dogs, or to connect to the North Wales Path as part of a much longer route, taking into account the PRoW that are proposed to be kept open within Route Section C, the overall the magnitude of impact of the temporary closure of these routes can be considered low.		
DE/206/18	Medium	Indirect impact of AyM construction traffic	Connects users from the residential areas to the west to DE/206/17, which is crossed by the Route C onshore ECC and is likely to be temporarily closed. Alternative routes identified and set out in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)).	**Negligible**	***Minor Adverse*** (not significant)

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
DE/206/46 and DE/206/20 (short section between DE/206/46 and DE/206/20 North Wales Path)	Medium	Temporary closure	It is proposed that this route would be temporarily closed, with alternative routes identified and set out in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). The alternative route along Pentre Lane to access the North Wales Path is less the 250 m for the majority of users that would originate from the south.	**Low**	***Minor Adverse*** (not significant)
DE/206/20 North Wales Path (short section from DE/206/46)	High	Temporary crossing by Order Limits	This part of the OL would provide access to a watercourse for watervole translocation only.	**Negligible**	***Minor Adverse*** (not significant)

Table 33: Assessment of users of ATRs and PRoW (Route Section D).

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
DE/206/42 and DE/206/31	Medium	Indirect impact of AyM construction traffic	Recreational routes that are connected to DE/206/29 North Wales Path/ NCN 84, no alternative routes required	**Negligible**	***Minor Adverse*** (not significant)
DE/206/23	Low	Temporary closure	Unlikely to be regularly used. It is proposed that this route would be temporarily closed, with alternative routes identified and set out in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)) The additional distance using the alternative route along DE/206/42 and DE/206/24 is less than 250 m.	**Low**	***Minor Adverse*** (not significant)
DE/206/24	Low	Temporary crossing by onshore ECC and AyM	The route would be kept open using a gated or manned crossing (see proposed management measures in	**Negligible**	***Negligible*** (not significant)

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
		construction traffic on haul road	the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). The frequency of the vehicle movements associated with the construction phase of AyM that would cross this route would be negligible (maximum 42 two-way HGV movements per day, therefore very infrequent and short delays.		
DE/206/29 North Wales Path/ NCN 84	Very High	Shared use of route by construction traffic	Regularly used route, which would be impacted for a short section along Tan-Yr-Eglwys Road (ATRs) and Access I which shares a short section of the PRoW. The route would be kept open and managed through measures in the Outline PAMP appended to the outline CoCP (application ref: 8.13). Access I is to be used for the construction of a bridge over the River	**Negligible**	***Minor*** or ***Moderate Adverse*** ***Minor Adverse*** (not significant) selected given the very temporary

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
			Ffyddion, with a negligible number of vehicle movements for a limited period.		period for he works and negligible vehicle movements.

Table 34: Assessment of users of ATRs and PRoW (Route Section E).

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
DE/206/14, DE/206/40 and DE/206/4	Low	Temporary closure	It is proposed that these routes would be temporarily closed, with alternative routes identified and set out in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). The additional distance using the alternative routes along DE/201/8 and DE/206/41 is less than 500 m.	**Medium**	***Minor Adverse*** (not significant)
DE/201/8 and DE/206/41	Low	Indirectly impacted as part of wider route			

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
DE/201/7	Low	Temporary closure	It is proposed that this route would be temporarily closed, with an alternative route identified and set out in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). The additional distance using the alternative route via the path to the south of Prince's Gorse, is less than 500 m.	**Medium**	***Minor Adverse*** (not significant)

Table 35: Assessment of users of ATRs and PRoW (Route Section F).

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
DE/201/9	Medium	Temporary crossing by onshore ECC and AyM construction traffic on haul road	The route would be kept open using a manned crossing (see proposed management measures in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)).	**Negligible**	***Minor Adverse*** (not significant)

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
			The frequency of the vehicle movements associated with the construction phase of AyM that would cross this route would be low (maximum 26 two-way HGV movements per day, therefore fairly infrequent and short delays.		
DE/201/9	Medium	Temporary crossing by AyM construction traffic on the public highway	The existing bridleway crossing point on Ffordd William Morgan (within St Asaph Business Park) between the western and eastern sections of the route already exists and has tactile paving and good visibility. Whilst the 153.9% increase in HGV in terms of percentage impact suggests a high magnitude of impact, the actual increase across a 12 hour day would be an increase of around 11 additional two-way HGVs per hour, which can be considered low, particularly on a highway link through a business park.	**Low**	***Minor Adverse*** (not significant)

Table 36: Assessment of users of ATRs and PRoW (Route Section G).

