Awel y Môr Offshore Wind Farm

Category 6: Environmental Statement

Volume 3, Chapter 4: Tourism and Recreation

Date: April 2022

Revision: B

Application Reference: 6.3.4

Pursuant to: APFP Regulation 5(2)(a)

REVISION	DATE	STATUS/ REASON FOR ISSUE	AUTHOR:	CHECKED BY:	APPROVED BY:
A	August 2021	PEIR	Hatch	SLR/GoBe	RWE
B	March 2022	ES	Hatch	SLR/GoBe	RWE

www.awelymor.cymru

RWE Renewables UK
Swindon Limited

Windmill Hill Business Park
Whitehill Way
Swindon
Wiltshire SN5 6PB
T +44 (0)8456 720 090
www.rwe.com

Registered office:
RWE Renewables UK
Swindon Limited
Windmill Hill Business Park
Whitehill Way
Swindon

Contents

Figures

Tables

Glossary of Terms

TERM	DEFINITION
Baseline	*Refers to existing conditions as represented by latest available survey and other data which is used as a benchmark for making comparisons to assess the impact of AyM.*
Code of Construction Practice (CoCP)	*The code sets out the standards and procedures to which the Applicant and its contractors must adhere to when undertaking construction of AyM. This will assist with managing the environmental impacts and will identify the main responsibilities and requirements. An outline CoCP is provided with the DCO application (application ref: 8.13)*
Construction effects	*Used to describe the effects that arise during the construction phase of AyM. This includes any temporary effects occurring throughout the construction phase (such as the employment of local construction workers during the construction period, as well as the presence of non-local construction workers) as well as other, permanent effects (such as long-term employment supporting operational activity).*
Cumulative effects	*Additional changes caused by a Proposed Development in conjunction with other similar developments or as a combined effect of a set of developments.*
Cumulative Effects Assessment (CEA)	*Assessment of impacts as a result of the incremental changes caused by other similar (often significant) infrastructure projects together with AyM.*

TERM	DEFINITION
Decommissioning	*The period during which a development and its associated processes are removed from active operation.*
Development Consent Order (DCO)	*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).*
Order Limits (OL)	*The OL combines the areas for the offshore and onshore infrastructure associated with AyM. It is defined as the area within which AyM and associated infrastructure will be located, including the temporary and permanent construction and operational work areas.*
Embedded mitigation measures	*Equate to 'primary environmental measures' as defined by Institute of Environmental Management and Assessment (2016). They are measures to avoid or reduce environmental effects that are directly incorporated into the design of AyM.*
Environmental Impact Assessment (EIA)	*Environmental Impact Assessment*
Environmental mitigation	*Measures which are proposed to prevent, reduce and, where possible, offset any significant adverse effects (or to avoid, reduce and if possible, remedy identified effects).*
Environmental Statement (ES)	*Environmental Statement (the documents that collate the processes and results of the EIA).*
Evidence Plan Process	*A voluntary consultation process with specialist stakeholders to agree the approach and the information required to support the EIA and HRA for certain aspects.*

TERM	DEFINITION
Full-time equivalent (FTE) jobs	*Full time equivalent (FTE) is a unit that indicates the workload of an employed person. An FTE of 1.0 is equivalent to one full-time employee, whilst a part-time employee working half the hours a full-time employee does would be recorded as 0.5 FTE.*
Future baseline	*Refers to the situation in future years without the proposed development of AyM.*
Gross value added (GVA)	*The measure of the value of goods and services produced in an area, industry or sector of an economy. At the level of a firm, it is broadly equivalent to employment costs plus a measure of profit.*
Impact	*The changes resulting from an action.*
Informal consultation	*Informal consultation refers to the voluntary consultation that Awel y Môr Offshore Wind Farm Limited undertook in addition to the formal consultation requirements.*
Local Area of Influence (LAI)	*The area which is likely to experience the largest impact as a result of the onshore construction, operation and maintenance and decommissioning activity related to Awel y Môr Offshore Wind Farm. For the purposes of the assessment, the local area of influence is generally taken to be a 500 m buffer each side of the onshore Export Cable Corridor.*
Local Study Area (LSA)	*Defined as the area that has potential to experience visitor/tourism impacts as a result of construction, operation and maintenance and decommissioning activity related to Awel y Môr Offshore Wind Farm. This is defined as the Isle of Anglesey, Gwynedd, Conwy, Denbighshire and Flintshire.*

TERM	DEFINITION
Location quotient (LQ)	*Location quotient (LQ) is a measure of a region's industrial specialisation relative to a larger region (e.g. Great Britain). A LQ of 1.0 indicates that both regions have the same level of specialisation, whereas a LQ > 1.0 means that the smaller region has a higher concentration of a particular sector than is seen in the larger region.*
Magnitude (of change)	*A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short term or long term in duration'. Also known as the 'degree' or 'nature' of change.*
National Policy Statements	*National Policy Statements are produced by government. They are the principal decision-making documents for NSIPs.*
Preliminary Environmental Information Report (PEIR)	*Preliminary Environmental Information Report. The PEIR was written in the style of a draft Environmental Statement (ES) and forms the basis of statutory consultation. Following that consultation, the PEIR documentation was updated into the final ES that accompanies the applications for the Development Consent Order (DCO) and Marine Licence.*
Proposed Development	*The development that is subject to the application for development consent, as described in both the onshore and offshore project description chapters (see Volume 2, Chapter 1 Offshore Project Description (application ref: 6.2.1) and Volume 3, Chapter 1 Onshore Project Description (application ref: 6.3.1) respectively).*
Receptor	*These are as defined in Regulation 5(2) of The Infrastructure Planning (Environmental Impact*

TERM	DEFINITION
	Assessment) Regulations 2017 and include population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage and landscape that may be at risk from exposure to pollutants which could potentially arise as a result of AyM.
Sensitivity	*A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value associated to that receptor.*
Significance	*A measure of the importance of the environmental effect, defined by criteria specific to the environmental aspect.*
Temporal scope	*The temporal scope covers the time period over which changes to the environment and the resultant effects are predicted to occur and are typically defined as either being temporary or permanent.*
Temporary or permanent effects	*Effects may be considered as temporary or permanent. In the case of Awel y Môr Offshore Wind Farm the application is for a 25-year period after which the assessment assumes that decommissioning will occur and that the site will be restored. For these reasons the development is referred to as long-term and irreversible.*
Transition to Net Zero	In 2019, the UK government passed secondary legislation to the Climate Change Act that committed the UK to a minimum 100% reduction by 2050 in carbon emissions, relative to the levels in 1990.

TERM	DEFINITION
Zone of Influence (ZOI)	*The area surrounding AyM which could result in likely significant effects.*

Abbreviations and Acronyms

TERM	DEFINITION
ATWA13	*Active Travel (Wales) Act 2013*
AyM	*Awel y Môr Offshore Wind farm*
BRES	*Business Register and Employment Survey*
COVID-19	*Coronavirus/SARS-CoV-2*
CROW	*Countryside and Rights of Way Act 2000*
DCO	*Development Consent Order*
DECC	*Department for Energy and Climate Change*
EN-1	*Overarching National Policy Statement for Energy*
ES	*Environmental Statement*
ETG	*Expert Topic Group*
FTE	*Full-time equivalent*
GB	*Great Britain*
GyM	*Gwynt y Môr Offshore Wind Farm*
HA80	*Highways Act 1980*
HDD	*Horizontal Directional Drilling*
HGV	*Heavy Goods Vehicles*
HM Government	*Her Majesty's Government*

TERM	DEFINITION
IPROW	Institute of Public Rights of Way and Access Management
LAI	Local Area of Influence
LHA	Local Highways Authority
LQ	Location Quotient
LSA	Local Study Area
OL	Order Limits
OWF	Offshore Wind Farm
MACA09	Marine and Coastal Access Act 2009
MDS	Maximum Design Scenario
MHWS	Mean High Water Spring
NCN	National Cycle Network
NPS	National Policy Statements
NRW	Natural Resources Wales
NSIPs	Nationally Significant Infrastructure Projects
O&M	Operation and Maintenance
ONS	Office for National Statistics
Onshore ECC	Onshore export cable corridor
ORVal	Outdoor Recreation Valuation
PEIR	Preliminary Environmental Information Report
PPW	Planning Policy Wales
PRoW	Public Rights of Way
R&D	Research and Development

TERM	DEFINITION
ROWIP	Rights of Way Improvement Plan
RTRA84	Road Traffic Regulation Act 1982
TAN	Technical Advice Note(s)
TJB	Transition Joint Bay
UK	United Kingdom
WACA81	Wildlife and Countryside Act 1981
WCP	Wales Coast Path
WFGA15	Wellbeing of Future Generations (Wales) Act 2015
WTG	Wind Turbine Generator
ZOI	Zones of Influence
ZTV	Zone of Theoretical Visibility

Units

UNIT	DEFINITION
FTE	Full-Time Equivalent
GW	Gigawatt
kJ	Kilojoule
m	Metre
MW	Megawatt

4 Tourism & Recreation

4.1 Introduction

1 This chapter of the Environment Statement (ES) presents the results of the assessment of the likely significant effects of the Awel y Môr Offshore Wind Farm (AyM) with respect to tourism and recreation including the visitor economy, as well as onshore and offshore recreation.

2 The recreation considered in this chapter involves the active use of open-air resources such as public rights of way (PRoW) and open spaces. This assessment is not directly concerned with more passive pastimes, such as studying archaeological sites or wildlife. .