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
DE/208/16	Medium	Indirectly impacted as part of wider route	This route would not be directly impacted by the construction of AyM and there would be no effect on users of these PRoW.	n/a	n/a
DE/208/32	Medium	Temporary crossing by construction traffic for the existing National Grid substation at Access S	The route would be kept open using a gated crossing (see proposed management measures in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)). The frequency of the vehicle movements associated with the construction phase of AyM that would cross this route would be negligible (maximum 22 two-way HGV movements and 62 two-way employee vehicles per day, therefore very infrequent and short delays	**Negligible**	***Minor Adverse*** (not significant)
DE/105/7	Low	Temporary closure	It is proposed that this route would be temporarily closed, with an alternative	**Medium**	***Minor Adverse***

PROW/ ATR	SENSITIVITY	IMPACT	ASSESSMENT	MAGNITUDE OF IMPACT	LEVEL OF EFFECT
			route identified and set out in the Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8)).		(not significant)

201 Based on the analysis in Table 31 to Table 36, the temporary adverse effects on users of ATRs and PRoW would be **negligible or minor** in significance, which is not significant in terms of the EIA Regulations.

9.11 Environmental assessment: decommissioning phase

202 Details surrounding the decommissioning phase are yet to be fully clarified. In addition, it is also recognised that policy, legislation and local sensitivities constantly evolve, which will limit the relevance of undertaking an assessment at this stage. Nevertheless, decommissioning activities are not anticipated to exceed the construction phase worst case criteria which have been assessed in Section 9.10. In addition, there is potential for onshore cables to remain in situ, which would see a reduction in impacts and resulting level of significance in comparison to the assessment of construction effects.

203 Decommissioning activities are expected to occur for up to three years – however this will be driven primarily by offshore works. The decommissioning strategy will be reviewed over the design life of AyM, and adapt to local sensitivities, policy, and legalisation.

204 The decommissioning methodology would be finalised nearer to the end of the lifetime of AyM, to be in line with current guidance, policy and legislation. Any such methodology would be agreed with the relevant authorities and statutory consultees. The draft DCO (application ref: 3.1), submitted with the application includes a requirement to submit a written scheme of decommissioning for onshore works for approval by DCC six months in advance of decommissioning.

9.12 Environmental assessment: cumulative effects

205 The Cumulative effects assessment methodology and long list are described in Volume 1, Annex 3.1: Cumulative Effects Assessment. The long list of projects has been reviewed based on a 5 km search area, which is considered a suitable distance to screen for other projects that might have construction or operational vehicle movements using the same highway links that are assessed in this chapter.

206 The list of projects screened for the cumulative assessment is set out in Table 37.

Table 37: Projects considered within the traffic and transport cumulative effect assessment.

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
Energy	40/2018/1036 - Gas fired power plant at St Asaph Business Park	Consented (construction not commenced)	Only 5 HGVs per day, likely to be built by 2026	Tier 1
Energy	Elwy Solar Energy Farm	Application submitted to Welsh Ministers (Development of National Significance)	No construction traffic information is made available for this development as traffic and transport has been scoped out of the assessment, which was agreed by PINS	Tier 1
Residential	43/2020/0521 - 106 dwellings, Alexandra Drive, Prestatyn	Consented	Traffic assigned to A548 Rhyl Coast Road - 12 two-way in the peak hours, which is negligible and would be imperceptible in the daily fluctuations on the highway network. The A548 Rhyl Coast Road is not fully assessed in this chapter as the thresholds set out in paragraph 97 are not	Tier 2

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
			breached. The addition of the daily trip generation of this proposed development with AyM construction traffic would not breach those thresholds.	
Residential	42/2018/0923 - 61 dwellings, Meliden Road, Dyserth	Consented	Traffic assigned to A547 east of Rhuddlan. The A547 east of Rhuddlan is not fully assessed in this chapter as the thresholds set out in paragraph 9797 are not breached. The addition of the daily trip generation of this proposed development with AyM construction traffic would not breach those thresholds.	Tier 1
Residential	43/2019/0730 - 41 dwellings, Plas Deva Camp, Fforddd Talargoch, Meliden.	Consented	Traffic assigned to A547 east of Rhuddlan. The A547 east of Rhuddlan is not fully assessed in this chapter as the thresholds set out in paragraph 97 are not breached. The addition of the	

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
			daily trip generation of this proposed development with AyM construction traffic would not breach those thresholds.	
Residential	43/2018/0900 15 - apartments, 1, The Dell, Prestatyn.	Consented	Minor scheme	Tier 1
Energy	30/2018/0269 - Solar farm, Lannerch Park, Llanelwy.	Screening opinion	The construction would not impact on the construction access routes for AyM.	Tier 3
Residential	30/2018/0969 - 13 dwellings, Trefnant, Denbigh.	Consented	Minor scheme	Tier 1
Residential	40/2021/0309 - 198 bed Registered Care Home, St Asaph Business Park.	Consented	Low trip generation, with the peak number of vehicle movements during the morning and evening peak hours when AyM construction flows would also be negligible.	Tier1