3 This chapter has been informed by, and should be read in conjunction with both the offshore and onshore project description (provided in Volume 2, Chapter 1: Offshore project description (application ref 6.2.1) and Volume 3, Chapter 1: Onshore project description (application ref 6.3.1) respectively), and the following ES chapters which have informed the analysis and tourism and recreation assessment:

- Volume 2, Chapter 3: Marine Water and Sediment Quality (application ref 6.2.3);
- Volume 2, Chapter 8: Commercial Fisheries (application ref: 6.2.8);
- Volume 2, Chapter 9: Shipping and Navigation (application ref: 6.2.9);
- Volume 2, Chapter 10: Seascape, Landscape and Visual Impact Assessment (application ref: 6.2.10);
- Volume 2, Chapter 12: Other Marine Users and Activities (application ref: 6.2.12);
- Volume 3, Chapter 2: Landscape and Visual Impact Assessment (application ref: 6.3.2);
- Volume 3, Chapter 3: Socio-Economics (application ref: 6.3.3);
- Volume 3, Chapter 8: Onshore Archaeology and Cultural Heritage (application ref: 6.3.8);
- Volume 3, Chapter 9: Traffic and Transport (application ref: 6.3.9);
- Volume 3, Chapter 10: Noise and Vibration (application ref: 6.3.10);

- Volume 3, Chapter 11: Air Quality (application ref: 6.3.11); and
- Volume 3, Chapter 12: Public Health (application ref: 6.3.12).

4 This tourism and recreation chapter describes:

- The legislation, planning policy and other documentation that has informed the assessment (see Section 4.2);
- The outcome of consultation and engagement that has been undertaken to date (see Section 4.3);
- The scope and methodology of the assessment for tourism and recreation (see Section 4.4);
- The assessment criteria used for the assessment (see Section 4.5);
- The current baseline environment (see Section 4.7);
- The assessment of effects on tourism and recreation receptors (see Sections 4.10, 4.11 and 4.11.1);
- Consideration of cumulative effects (see Section 4.13);
- Consideration of inter-related effects (see Section 4.13.3);
- Consideration of transboundary effects (see Section 4.15); and
- A summary of residual effects for tourism and recreation (see Section 4.16).

4.2 Statutory and policy context

5 This section identifies the legislation, policy and other documentation that has informed the assessment of effects with respect to tourism and recreation.

4.2.1 Tourism and recreation legislation context

6 Table 1 below lists the legislation relevant to the assessment of the project on tourism and recreation receptors and the relevant sections where each is addressed within this assessment

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

Table 1: Legislation and policy context.

LEGISLATION/ POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
Overarching National Policy Statement for Energy (EN-1)	EN-1 is limited in the guidance it provides on methods to be used when assessing the effects of major infrastructure from a socio-economic point of view (which includes tourism). EN-1 suggests that socio-economics (or in this case tourism and recreation) should consider: • The effects on tourism; • The effects of the proposed project on maintaining coastal recreation sites and features; and • Cumulative effects	*Tourism plays a major role within the local economy of North Wales. As such, the assessment considers the effects of construction, operation, and decommissioning of AyM in Sections 4.10, 4.11 and 4.11.1 respectively.* *The construction and decommissioning of AyM (much less so the operational phase) could be expected to impact on certain offshore, inshore and onshore recreation activities. The Scoping Report (innogy Renewables UK, 2020) proposed to scope out the impact of the operational phase (especially for onshore recreation) as this phase is anticipated to see very little disruptive activity. This proposal was not accepted within the Scoping Opinion (The Planning Inspectorate, 2020), and the impact of the AyM's operational phase on both onshore and offshore recreation is also considered. Whereas, the effects of construction and decommissioning are considered in Sections 4.10 and 4.11 respectively.*

LEGISLATION/ POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
	▲ In addition, EN-1 indicates that the assessment should describe the existing socio-economic (i.e. baseline) conditions in the areas surrounding the proposed development, and should also refer to how the proposal's socio-economic impacts correlate with local planning policies. Finally, EN-1 states that the inter-relationships of socio-economic (including tourism and recreation) impacts with other impacts should also be considered.	*The construction, operation and decommissioning of AyM is likely to generate cumulative effects on the various receptors identified in the assessment. These are considered in Section 4.13.* *The baseline conditions against which the effects of AyM are considered are presented in Section 4.7 of this assessment. Detail on the methodology for baseline data gathering and datasets used is provided in Section 4.4 below.* The inter-relationships of socio-economics (including tourism and recreation) with other effects are considered in Section 4.13.3.
Draft Overarching National Policy Statement for Energy (EN-1)	*Accommodation strategies should be developed where appropriate, especially during construction and decommissioning phases, that would include for the need to*	*The EIA Scoping Report (innogy Renewables UK, 2020) found that, whilst construction, operations and decommissioning of AyM is likely to generate increased demand for temporary housing and accommodation, in addition to local services, this*

LEGISLATION/ POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
	provide temporary accommodation for construction workers if required – Draft NPS EN-1 (paragraph 5.13.6).	*is not likely to be significant and was scoped out. An accommodation strategy is therefore not required.* Given the importance of the tourism sector locally, however, the potential displacement of holiday visitors arising from the take-up of serviced and non-serviced accommodation by construction workers has been assessed.
Highways Act 1980 (HA80)	s.130 Protection of PRoW s.131 Penalty for damaging highways, etc. This Act has the effect of prohibiting any works affecting PRoW without the Local Highways' Authority's consent.	This is considered in Section 4.13 as these provisions essentially form part of embedded mitigation, being part of the legislative landscape in which AyM will operate and be subject to the powers being sought by the Development Consent Order (DCO) application.
Countryside and Rights of Way Act (CROW) 2000	Part I – Access to the countryside, establishes concept of access land. Part II – Rights of Way improvement Plans, stipulated that Local Highways' Authority must draw up a Rights of Way Improvement Plan (ROWIP) and regularly review it.	Access Land is considered in Section 4.7 and as part of the assessment of construction (Section 4.10), operation (Section 4.11) and decommissioning (Section 4.11.3) of AyM. The Denbighshire ROWIP is considered below (in Section 4.2.4).

LEGISLATION/ POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
Marine and Coastal Access Act 2009 (MACA09)	Part 9 Coastal Access s.310 Powers of National Assembly Wales. This section, inserted into Part 1 of Schedule 5 of the Government of Wales Act 2006, has the power to establish and maintain the Wales Coast Path.	The Wales Coast Path (WCP) is a major recreational resource within the study area and is considered in Section 4.7.
Active Travel (Wales) Act 2013 (ATWA13)	The ATWA13 makes walking and cycling the preferred option for shorter journeys and requires local authorities to produce Integrated Network Maps which identify key routes to walk or cycle for access to work, education, services and facilities.	The onshore export cable corridor (onshore ECC) crosses two integrated network routes as discussed in Section 4.7.
Active Travel Act Guidance	The ATWA13 is complemented by statutory guidance which is available online (Welsh Government, 2021f).	The guidance will be followed for the reinstatement of crossings of the integrated network routes, as discussed in Section 4.9.
Wellbeing of Future Generations (Wales) Act 2015 (WFGA15)	One of the seven goals of the Wellbeing of Future Generations	Public bodies, including Natural Resources Wales, are required to publish their 'Wellbeing Objectives'. Walking and other active recreation is

LEGISLATION/ POLICY	KEY PROVISIONS	SECTION WHERE COMMENT ADDRESSED
	(Wales) Act includes the ambition for 'A Healthier Wales'.	a recognised tool for improving health and well-being. The potential impact of the project on health walks has been assessed in section 4.7.2 and, where required, measures implemented to mitigate any adverse effects.
Wellbeing Statement 2017/18 Natural Resources Wales	The seven Wellbeing Objectives include the ambition to *"Help people live healthier and more fulfilled lives"*.	Maintaining access to the countryside is considered as a contributor to healthier and more fulfilled lives, and is a common theme in this assessment.

8 In terms of future changes, the *Energy White Paper* (HM Government, 2020) announced that the energy National Policy Statements would be reviewed. The Government has now reviewed all the National Policy Statements for energy infrastructure, and determined that the existing EN-1 to EN-5 documents should be amended to reflect the policies set out in the White Paper and support the investment required to build the infrastructure needed for transition to net zero.

9 Namely, in June 2019 the UK became the first major economy in the world to pass a national net zero emissions law. The new 2020 Nationally Determined Contributions (NDCs) committed the UK to reducing economy-wide greenhouse gas emissions by at least 68% by 2030 (compared to 1990 levels). In June 2021, the UK Government went further on its commitments by setting a new target to cut emissions by 78% by 2035 compared to 1990 levels.

4.2.2 UK Policy and Guidance

10 UK policy is constantly evolving and, following the March 2021 budget, it was announced that the UK Industrial Strategy (HM Government, 2017a) would be withdrawn and replaced by a new Plan for Growth (HM Treasury, 2021) which, whilst still retaining the ambition to create and support jobs, it also helps to drive growth in existing, new and emerging industries through investment in infrastructure, skills and innovation. The measures announced in the Autumn 2021 Budget and Spending Review, including £380m for the offshore wind sector to support the building back greener agenda, reflect the priorities of the new *Plan for Growth*.

Build Back Better: Our plan for growth

11 The *Build Back Better: Our Plan for Growth* (HM Treasury, 2021) policy paper sets out the UK Government's plan *"to deliver growth that creates high-quality jobs across the UK"* by building on the three core pillars of infrastructure, skills and innovation. The plan also identified three priorities which includes supporting the transition to net zero.

12 A suite of deliverable plans, including the *Energy White Paper* (HM Government, 2020a) and the *Net Zero Review: Interim Report* (HM Treasury, 2020a) were published in late 2020. The *Net Zero Review: Final Report* (HM Treasury, 2021) was published in 2021. These build on the *Ten Point Plan* (HM Government, 2020b), and seek to examine how the economic benefits of the transition to net zero can be maximised.

13 The final report of HM Treasury's *Net Zero Review* (HM Treasury, 2021) states, *"The costs of global inaction significantly outweigh the costs of action"*, highlighting that current economic analysis could understate the economic costs of climate change to the UK. It recognises that climate action could boost the economy, but also yield co-benefits such as improved air quality.

14 The current focus on the green growth agenda builds on the *Industrial Strategy* (HM Government, 2017a) and *Clean Growth Strategy* (HM Government, 2017b).

15 AyM will generate employment opportunities in the sector, as the UK builds offshore wind capacity up to 40 GW by 2030. Thus, it aligns with the UK government policy (as outlined in *Build Back Better: Our Plan for Growth* and the policy considered below) as well as with Welsh government policy examined below.

Tourism Sector Deal

16 The *Tourism Sector Deal* (HM Government, 2019) outlines how the UK Government and industry will collaborate to enhance productivity and workforce skills as well as support destinations to improve the UK's visitor offer. The Deal reinforces the five foundations of the UK Industrial Strategy, and maximises opportunities from the Grand Challenges, as follows:

- **Ideas** – it places small businesses at the centre of innovation through the creation of a Tourism Data Hub that will enable data sharing to improve understanding of consumer habits.
- **People** – it seeks to attract, train and retain a more skilled workforce. This ambition is to be overseen by the newly formed Hospitality and Tourism Skills Board, which will oversee an increase in approved apprenticeship starts to 30,000 a year by 2025 and a mentoring programme supporting 10,000 employees. A £1m retention and recruitment campaign is to be led by industry.

- **Infrastructure** – it seeks to encourage investment to accommodate the additional 23% visitors expected annually by 2025, ensuring that UK's visitor offer remains world-leading. This entails investment in 130,000 additional hotel rooms UK-wide by 2025, 75% of which are outside the capital.
- **Business Environment** – it seeks to maintain UK's position as a leading destination for hosting international business events in Europe, through the UK government's International Business Events Action Plan. Additional support for tourism SMEs is to be made available through the Great Britain Tourism Exchange platform.
- **Places** – it adopts a place building approach to tourism and proposes the development of five Tourism Zones to provide industry and government support to grow the visitor economy of ambitious areas.

17 The Sector Deal states that the UK Government will continue to consult the devolved governments on future work where appropriate, and join up on projects the devolved governments would like to partner in. The Skills and Hospitality Board, established by industry, suggests working with all four nations on the skills agenda.

18 This assessment considers the impacts associated with the construction, operation and decommissioning of AyM on recreation (i.e. both onshore and offshore) and the wider tourism economy. Through an iterative design approach, the project has sought to control and minimise any potential adverse effects on the local tourism economy.

Other UK Guidance

19 In addition to the legislation and UK policy context outlined above, the tourism and recreation assessment also draws on the following guidance and standards published:

- **Environmental Impact Assessment: Appraising Access** (IPROW, 2020) – This guidance, published by the Institute of Public Rights of Way and Access Management (IPROW) provides a guide as to how PRoW and wider outdoor access resources should be assessed. This document has guided the assessment of the impact of AyM upon onshore outdoor access.

- **British Standard for Gaps, Gates and Stiles** (The Pittercroft Trust and Bindoff, 2018) – This standard is about ensuring the least restrictive access infrastructure is used in any given situation, and ensuring that the access provided is adequately maintained. The standard sets out minimum dimensions for structures and a hierarchy for their use: Gaps > Gates > Kissing Gates > Stiles. The guidance suggests that stiles should only be used in exceptional circumstances.
- **A Good Practice Guide to Countryside Access for Disabled People** (Paths for All, 2019) - First published as the 'BT Countryside for All Good Practice Guide' in 1997, this guide is now maintained by the Fieldfare Trust. The guide presents a benchmark of best practice for the provision of countryside access for disabled people, helping to ensure compliance with the requirements of the Equality Act 2010.
- **By All Reasonable Means** (Sensory Trust, 2017) – Published by Sensory Trust on behalf of NRW in 2017. The document is a toolkit for planning equality of outdoor access to ensure an inclusive outcome. 'By All Reasonable Means' extends the range of standards set out in the 'Good Practice Guide to Countryside Access for Disabled People' to cover unimproved sites, whilst recognising that it is impractical to make all areas of the countryside accessible to everyone.

4.2.3 National Policy and Guidance

Future Wales – The National Plan 2040

20 *Future Wales – The National Plan 2040* (Welsh Government, 2021a) sets out a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of communities. Relevant policies include:

- Policy 5 – Supporting the rural economy states that the Welsh Government supports sustainable and vibrant rural communities, and encourages consideration of the role employment opportunities can play in tackling local challenges (of depopulation, and an ageing population).
- Policy 21 - Regional Growth Areas – North Wales Coastal Settlements outlines the Welsh Government's support for sustainable growth and regeneration in regionally important towns along the northern coast (such as Holyhead, Llandudno, Colwyn Bay, Rhyl and Prestatyn).

21 AyM will support locations along the North Wales coastline to grow and diversify their economies through the creation of employment in the renewable energy and related supply chain sectors. Alongside other regionally significant renewable energy projects, AyM may help to stimulate this growth. Whilst offshore wind farms may impact on coastal tourism economies which are important locally and a focus for regeneration, the evidence suggests that they are typically neutral in their impacts.

Planning Policy Wales (Edition 11)

22 *Planning Policy Wales's (Edition 11)* (Welsh Government, 2021b) primary objective is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural wellbeing of Wales.

23 *Planning Policy Wales* sets out the land use planning policies of the Welsh Government, and is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together provide the national planning policy framework for Wales.

24 It promotes the concept of placemaking into planning which includes *"Movement - Walking, cycling and public transport are prioritized to provide a choice of transport modes and avoid dependence on private vehicles. Well-designed and safe active travel routes connect to the wider active travel and public transport network and public transport stations and stops are positively integrated."*

25 The Key Planning Principles include "*Maximising environmental protection and limiting environmental impact – Natural, historic and cultural assets must be protected, promoted, conserved and enhanced. Negative environmental impacts should be avoided in the wider public interest."*

26 AyM has been designed to reflect the requirements set out within Planning Policy Wales and, in particular, seeks to improve the social and economic wellbeing of Wales by providing clean energy, whilst also generating opportunities for growing and diversifying the economy.

Planning Policy Wales Technical Advice Note 16: Sport, Recreation and Open Space

27 *Planning Policy Wales Technical Advice Note 16 (TAN 16): Sport, Recreation and Open Space* (Welsh Assembly Government, 2009) provides guidance to supplement Planning Policy Wales. It advises on the role of the planning system in making provision for sport and recreational facilities and informal open spaces, as well as protecting existing facilities and open spaces in urban and rural areas in Wales. In particular, TAN 16 identifies the following key aspects of relevance to the assessment:

- 3.12 Open space, particularly that with a significant amenity, nature conservation or recreational value should be protected.
- 3.41 There is an extensive network of rights of way across the country which, suitably maintained and protected, provides a significant recreational and tourist resource. PRoW should be protected and should be considered when assessing applications for planning permission.
- 3.44 It is essential that local authorities consider accessibility for people who have impaired mobility or another impairment, in accordance with the Disability Discrimination Act 1995, and the Disability Equality Duty, which came into force in December 2006. The Act gives any disabled person the right to equal access to facilities, goods and services, while the Disability Equality Duty places a duty on all public authorities to promote equality for disabled people.

28 The AyM project's approach to design has been to try to avoid sensitive areas and, where this was not possible, adopt measures that will mitigate the overall effect on open space and PRoW. This includes providing diversions and/or alternatives where necessary for PRoW adversely impacted during construction activity.

Welcome to Wales: Priorities for the visitor economy 2020-25

29 VisitWales is the Welsh Government's tourism body. The Welcome to Wales: Priorities for the visitor economy 2020 to 2025 (Welsh Government, 2020) policy document envisions to grow tourism for the good of Wales. This entails economic growth that delivers benefits for people and places, including environment sustainability, social and cultural enrichment and health and well-being benefits. The central strategic mission of the plan is improving the quality of the visitor experience across Wales in a way that also benefits local people.

30 Among the ambitions and goals of the strategy is to grow purposefully the tourism sector throughout the year, helping to promote prosperity in rural and urban areas. Specifically, the main target in this regard is a sustained level of growth with a focus on off-peak periods. The importance of attracting special interest visitors (e.g. golf or food tourism) is recognised, as this market has the potential to drive high-value tourism, especially out-of-season.

31 The assessment considers how construction, operation and decommissioning of AyM is likely to impact upon the volume and value of the tourism economy of North Wales.

Walking and Cycling Strategy for Wales

32 The *Walking and Cycling Strategy for Wales* (Welsh Assembly Government, 2003) highlights the links between transport choices and health, the environment and the economy. Walking, cycling and horse riding are discussed in terms of utility and as leisure choices.

33 The assessment of the construction, operation and decommissioning phases of AyM considers how the project will impact upon walking and cycling in the areas affected. Overall, the project has been designed to have the smallest-possible impact on walking and cycling.

4.2.4 Local Planning, Tourism and Recreation Policy and Guidance

Denbighshire Adopted Local Development Plan

34 Denbighshire County Council is currently working on a Replacement Local Development Plan 2018-2033, which will eventually replace the Adopted Local Development Plan 2006-2021. Denbighshire County Council has indicated that, due to delays caused by the COVID-19 pandemic, adoption of the emerging plan isn't anticipated until at least 2023. The Welsh Government has confirmed that the current (i.e. adopted) Local Plan will remain in place until the Replacement Local Development Plan is adopted. The following are the key policies within the current Local Plan which are of relevance to the tourism and recreation assessment.

- Objective 8 - Public Open Space of the *Adopted Local Development Plan* (Denbighshire County Council, 2013) indicates that the *"Local Development Plan will seek to protect existing open space and ensure that new developments make an adequate contribution to public open space provision"*. The development of AyM will not result in any permanent loss of open space requiring alternative provision.
- Furthermore, Objective 15 – Tourism states that the plan will also *"seek to enhance and sustain sustainable tourism in the rural and coastal areas of the County"*.
- Policy RD 1 states that sustainable development and good standard design *"Does not unacceptably affect the amenity of local residents, other land and property users or characteristics of the locality by virtue of increased activity, disturbance, noise, dust, fumes, litter, drainage, light pollution etc., and provides satisfactory amenity standards itself' and that it 'provides safe and convenient access for disabled people, pedestrians, cyclists, vehicles and emergency vehicles together with adequate parking, services and manoeuvring space. Proposals should also consider impacts on the wider Rights of Way network surrounding the site".* All PRoW and other access routes will be reinstated to their original condition or better, and there will be no permanent loss of amenity for onshore receptor users.