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
Commercial	46/2021/0159 - Commercial vehicles sales unit and five business buildings, Glascoed Road.	Decision pending	Negligible trip generation with the peak number of vehicle movements during the morning and evening peak hours when AyM construction flows would also be negligible.	
Leisure	43/2017/1121 - Use of land for the siting of an additional 65 touring caravan pitches and 39 timber camping pods, Ffrith Park, Prestatyn.	Consented	Negligible trip generation on the A548 Rhyl Coast Road, with the peak number of vehicle movements during the morning and evening peak hours when AyM construction flows would also be negligible. The A548 Rhyl Coast Road is not fully assessed in this in this chapter as the thresholds set out in paragraph 97 are not breached. The addition of the daily trip generation of this proposed development with	

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
			AyM construction traffic would not breach those thresholds.	
Residential	45/2018/1215 - 109 dwellings and associated works (Phase 5). Ffordd Aberkinsey, Rhyl	Consented	The Transport Assessment prepared to support the application confirms there will be no material impact and can be accommodated on the local highway network, without the need for any mitigation measures. The maximum number of AyM peak hour construction vehicles that would use the B5119 west of the ECC is forecast to be 10 and unlikely to change that conclusion.	
Residential	44/2018/0855 - 99 dwellings at Land East of Tirionfa, Meliden Road, Rhuddlan	Consented	Traffic assigned to A547 east of Rhuddlan. The A547 east of Rhuddlan is not fully assessed in this chapter as the thresholds	

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
			set out in paragraph 97 are not breached. The addition of the daily trip generation of this proposed development with AyM construction traffic would not breach those thresholds.	
Residential	40/2021/0825 -106 dwellings, Rhuddlan Road, Bodelwyddan	Decision Pending	Negligible number of vehicle movements (less than 15 two-way) in the peak hours forecast on Bodelwyddan Road/ A525, when AyM construction flows would also be negligible.	
Residential	43/2020/0773 - 35 dwellings, 54, Ffordd Penrhwylfa, Prestatyn	Decision pending	Negligible number of vehicle movements (maximum 15 two-way) in the peak hours and unlikely to impact on the AyM construction access routes. Bodelwyddan Road is not fully assessed in this chapter for an increase in total vehicles as the	

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
			threshold set out in paragraph 97 is not breached (it is fully assessed for an increase in HGVs). The addition of the daily trip generation of this proposed development with AyM construction traffic would not breach that threshold.	
Health	45/2020/0498 - Community hospital at Queen Alexander Hospital, Rhyl	Consented	320 daily vehicle movements forecast (two-way) using the A458 Russell Road / Rhyl Coast Road, which is not fully assessed in this chapter as the thresholds set out in paragraph 97 are not breached. The addition of the daily trip generation of this proposed development with AyM construction traffic would not breach those thresholds.	

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
Residential	46/2019/0806 26 dwellings, The Roe, St Asaph.	Decision Pending	Negligible trip generation. The only AyM construction access route likely to be impacted is the A525, which is not fully assessed in this chapter as the thresholds set out in paragraph 97 are not breached. The addition of the daily trip generation of this proposed development with AyM would not breach those thresholds.	
Health	45/2020/0096 61 - bed, 6 ward hospital for residential nursing and health care.	Consented	No transport impacts considered in the application.	
Residential	45/2018/0822 - 41 housing association apartments, East Parade, Rhyl	Consented	Minor scheme, no transport impacts assessed	

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
Education	45/2021/0187 - Further Education Engineering Centre, Coleg Llandrillo, Rhy	Consented	Negligible trip generation. The only AyM construction access route likely to be impacted is the A525, which is not fully assessed in this chapter as the thresholds set out in paragraph 97 are not breached. The addition of the daily trip generation of this proposed development with AyM would not breach those thresholds.	
Retail	43/2020/0023 - Retail store with garden centre, Market Site, Gas Works Lane, Prestatyn	Consented	The vehicles associated with the proposed development would not impact on the construction access routes for AyM.	
Retail / Residential	45/2021/0040 – Mixed use scheme, Queens Supermarket, Heol Sussex	Consented	No transport impacts considered in the Transport Assessment.	