- Policy BSC 11 – Recreation and Open Space Existing recreation, public open space, allotments and amenity greenspace will be protected and where possible enhanced. Development that would result in the loss of public or private land with recreational and/or amenity value will only be permitted where alternative outdoor provision of equivalent or greater community benefit is provided. The development of AyM has sought (through good design and site selection) to avoid (where practical) any existing recreation and public open spaces. Where this is unavoidable (or not practical), AyM seeks to implement management measures to mitigate any adverse effects.
- Policy PSE 13 – Coastal Tourism Protection Zones of the *Adopted Local Development Plan* (Denbighshire County Council, 2013) states that within areas identified as coastal tourism protection zones proposals which would result in the loss of tourism facilities will not be supported. Such coastal areas include Rhyl and Prestatyn. The proposed development of AyM will not result in any permanent loss of tourism facilities as per Policy PSE 13. However, it should be noted that the TCC and access arrangements for the beach at both the Garford Road and Ferguson Avenue locations are within this designated area so there could be temporary impacts which will be managed to ensure they are minimised.

Denbighshire Replacement Local Development Plan

35 The Replacement Local Development Plan recognises the visitor economy's central role in ensuring the continued success of the county's economy. It acknowledges that the county's attractions include its historic and cultural features as well as natural beauty. Hence, it states that proposals which strengthen and diversify the visitor economy will be supported, where they are suitably located and conserve the county's natural and built environment.

36 The Draft Preferred Strategy (Denbighshire County Council, 2019) points towards the high-level strategy and key priorities envisioned for the Replacement Local Development Plan.

Supplementary Planning Guidance Note: Recreational Public Open Space

37 The Supplementary Planning Guidance Note: Recreational Public Open Space (Denbighshire County Council, 2017) sets out the principle of *"least restrictive access"* and the hierarchy of access to be used in planning reinstatement. Of particular relevance to the tourism and recreation including:

> *'9.8.2 Contributions from developers could be spent on improvements to accessibility of Public Rights of Way (PRoW) should they directly be impacted by a new development, for example the implementation of kissing gates (and with wheelchair access where possible) instead of stiles which allows accessibility to a wider proportion of the population who may not be able to use stiles. '*

38 AyM has been designed to limit and reduce the overall impact on PRoW and ensure that, following construction, original conditions are reinstated (and, if possible, improved, with improvements being in-line with the "least restrictive access" principles).

Caring for Our Countryside

39 The *Caring for Our Countryside* (Denbighshire County Council, 1998) strategy sets out the vision and policies for the future conservation, enhancement, enjoyment and understanding of the Denbighshire countryside. It states that *"Access to the countryside for recreation is an important feature in the lives of many of the people of Denbighshire and visitors to the county"* and goes on to say that *"the public rights of way network is the principal means of access to the countryside"*.

40 The importance of access to the countryside, and PRoW in particular, has guided the route and site selection of onshore elements of AyM, and the outline Public Access Management Plan (PAMP) that is provided as Appendix 8 (application ref: 8.13.8) of the outline Code of Construction Practice (application ref: 8.13).

Denbighshire Community Strategy

41 The relevant key targets within the *Denbighshire Community Strategy* (Denbighshire County Council, n.d.) are to maintain and improve routes for walking, cycling, riding and improving access to promote participation in healthy outdoor activities.

42 Any access routes temporarily disturbed during the construction phase will be reinstated to the same (or better) standard as before.

Denbighshire Leisure Strategy

43 The *Denbighshire Leisure Strategy* (Denbighshire County Council, n.d.) covers the period 2011 to 2020. It recognises the importance of 'natural' resources for leisure, including walking and off-road cycling. Outcome 2: access to high quality setting for leisure, puts improving the marketing and promotion of what is on offer across countryside and coastal leisure as a key action for the strategy.

44 Any access routes temporarily disturbed during the construction phase will be reinstated to the same (or better) standard as before.

Other relevant local policy for local authorities along North Wales coast.

45 The *Conwy Local Development Plan* (Conwy Borough Council, 2013), which is currently undergoing a full review, acknowledges that the county's economy relies heavily upon tourism and related service industries. It identifies Llandudno not only as a traditional Victorian seaside resort which combines its existing role with a thriving commercial centre, but as a key sub-regional centre for the area.

46 The Local Development Plan highlights sustainable tourism as one of its priority issues and argues that there is a need to encourage and prioritise any developments that would encourage year-round tourism. This is especially pertinent as unemployment in Conwy tends to increase over the winter months.

47 The sentiment for year-round tourism is echoed in both the *Destination Conwy Management Plan 2019-2029* (Conwy Borough Council, 2019) and the *Destination Conwy Action Plan 2019-2029* (Visit Conwy, 2019). Both highlight the need, and ambition, to increase the value of tourism across the whole year, with the *Destination Conwy Action Plan 2019-2029* setting a target to increase the economic impact of tourism to £1 billion by 2027 and increase the economic impact per visitor by an average of 3%.

48 The ambition for year-round tourism is identified as a strategic priority within the Anglesey and Gwynedd Joint Local Development Plan 2011-2026 (Anglesey County Council and Gwynedd Council, 2017). The process of reviewing this plan began in 2021 and is not yet complete.

4.3 Consultation and scoping

49 This section describes the outcome of, and response to, the Scoping Opinion provided by PINS in relation to the tourism and recreation assessment (initially considered as part of the socio-economic assessment), in addition to details of the informal and formal consultation that has been undertaken with stakeholders and individuals.

50 AyM statutory consultation, under section 42 of the Planning Act 2008, ran for a period of six weeks, from 31 August to 11 October 2021. A Preliminary Environmental Information Report (PEIR) was published as part of the formal consultation, which provided preliminary information on tourism and recreation within Volume 3, Chapter 4: Tourism and Recreation.

51 Given the restrictions which have been in place due to the COVID-19 pandemic during preparation of the assessment, all post-scoping consultation meetings have taken the form of conference calls, video conferencing s and/ or phone calls.

4.3.1 Scoping opinion

52 Awel y Môr Offshore Wind Farm Limited (the Applicant) submitted a Scoping report and request for a Scoping Opinion about the proposed development of AyM to the Secretary of State (administered by PINS) in March 2020. A Scoping Opinion response was issued by PINS in July 2020.

53 The Scoping Report sets out the proposed approach to the assessment of socio-economics impacts, within which was included the proposed assessment of tourism and recreation, including the methodology, outline of the baseline data collected, and scope of assessment. Table 2 sets out the comments relevant to tourism and recreation from PINS, and identifies the section(s) in which each of these comments is addressed.

Table 2: The Planning Inspectorate's Scoping Opinion response for the tourism and recreation assessment (provided within its critique of socio-economics).

PINS ID NUMBER	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
4.21.1	"The Inspectorate does not consider that sufficient evidence has been provided to support scoping *[the displacement of tourism visitors within the Local Study Area (LSA) during construction]* out from the assessment. The Applicant should make effort to agree the approach to the assessment with relevant consultation bodies ensuring that the assessment is both proportionate and robust".	*The ES takes into consideration the impacts of construction, operation and decommissioning activity in Sections 4.10, 4.11 and 4.11.1 respectively.*
4.21.5	"The Inspectorate does not consider that sufficient evidence has been provided to support scoping out [the impact on the Local Area of Influence (LAI) due to the presence of onshore infrastructure during O&M] from the assessment. The Applicant should make efforts to agree the approach to the assessment relevant consultation bodies ensuring that the assessment is both proportionate and robust."	*The impact of the operation and maintenance phase is considered in Section 4.11 of the assessment. This impact is expected to be minimal as most of the onshore infrastructure, with the exception of the substation and cable access and maintenance infrastructure, will be buried underground, and the ground returned to original condition following completions of onshore works. Onshore maintenance or repairs may be required,*

PINS ID NUMBER	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
		however this is anticipated to be infrequent and low impact.
4.21.6	"The Scoping Report assumes that effects arising from decommissioning are likely to be of a similar nature to construction but smaller in scale and extent. However, since the impacts during construction have yet to be assessed it seems premature to assume that the decommissioning effects would not be significant. The Inspectorate does not consider that sufficient evidence has been provided to support scoping these matters out from the assessment. The Applicant should make efforts to agree the approach to the assessment with relevant consultation bodies ensuring that the assessment is both proportionate and robust."	*Like the socio-economics assessment, the tourism and recreation assessment retains the assumption that the effects arising from decommissioning are likely to be of a similar nature to the impacts of construction, albeit smaller in scale and extent. This is based on the assumption that decommissioning will follow construction, but in reverse order.* *The tourism and recreation assessment acknowledges that it may be premature to assume that the effects of decommissioning would not be significant, and therefore this chapter undertakes an assessment of the impacts of decommissioning in Section 4.11.1.*
4.21.7	"The Scoping Report states that receptors will be identified but does not explain how this will happen or the likely range of receptors under consideration. The ES should explain how	*The receptors (and specific indicators) considered have been identified based on the Scoping Report, Scoping Opinion response, inputs from consultations*

PINS ID NUMBER	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	receptors have been selected and effort should be made to agree the approach with relevant consultation bodies."	*with key stakeholders and professional judgement, and outlined in Section 4.3.* *The approach to scoping and methodology of the socio-economics assessment is detailed in Section 4.4. Following Statutory Consultation, no additional suitable receptors were identified for the ES and therefore, the list of tourism and recreation receptors remained unchanged from what was presented in the PEIR.*

Stakeholder consultation and engagement

54 Informal stakeholder engagement has been undertaken with a view to identifying the public, outdoor-recreation resources that may be affected by AyM. Searches have been made for local user-groups in order to contact them to identify and define what impacts may or may not be significant to them. Table 3 below provides an overview of the stakeholder engagement undertaken in this regard.

Table 3: Summary of consultation relating to tourism and recreation.

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
5/1/21 *Informal consultation with Denbighshire County Council, Rights of Way section*	*Enquiry made as to when the ROWIP would be re-published.* *No firm date provided, but this is anticipated to be during 2022.*	*The ROWIP is referred to above (see Section 4.2).*
10/2/21 and 16/3/21 *Informal consultation with Vale of Clwyd Ramblers*	*Email sent requesting information about paths of particular importance to the group.* *No response received.*	
15/2/21 *Informal consultation with Wales Coast Path office (Natural Resources Wales) and Access and Recreation Officer (Denbighshire County Council)*	*Zoom meeting held to discuss:* • The Proposed Development • Recreation resources that may be affected • Availability of data	*The information received has been used to develop a baseline of key resources (see Section 4.7), and in the assessment of the construction, operation and decommissioning of AyM (see Sections 4.10,*

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	▲ Evidence of impact of offshore wind farms on onshore recreation.	*4.11 and 4.11.1 respectively).*
18/2/21, 3/3/21 and 15/3/21 *Informal consultation with Transport Data Officer (Denbighshire County Council)*	*Request for traffic counter data, particularly for River Clwyd embankment path.* *Data received on 16/3/21.*	*The data has been used to inform the baseline analysis (Section 4.7) and the assessment of AyM (see Sections 4.10, 4.11 and 4.11.1).*
5/2/21 and 11/3/21 *Informal consultation with Sustrans*	*Request for traffic data on Sustrans' routes NCN5 and NCN84.* *No data is available.*	*n/a*
8/3/21 *Informal consultation with Prestatyn and District Environment Association.*	*Advice sought about recreation areas and paths that are of importance to the group.* *No response received.*	*n/a*
8/3/21 and 15/3/21 *Informal consultation with Principle Engineer, Road Safety and Sustainable Transportation (Denbighshire County Council)*	*Request made for data relating to River Clwyd embankment path.* *Telephone conversation (on 15/3/21) discussed various local cycle routes and their relative importance.*	*The information provided has been used in the resource assessment (Sections 4.10, 4.11 and 4.11.1).*

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
15/3/21 and 30/3/21 *Informal consultation with Great Orme Ranger*	*Request made for visitor numbers data.* *Data was received on 30/3/21.*	*The data received has been used to inform the baseline (Section 4.7) and assessment of AyM (Sections 4.10, 4.11 and 4.11.1).*
16/3/21 and 30/3/21 *Informal consultation with Wales Coast Path Officer covering Great Orme*	*Request made for Wales Coast Path user numbers data.* *Response received indicated that there are no counters on that part of the Wales Coast Path.*	*n/a*
16/3/21 and 30/3/21 *Informal consultation with Rhyl Cycling Club*	*Request for information about which routes were of particular importance to the club.* *General comment received asking for cycleways to be as accessible as possible during works, with alternative routes close to any point of closure.*	*The impact of construction, operation and decommissioning of AyM on cycleways is considered in Sections 4.10, 4.11 and 4.11.1 respectively.*
29/3/21 *Informal consultation with Community Wellbeing Officer (Denbighshire County Council)*	*Request for information about whether the proposed onshore ECC would impact on any routes used by the walking groups that the officer coordinates.*	*n/a*

DATE AND CONSULTATION PHASE/ TYPE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	No response received.	
21/5/21 *Informal consultation with Rhyl Golf Club*	*Request for information about numbers of members and membership trends*	*The data supplied have been used to inform Section 4.7.*
15/4/21 *Wirral Council;* *Wales Water sports;* *Anglesey JetSki Safari;* *Oks Water sports;* *North Wales Sub-Aqua Club;* *Golden Lion Sub Aqua Club; and* *Clwb Syrffio Dyffryn Conwy.*	*All contact/consultees were approached for a discussion about the proposed development of AyM and its potential impact on tourism and recreation.* *No uptake of opportunity for informal consultation about AyM .*	*n/a*
12/11/21 & 11/1/22 *Post Statutory Consultation meeting with DCC; Expert Topic Group follow-up re proposed country park at Bodelwyddan Castle.*	*Drawing received 17/1/22.* *The ground to be developed as a country park is all outside of the ZOI.*	*Bodelwyddan Castle grounds are considered in Table 20.*

55 In addition to the above, an expert topic group (ETG) covering tourism and recreation has been established. Tourism and recreation representatives from all local authorities along the North Wales coast, (including Gwynedd Council, Denbighshire County Council, Conwy County Borough Council, Flintshire County Council and Isle of Anglesey County Council) in addition to other key tourism destination bodies and recreation organisations, including Destination Conwy, were invited to join the ETG. The purpose of the ETG was to introduce and update stakeholders about the project and provide stakeholders with the opportunity to comment on the proposed approach to the assessment and raise any concerns (including the impact of construction, operation and decommissioning of AyM) on the tourism economy and recreation activity.

Section 42 consultation feedback

56 Following Statutory Consultation on the PEIR, an ETG was undertaken in November 2021. This provided the ETG with an opportunity to discuss the comments and the responses to these comments. A summary of the feedback and responses is shown in Table 4.