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
Residential	46/2021/1161 - 124 dwellings, Ty Tyn Farm, Track from A525 To Bryn Polyn Bach, St Asaph	Decision pending	Unlikely to impact on the AyM construction access routes.	
Residential	43/2016/0356 – 62 dwellings, land at Warren Drive, Prestatyn	Decision pending	Unlikely to impact on the AyM construction access routes	
Residential	43/2017/0848 - 41 affordable dwellings, Nant Hall Hotel, Prestatyn Road, Prestatyn	Consented	No transport impacts considered.	

207 The developments considered in Table 37 comprise:

- Minor schemes which would have negligible traffic movements;
- Schemes that would not impact on the AyM construction access routes;
- Schemes that would impact on some AyM construction access routes that are not fully assessed in this chapter, and with the addition of the development traffic associated with those schemes, would not breach the thresholds identified in Paragraph 97;
- Schemes at screening stage and/ or without any traffic flow information;
- Schemes that have a decision pending and may not be consented; and
- Schemes that are already in construction or are likely to be constructed by 2026 when AyM construction is likely to commence.

208 Therefore, no assessment in relation to cumulative effects is therefore required.

9.13 Transboundary effects

209 There will be no national transboundary effects arising from AyM with regard to traffic and transport.

9.14 Summary of effects

210 This assessment has considered the potential traffic and transport effects arising from onshore activities associated with AyM. Consideration has been given to potential worst-case effects arising from onshore construction and decommissioning activities based upon available information. Worst-case parameters have been adopted to provide a robust assessment.

211 The approach undertaken was based upon the PINS Scoping Opinion (PINS, 2020), which was subsequently presented to and agreed with the Traffic and Transport ETG, with some alterations based on a more suitable method that has been identified for the assessment of WCH users of PRoW and ATRs and a more robust method identified for vulnerable road users and road safety. The assessment has considered feedback received in response to the Statutory Consultation that was undertaken between August and October 2021.

212 A quantitative and qualitative assessment of the potential traffic and transport effects associated with worst-case construction activities has been undertaken following the methods set out in GEART, DMRB and the use of professional judgement.

213 Based on a screening assessment using Rules 1 and 2 in GEART, the B5119, Bodelwyddan Road, the B5381 Glascoed Road and Ffordd William Morgan required full assessment under EIA regulations, for the impacts of an increase in AyM construction vehicle movements. The outcome of the assessment does not include any significant effects.

214 Peak hour vehicle movements associated with the constriction of AyM have been considered for the impacts of driver severance and delay for all highway links within the study area. The outcome of the assessment does not include any significant effects.

215 The implications of lane or road closures associated with the use of open trenching has been assessed in terms of driver severance and delay.

216 The consideration of WCH users of all PRoW and ATRs within the study area that were identified as being directly or indirectly impacted by the onshore ECC have been assessed, using the guidance in DMRB LA 112. The outcome does not include any significant effects.

217 An assessment of the decommissioning phase was not required as the likely effects would be no greater than the construction phase. A cumulative impact assessment was not required.

218 A summary of the assessment outcomes is provided in Table 38.

Table 38: Summary of effects.

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTORS	MITIGATION MEASURES	RESIDUAL EFFECT
CONSTRUCTION				
Driver delay and severance - increase in vehicle movements	**Low adverse**	**Negligible**	Measures within Outline CTMP (Appendix 7 of the Outline CoCP (application ref: 8.13.7)) and the Outline TP (Appendix 9 of the Outline CoCP (application ref: 8.13.9))	***Negligible adverse*** (not significant)
Driver delay and severance - use of open trenching	**Negligible to low/medium**	**Negligible to high**	Measures within Outline CTMP	***Negligible adverse to Minor adverse*** (not significant)
Community severance	**Negligible adverse**	**Low to high**	None	***Minor adverse***

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTORS	MITIGATION MEASURES	RESIDUAL EFFECT
Vulnerable road users and road safety	**Negligible to low adverse**	**Low to high**	Measures within Outline CTMP	***Minor adverse*** (not significant)
Dust and dirt	**Negligible to low adverse**	**Low and high**	Measures within Outline CTMP	***Negligible to Minor adverse*** (not significant)
Dangerous loads	**Negligible**	**Low and medium**	Any measures identified in ALAR to be prepared post consent.	***Negligible and Minor adverse*** (not significant)
Users of ATRs and PRoW	**Negligible to high**	**Low to very high**	Measures within Outline PAMP (Appendix 8 of the Outline CoCP (application ref: 8.13.8))	***Negligible to minor adverse*** (not significant)
DECOMMISSIONING				
Likely traffic and transport impacts associated with	Comparable to construction and lesser if underground cables remain in situ.			

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTORS	MITIGATION MEASURES	RESIDUAL EFFECT
decommissioning activities.				
CUMULATIVE EFFECTS				
No assessment required				

9.15 References

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