Table 4: section 42 consultation feedback

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
Welsh Government	*The Welsh Government noted that the data collected in relation to tourism relates to a time pre-covid. Welsh Government officials stated they would like to discuss this evidence base further due to the complexity of the effects on this sector. The approach in Wales now is to ensure there is an opportunity for visitors throughout the year in Wales and this is especially the case in north Wales where adventure tourism and Christmas time visitors is growing.* *The Welsh Government noted that further consideration should be given to a collaborative approach to ensure that data can be collected as soon as possible to try and establish a better evidence base. This could be particularly the case for cycle/ walking routes.* *It was also noted that there will inevitably be some impact on Public Rights of Way during the construction phase onshore. The Welsh*	*The review of available research presented in the PEIR has been updated to take account of more recent data that was conducted whilst Covid-19 restrictions were placed on North Wales. This is presented in section 4.7.4.* *Section 4.2.3 highlights importance of the Welsh Government's year-round tourism strategy approach.* *The conclusion from the available research, presented in section 4.7.4, is that there is little impact of OWFs on walkers, horse riders and cyclists. Most users of the Wales Coast Path (WCP) will be local and using a short section only, and their use will not be related to the National Trail status. Those users that are attracted to the route because it is 'The Wales Coast Path' will be expecting to*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	Government stated that these should be minimised, and the developers will need to work closely with Denbighshire County Council Countryside service to comply with statutory rules and also [remain] mindful of user experience.	*see a variety of land and seascapes on their journey; and evidence suggests that they will not be put off by a proportion of the seascape featuring OWFs.*
Welsh Government	*The Welsh Government noted the Wales Coast Path is a major national tourism asset. It is enjoyed by many thousands of people a year and contributes to national wellbeing and the tourism economy. The Welsh Government noted that additional mitigation measures should be put in place with Natural Resources Wales / Denbighshire County Council to ensure both minimum disruption to the Path itself during construction, and also reducing the impact on the experience of walkers in general in the landfall area.*	*The conclusion from the available research, presented in section 4.7.4, is that there is little impact of OWFs on walkers, riders and cyclists. Most users of the WCP will be local and using a short section only and their use will not be related to the National Trail status. Those users that are attracted to the route because it is the 'Wales Coast Path' will be expecting to see a variety of land and seascapes on their journey; evidence suggests they will not be put off by a proportion of the seascape featuring OWFs.*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
Welsh Government	*The Welsh Government stated that the evidence on the visitor economy seems to suggest that there will be very little impact (page 110 Vol 3 chapter 4 –Tourism and Recreation) on this and the evidence to support it seems dated (General perceptions-based studies (such as RCUK (2009) and Soini et al. (2011)). Further clarification on whether further work has been carried out on public's perception of offshore wind turbines by RWE. Some general statements are included in the evidence e.g. "wind farms appear to be significantly associated with demographics, but also suggests that attitudes are dependent on type and frequency of usage of the beach and coastal zone". It is not clear what this means in relation to this project –does it mean a more positive attitude depending on age?*	*The evidence base of the relationship between offshore wind and tourism has been updated (please see section 4.7.4) and a research study into tourism sector employment trends in seaside towns located in proximity to several operational UK offshore wind farms has been undertaken (please see Volume 5, Annex 4.2).*
Flintshire County Council	*Flintshire Council notes that the project may have an indirect negative effect on tourism for the region as a result of the offshore array, a potential significant impact from certain key tourist*	*The evidence base to support this assessment (and associated limitations) is presented in Section 4.7.4.*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	destinations in North Wales and an indirect negative impact on the number of visitors travelling to North Wales. Many travelling to North Wales will need to travel through Flintshire on the A55, so this may have an indirect impact on tourism and other shops and services.	
Denbighshire County Council	*The Council considers that AyM would have a significant effect on views from Rhyl along the coastal promenade. The proposal could have an adverse impact on North Wales as a region, and its ability to attract tourists to the area, as a further windfarm development would detriment the quality of the seascape currently experienced and may deter visitors from the area. The Council therefore considers the assessment on the tourism economy must be scoped in.*	*The evidence base (and associated limitations) to support the assessment is presented in Section 4.7.4.*
Denbighshire County Council	*The Council has significant concerns with the potential impact of the landfall works on Rhyl Golf Course, and in particular the siting of a construction compound on the eastern section of*	*The PEIR concluded that the effect on Rhyl Golf Club from the perspective of the users and the business would be negative and significant in EIA terms.*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	the golf course and the permanent siting of Transition Joint Bays on the fairway. The Council considers the works proposed would have a significant, detrimental impact on the golf course during construction and operational phases and may result in the golf course having to permanently close. A full assessment of impact on the viability of the golf course needs to be undertaken, and the Council would strongly object to any works which have a detrimental impact on the functionality or viability of the golf course.	*However, the AyM design has been revised and will avoid overground use of Rhyl Golf Club, given stakeholder feedback and technical and environmental findings in parallel, thereby removing the potential for significant negative impacts at this location.*
Mostyn Estates	*Mostyn Estates states that the impacts of the proposal, both onshore and offshore, will have potentially significant impacts on settlements such as Llandudno and its surrounding environs. As Llandudno relies heavily on the tourism and leisure industry along with its heritage, the potential loss of visitors will have a knock-on effect on the local economy with the potential for reduced investment from Mostyn Estates and*	*The Applicant recognises the concerns raised by Mostyn Estates whilst also noting that the concerns are not supported by the available empirical evidence.* *The EIA has concluded that the project would not have a significant effect on the tourism economy in Llandudno and the Great Orme. The evidence base to*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	others in Llandudno as a consequence of AyM. The impacts of the proposal on these industries could potentially lead to loss of employment within the coastal towns; the socio-economic impacts of this have not been assessed within the PEIR and therefore cannot be quantified.	*support this conclusion (and associated limitations) is presented in Section 4.7.4.* *In response to the received feedback, an additional research study has been conducted which collected evidence on the tourism sector employment in seaside towns in proximity to several offshore Wind Farms across the UK (please see Volume 5, Annex 4.2). The conclusions of the study are used to support the assessment presented in Sections 4.10.4 and 4.11.4.*
Mostyn Estates	*The PEIR only makes reference to the Local Development Plan for Denbighshire County Council. Given the wider impacts of the proposals it is considered that other Local Development Plans and their tourism policies should be acknowledged including those in the Conwy County Borough administrative area.*	*Other local authority development plans, including that for Conwy, were reviewed and referenced within both the PEIR and this ES chapter (see Section 4.2.3).*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
Mostyn Estates	*The PEIR sets out an overview of the nature of the tourism offer to visitors to locations in North Wales. It identifies the Great Orme and Llandudno as one of these locations and describes the nature of the tourism offer.*	*Noted.*
Mostyn Estates	*The following items are questioned: (a) the validity of the data in Figure 4 of the PEIR and the impact of the existing Gwynt y Mor windfarm; (b) the conclusion that the presence of WTGs will have no significant impact on onshore recreation.* *Given the proposal will extend further westward than the Gwynt y Mor windfarm it is considered that this will result in a greater impact on the Great Orme. The conclusions of the supporting review of the Seascape, Landscape and Visual Impact Assessment undertaken by Bright & Associates confirm this, concluding that the impact will be of Major (adverse) significance (Paragraph 7.3.8).*	*As with the assessment for Llandudno and the Great Orme presented in Section 4.10.4 and 4.11.4, there is the potential for the visual effect to discourage some visitors whilst it may enhance the enjoyment for others through adding an interesting seascape view. The limitations of the available empirical evidence are acknowledged in reaching this conclusion, and steps have been taken to address this through additional research. This involved updating the evidence base of the relationship between offshore wind and tourism (please see section 4.4.7) and undertaking a research study into*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
		tourism sector employment trends in seaside towns located in proximity to several operational UK offshore wind farms (please see Volume 5, Annex 4.2).
Mostyn Estates	*Given the stage the proposal is at, and the acknowledged limited body of evidence, there is the opportunity to undertake specific ex-ante research in relation to the Awel y Môr to better understand the potential impacts. The PEIR also refers to ex-post research undertaken in regard to the Gwynt y Mor windfarm, however, the conclusions of this research are not presented.* *Given the acknowledged, limited body of evidence it is unclear how a conclusion that 'offshore wind farm developments generate very limited, or no negative impact on tourist and recreational users during the construction and operational phases' can be drawn.*	*The review of available research presented in the PEIR has been updated to take account of more recent data. This is presented in section 4.7.4. An additional research study has also been undertaken which is presented in Volume 5, Annex 4.2.*
Mostyn Estates	*The PEIR provides an assessment of magnitude of impact on tourism economy at the local level.*	*This is contextual information.*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	With regard to the Great Orme and Llandudno it identifies the magnitude of impact as Low and draws conclusions accordingly.	
Mostyn Estates	*Mostyn Estates wholly disagree with the conclusion that the proposal is not anticipated to result in a substantial impact as it will add WTGs to the area's current seascape. They note Awel y Môr is larger and closer to Llandudno and the scale and massing of the proposals will have a significant impact, for example, they note that two-thirds of the view from the Great Orme will be impacted. It is considered that the assessment of the tourism impacts are underestimated and are likely to be greater than the stated 'low negative impact on overall visitor numbers and for this to be short term in nature'.*	*The Applicant recognises the concerns raised by Mostyn Estates, but also notes that the concerns are not supported by the available empirical evidence.* *The assessment has drawn on further research in support of the conclusion, which is presented in Section 4.7.4. The updated assessment has also taken account of the significant reduction in project footprint and the number of WTGs that have been introduced in response to stakeholder concerns. The Applicant has reduced the maximum number of WTGs from 107 (scoping phase) to 50, to minimise potential harm to the seascape and tourism interests.*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
		An additional small-scale study has been conducted which collected evidence on the tourism sector employment around several offshore Wind Farms across the UK (please see Volume 5, Annex 4.2 (application ref: 6.5.4.2) and a summary of the findings in Section 4.10.). The study found that the employment data does not provide evidence that the development of large scale offshore wind farms near to significant seaside towns is associated with a decline in tourism employment.
Conwy County Borough Council	*The Council's Tourism and Regeneration Project Officer notes that: (a) The majority of tourists who come to Conwy County come for the beaches. This is evidenced in the May 2020 and April 2021 visitor surveys which we undertook. The construction of Awel Y Mor may force these visitors to visit other unspoiled beaches in a different area which would be a huge loss of*	*The evidence related to the popularity of Llandudno and surrounding areas is helpful and has been added to the baseline description presented in Section 4.7.1. The available research on the relationship between wind farms and visitors suggest these types of visitors are less likely to be discouraged. It is possible*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	tourism in Conwy County; (b) There is evidence to suggest that smaller wind farms generate a less negative response from tourists. Given the existing Gwynt Y Mor wind farm and Rhyl Flats development, concerns arise about the impact the additional Awel Y Mor wind farm will have on tourism; (c) Concerns arise about the impact of any light pollution from the wind farm affecting dark skies; (d) Conwy County Borough Council has submitted its expression of interest to become UK City of Culture 2025 under the title Conwy 2025. Concerns arise about whether the development would inhibit these efforts, as being connected to communities, culture and a place's heritage are all important aspects of the bid.	*that the bigger scale of the project's turbines may be an attraction in their own right, especially if opportunities to build this into destination marketing and promotion is pursued (as part of an energy coast theme). Conwy was not shortlisted for the City of Culture however despite this there are opportunities to promote Conwy's 'energy coast' as part of a low carbon transition.*
Conwy County Borough Council	*The majority of tourists to the area are aged 45+. This is evidenced in both the May 2020 and April 2021 visitor surveys. The PEIR points to evidence that younger people and those in higher socio-economic groups could be more accepting of*	*These are a number of reasonable points here which are supported in the research evidence and reflected in the assessment in sections 4.7.1 and 4.7.4 - as such, these point to a source of*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	wind farm development. So the construction of Awel Y Mor is more likely to be viewed negatively by the majority of tourists to our area. *The presence of wind farms could have an effect on the frequency and duration of visits.* *The evidence base points towards potential for greater impacts to occur where wind farms or other infrastructure are sited in areas of high landscape value. In our May 2020 and April 2021 surveys, the top reason for people visiting Conwy County was because they love visiting and it's a beautiful location. The proposed Awel Y Mor wind farm could have a very negative effect on our tourism industry since visitors may perceive the area as less beautiful. The SLVIA assesses the magnitude of change as being 'Medium High' from the Great Orme, Llandudno paddling pool and Colwyn Bay prom, and as 'Medium' or 'Medium low' for the other viewpoints (Llanfairfechan Promenade, Bryn Euryn, Mynydd*	*uncertainty in the assessment and hence a risk. As the assessment presented in this ES chapter notes in Section 4.10.4, there is the potential for some visitors to be discouraged, although these are not necessarily lost from North Wales or Wales as a whole.* *However, In terms of the argument that the evidence base points towards potential for greater impacts to occur where wind farms or other infrastructure are sited in areas of high landscape value' this may be less applicable in this instance due to (i) visitors to Llandudno coming for the range of its facilities not just its landscape/seascape value and (ii) the location of AyM at sea which doesn't impact directly on views of and access to many of the high quality landscapes surrounding the town. These points are part of the consideration of*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	Marian, Abergele Promenade and Cefn Coch Stone Circle).	*the magnitude of impact assessed in Section 4.10.4 and Section 4.11.4.*
Conwy County Borough Council	*Regular visitors to an area may be more likely to oppose developments, as shown in Frankal and Kunc (2011) but also wider research into reactions to wind farms amongst residents where a theme of people's attachment to a particular place is an important factor which influences their responses to developments (e.g. Devine-Wright, 2012). A huge proportion of responses in the visitor survey were from people who regularly visit the area.*	*As above.*
Conwy County Borough Council	*Llandudno is a holiday accommodation zone meaning that there is a policy protecting holiday accommodation. The change of use of holiday accommodation is not permitted. These businesses could suffer by price reductions as a result of the construction of Awel Y Mor if the wind turbines are deemed an eyesore by visitors.*	*As noted above, the weight of evidence (Section 4.7.4) suggests that there will be no or very limited impacts on the visitor economy, although there is the need to reflect and respond in the analysis to the particular characteristics of Llandudno and its surrounding areas. Besides the potential for detrimental impacts, it is*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	Tourism is a priority sector in Conwy. If the construction and development of Awel Y Mor discourages visitors then this may prevent us from achieving our target of increasing the economic impact of tourism to £1billion by 2027 as set out in the Conwy Economic Growth Strategy.	*important to also note the potential for visitors to be attracted by the project and for this type of visiting activity to be actively promoted by tourism destination agencies. In addition, there is the potential for Llandudno, alongside other coastal resorts in the UK, to benefit from increased UK domestic tourism arising from the short- and longer-term consequences of the pandemic (although it is unclear at this time how long this current trend may continue as international travel resumes).* *An additional study has been conducted which collected evidence on the tourism sector employment around several offshore Wind Farms across the UK (please see Volume 5, Annex 4.2 (application ref: 6.5.4.2) and a summary of the findings in Section 4.10.).*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
Conwy County Borough Council	*The PEIR considers that the magnitude of impact on the tourism economy in Llandudno and the Great Orme would be low in the short term and negligible in the longer term, and in other resorts would be negligible (para. 291 of Volume 3, Chapter 4). However, it is unclear to what extent this conclusion takes account of the demographic profile of visitors to Llandudno and the County generally, or to the distinctive heritage and character which are critical in its attractiveness to that visitor profile. Paragraph 292 notes that there is a potential for any visitors discouraged by the WTGs to be replaced by other visitors, yet does not include evidence to support this. As such, the Council considers that the conclusions in relation to the magnitude of the impact are subject to a wide margin of uncertainty.*	*The assessment does take account of the characteristics of Conwy (and therefore Llandudno) and its surrounding areas, including its visitor offer, characteristics of visitors and reasons for visiting (please see Section 4.7.1). Whilst the research suggests (see Section 4.7.4) OWF usually has no or limited impacts on visitor economies, there is an element of uncertainty here linked to the scale of the development and the characteristics of the resort.* *An additional study has been conducted which collected evidence on the tourism sector employment around several offshore Wind Farms across the UK (please see Volume 5, Annex 4.2 and a summary of the findings in Section 4.10.4). The study found that the employment data does not provide evidence that the development of*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
		large-scale offshore wind farms near to significant seaside towns is associated with a decline in tourism employment.
Conwy County Borough Council	*At the Great Orme, new turbines would be conspicuous, but wouldn't be unduly detrimental to appreciation of the numerous archaeological sites that occupy it. However, several of the viewpoints towards the Orme detract from its appearance as a prominent headland.* *Furthermore, the vast majority of the buildings along Llandudno's Promenade comprise hotels, many of which are listed as being of special architectural or historic interest and are expensive to maintain due to their traditional building materials and features. In the light of the uncertainty of the impacts on the tourism economy, the Council has concerns that any reduction in either the number or the value of hotel bookings could affect future investment in*	*Addressed in the points above and section 4.10.4 and 4.11.4.*

SECTION 42 CONSULTEE	CONSULTATION AND KEY ISSUES RAISED	SECTION WHERE COMMENT ADDRESSED
	the tourism industry, and hence the frequency and quality of maintenance of the built fabric.	
Isle of Anglesey County Council	*Tourism contributes to local prosperity and quality of life in Anglesey. The Island needs to manage and develop tourism because this is where it has a natural comparative advantage. The Tourism & Recreation Chapter of the PEIR concludes that the impacts on the tourism economy would be 'low' or 'negligible'.*	*Anglesey offers a high-quality environment which is valued by visitors. However, the greater distance from the Isle of Anglesey destinations and the AyM project, and hence reduced visibility, substantially reduces the potential for negative impacts on visitors and the tourism economy. This is considered in Sections 4.10.4 and 4.11.4.*

4.4 Scope and methodology

57 This section sets out the approach of the tourism and recreation assessment and seeks to respond to feedback received, as outlined in Section 4.3 above.

4.4.1 Tourism and recreation receptors

58 The tourism and recreation receptors and the phases (i.e. construction, operation and decommissioning) of AyM these are assessed against are outlined in Table 5 below.

Table 5: Summary of the receptor groups and phases against which each receptor is assessed.

RECEPTOR	CONSTRUCTION	OPERATION	DECOMMISSIONING
Disruption to onshore recreation receptors	*Y*	*Y*	*Y*
Disruption to offshore recreation receptors	*Y*	*Y*	*Y*
Tourism receptors	*Y*	*Y*	*Y*
Impact on volume and value of tourism economy	*Y*	*Y*	*Y*
Displacement of tourism visitors	*Y*		*Y*

59 The receptors outlined in Table 5 are adapted from those presented within the Scoping Report. Scoping for AyM was undertaken on the basis of combined consideration of socio-economics and tourism and recreation. However, given the length of the assessments and the greater clarity afforded by splitting the matter into two separate chapters, this is how the ES is presented.

60 To ensure that all the receptors identified in the Scoping Report are, in effect, considered within this (or the socio-economics) assessment, the following table provides an overview of where each is addressed.

Table 6: Scoping Report receptors and location where each is addressed.

SCOPING REPORT RECEPTOR	SECTION WHERE EACH RECEPTOR IS CONSIDERED
Construction	
Beneficial effects on economy (labour market and gross value added (GVA) within the Local Study Area (LSA) including local supply chain.	*The benefits to the economy (in terms of labour market and GVA) are considered within the socio-economics chapter (see Volume 3, Chapter 3 (application ref: 6.3.3)), and are therefore not considered further in this chapter.*
Disruption to community and tourism receptors within the Local Area of Influence (LAI)	*The assessment of disruption arising from construction activity on community receptors is considered within the socio-economics chapter (see Volume 3, Chapter 3).* *An assessment of the impact of construction activity on tourism receptors within the LAI is presented in Sections 4.10.1, 4.10.2 and 4.10.3 respectively.*
Displacement of tourism visitors within the LSA	*An assessment of the potential displacement of tourism visitors within the LSA during construction is presented in Section 4.10.5.*

SCOPING REPORT RECEPTOR	SECTION WHERE EACH RECEPTOR IS CONSIDERED
Demand for healthcare services within the LSA	*The additional demand on healthcare services within the LSA is considered as part of the socio-economics chapter (see Volume 3, Chapter 3).*
Impact on tourism receptors and tourism economy within the Wider Study Area (WSA)	*The impact of construction activity on tourism receptors is considered in Section 4.10.3, whilst an assessment of construction activity on the volume and value of the tourism economy is presented in Section 4.10.4.*
Operation	
Economy (labour market and GVA) including local supply chain within the LSA	*The benefits to the economy (in terms of labour market and GVA) are considered within the socio-economics chapter (see Volume 3, Chapter 3), and are therefore not considered further in this chapter.*
Long term impact on tourism receptors and tourism economy within the WSA	*The impact of long-term operational activity on tourism receptors is considered in Sections 4.11.1, 4.11.2 and 4.11.3 respectively, whilst an assessment of operational activity on the volume and value of the tourism economy is presented in Section 4.11.4.*

4.4.2 Spatial scope and study areas

61 Table 7 below provides an overview of the different Zones of Influence (ZOI) used in this assessment of AyM on tourism and recreation receptors. For the assessment of AyM's potential impact on the volume and value of the tourism economy, a wider study area (covering all areas that fall within a 50km radius from the offshore array, and from which (in theory) the larger Wind Turbine Generators (WTG) could be visible) in addition to a local study area (comprising all local authority areas along the North Wales coast) have been used.

62 The assessment of AyM's impact on visitor numbers takes into consideration the wider economy along the North Wales coast (i.e. the local study area), but also considers specific locations (such as Llandudno, Rhyl and Rhos-on-Sea).

63 The ZOI used to inform the onshore recreation impact assessment (defined as the local area of influence (LAI)) has primarily focussed on the onshore OL, including the area around landfall point at Ffrith Beach, through to the substation near Bodelwyddan. For the purposes of this assessment, the local area of influence has been generally taken to be a 500 m buffer each side of the onshore OL. That being said, it should be noted that for the purpose of considering the visual impact of the offshore infrastructure, a Zone of Theoretical Visibility (ZTV) has been modelled, extending ds 50km from the offshore array (see Volume 2, Chapter 10 (application ref: 6.2.10) for further details of the assessment of visual impact.

64 For offshore recreation, local area of influence is defined as the area located within the OL (i.e. encompassing all WTG, offshore substation(s), array cables, and offshore export cable) up to, but excluding, landfall.

65 An overview of the spatial areas referenced in the tourism and recreation assessment is presented in Figure 1 and Table 7 below.

Table 7: Summary of the receptor groups and study areas used.

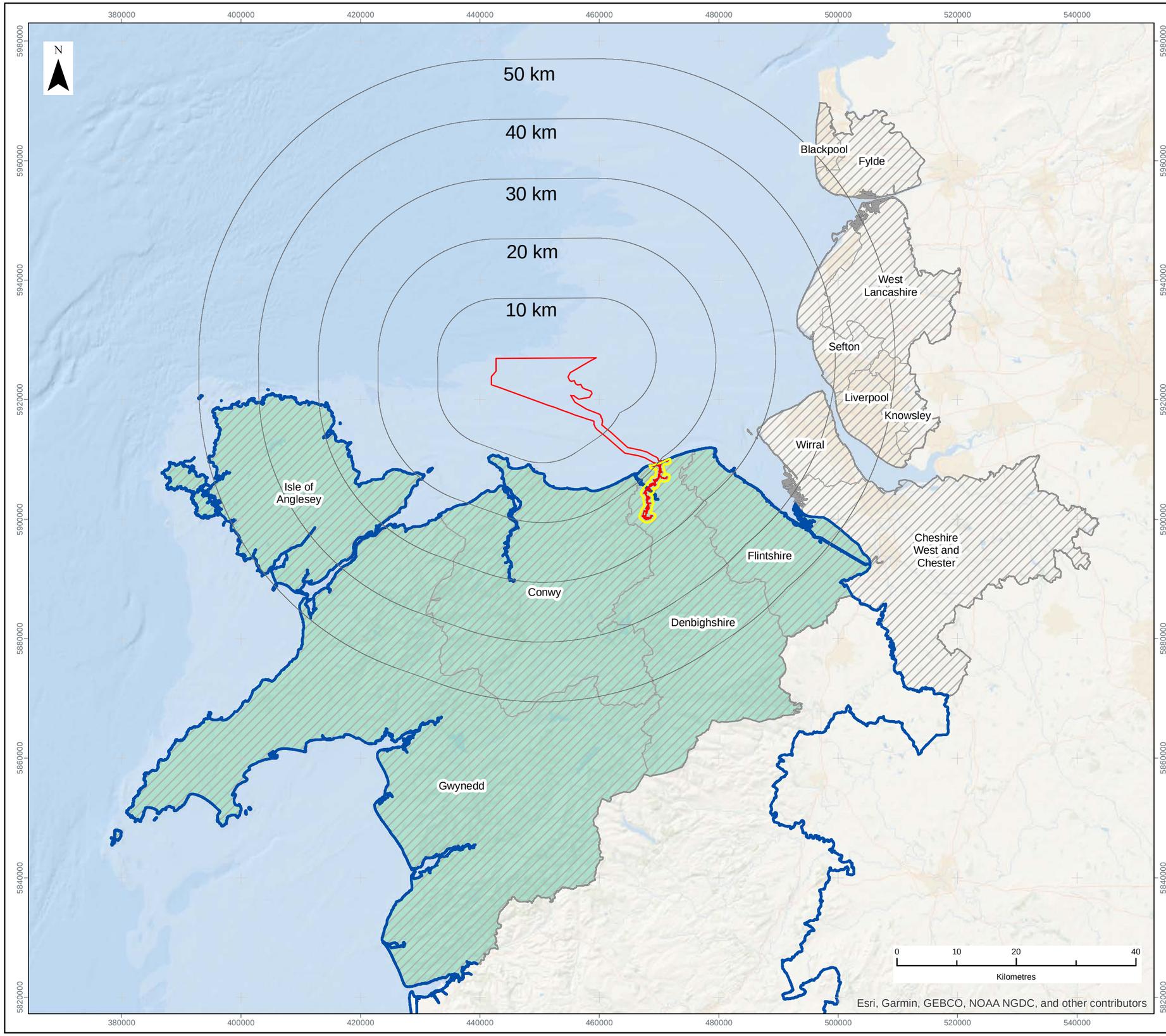
RECEPTOR	WIDER STUDY AREA*	LOCAL STUDY AREA**	LOCAL AREA OF INFLUENCE***
Disruption to onshore recreation receptors	*N*	*N*	*Y*
Disruption to offshore recreation receptors	*N*	*N*	*Y*
Tourism receptors	*N*	*N*	*Y*
Impact on volume and value of tourism economy	*Y*	*Y*	*N*

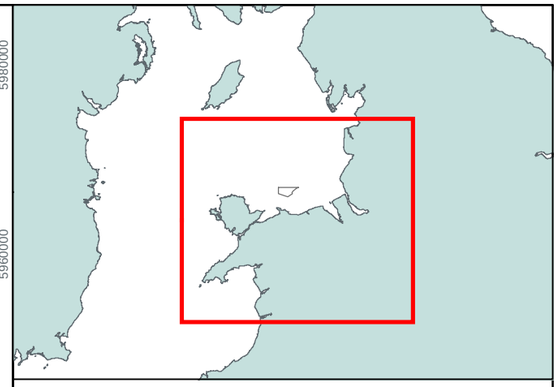
RECEPTOR	WIDER STUDY AREA*	LOCAL STUDY AREA**	LOCAL AREA OF INFLUENCE***
Displacement of tourism visitors	*N*	*Y*	*N*

** Defined as a catchment of 50 km radius from the offshore array, from which the WTG could (in theory) be visible.*

*** Defined as all local authorities along the North Wales coast (including Anglesey, Gwynedd, Conwy, Denbighshire and Flintshire).*

**** Defined as an area within 500 m buffer from OL.*





LEGEND

- Order Limits
- Wales Boundary
- Wider Study Area
- Local Study Area
- Local Area of Inluence

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE: Study areas used in the tourism & recreation assessment

VER	DATE	REMARKS	Drawn	Checked
1	3/10/2022	For Issue	MI	MI

FIGURE NUMBER:

Figure 1

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:650,000	A3	WGS84	UTM30N

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

C:\Users\loan97328\Hatch Ltd\H-363168 Awel Y Mor OSW ES support - Documents\2_WIP\ArcMap\AYM_Tourism_Study Areas_ES_10_03_22.mxd

4.4.3 Temporal scope

66 The temporal scope of the assessment of tourism and recreation comprises the period over which AyM would be delivered, and covers the construction, operational and decommissioning phases.

67 It is assumed that the development and construction phase of AyM will last up to five years, starting in 2026. The operational lifespan of AyM is assumed to be 25 years. As is typical of projects of this nature, the proposed approach to decommissioning is less well-defined at this stage. As such, the assessment of the project's decommissioning phase is undertaken qualitatively and is based on the assumption that the effects will be similar to those experienced throughout construction, albeit smaller in magnitude.

4.4.4 Tourism and recreation receptors

68 The spatial and temporal scope of the assessment enables the identification of the receptors which may experience a change as a result of AyM. The identified receptor groups that may experience likely significant effects for tourism and recreation are outlined in Table 8.

Table 8: Receptors requiring assessment for tourism and recreation.

RECEPTOR	RECEPTORS INCLUDED WITHIN RECEPTOR GROUP
Recreation	▲ Onshore recreation receptors (including users of PRoW, publicly accessible land and cycling routes); and ▲ Offshore recreation (including bathing, water sports and scuba diving).
Tourism receptors	*Includes tourist facilities and attractions that are likely to be directly affected by AyM.*
Tourism economy	*Volume and value of tourism activity both onshore and offshore.*
Visitor numbers	*Demand for and availability of visitor accommodation and related facilities generated*

RECEPTOR	RECEPTORS INCLUDED WITHIN RECEPTOR GROUP
	by construction and decommissioning workers, potentially displacing tourism visitors.

69 The list of receptors has been kept under review during the preparation of the EIA. It is acknowledged that following statutory consultation on the PEIR, the list of receptors includes North Wales Bowls Centre.

4.4.5 Potential effects

70 The potential effects on tourism and recreation receptors that have been scoped in for assessment are summarised in Table 9 below.

Table 9: Potential effects on tourism and recreation receptors scoped in for further assessment.

RECEPTOR	ACTIVITY/ IMPACT	POTENTIAL EFFECT
CONSTRUCTION		
Onshore recreation	*Disruption to onshore recreation receptors located within close proximity of the onshore works for AyM.*	*Impacts on onshore recreation receptors due to construction of the onshore infrastructure may occur due to severance of access routes, increased traffic, the presence of construction compounds and/ or construction activity at landfall point.*
Offshore recreation	*Disruption to offshore recreation (including activities taking place within the*	*Impacts on offshore recreation receptors due to construction of the offshore infrastructure may occur due to presence of temporary exclusion zones*

RECEPTOR	ACTIVITY/ IMPACT	POTENTIAL EFFECT
	array of AyM and the offshore area surrounding it).	*around the construction activity within the array and export cable corridor. There may also be disturbance from construction activity that has the potential to generate underwater noise (i.e. foundation installation) in the wider field.*
Tourism receptors	*Direct impact on tourist facilities and attractions as a consequence of construction activity. This excludes any visual impact associated with the construction of AyM. These are included in the assessment of the project's impacts on the volume and value of the tourism economy (below).*	*Impact on (onshore) visitor facilities and attractions located within and/ or in close proximity of the OL.*
Tourism economy	*Impact on the volume and value of the tourism economy as a consequence of*	*Changes to the number and overall expenditure by visitors (both day and overnight) to the wider and local study areas as a consequence of*

RECEPTOR	ACTIVITY/ IMPACT	POTENTIAL EFFECT
	construction activity.	*construction activity. This takes into consideration the visual impacts arising as a consequence of both onshore and offshore construction activity, as well as the nature of visitor offer locally, and more widely.*
Visitor numbers	*Displacement of tourism visitors through displacement of visitor numbers and/ or potential reduction in availability of tourism accommodation.*	*Potential for some construction workers to temporarily relocate to the area, creating demand for local accommodation (and related facilities) that may lead to competition for accommodation and hence displacement of tourist visitors.*
OPERATIONS		
Onshore recreation	*Disruption to onshore recreation receptors located within close proximity of the onshore works for AyM. This excludes any visual impacts associated with the offshore infrastructure of AyM. These are considered in the*	*It is very unlikely that there will be any significant disturbance of onshore recreation assets during the operational phase. If repairs are needed, these will be effected from the transition joint pits or other infrastructure, without the need for trenches to be re-opened. In the unusual and unlikely case that an open trench repair is needed, effects would be no worse*

RECEPTOR	ACTIVITY/ IMPACT	POTENTIAL EFFECT
	assessment of the project's impacts on the volume and value of the tourism economy (below).	*than construction and would be localised, and therefore limited in scale and extent.*
Onshore recreation	*Disruption to onshore receptors from the presence of offshore infrastructure.*	*Studies into the potential impacts of offshore wind farms on onshore recreation receptors have been reviewed in Section 4.7. The balance of available evidence indicates that there will not be any significant disruption to onshore receptors from offshore infrastructure.*
Offshore recreation	*Disruption to offshore recreation (including activities taking place within the array of AyM and the offshore area surrounding it).*	*This includes the loss of amenity and/ or disturbance to inshore and offshore recreation as a result of operational activity and/ or buffer zones implemented to protect personnel and offshore infrastructure during repair works and/or day-to-day operations.*
Tourism receptors	*Direct impact on tourism facilities and attractions as a consequence of*	*Impact on (onshore) tourism facilities and attractions located within and/ or in close proximity of the OL.*

RECEPTOR	ACTIVITY/ IMPACT	POTENTIAL EFFECT
	operational activity.	
Tourism economy	*Long term impact on the volume and value of the tourism economy as a consequence of AyM operations.*	*The presence of offshore infrastructure may deter potential visitors, and therefore (indirectly) impact the number and overall visitor expenditure (thereby resulting in a reduced tourism sector locally).*
DECOMMISSIONING		
It is assumed that the decommissioning phase of AyM will be similar in nature to, but no worse than, the construction phase.		

4.4.6 Impacts scoped out of the assessment

71 The impact of the displacement of visitor numbers s and/ or potential reduction in availability of tourism accommodation during AyM's operational phase has been scoped out of the assessment. This is based on the conclusion that no likely significant effect will occur. The reasons behind this conclusion are presented in Table 10 below and have been agreed with consultees as part of the relevant ETG discussion. This conclusion has been made based on the knowledge of the baseline environment and the nature of planned activity during the operational phase on the potential for impact arising during offshore wind farms' operation more widely. These conclusions follow existing best practice.

Table 10: Activities or impacts scoped out of the tourism and recreation assessment.

ACTIVITY OR IMPACT	RATIONALE FOR SCOPING OUT
Displacement impact on visitor numbers (especially visitor tourism) through displacement of visitor numbers and/ or potential reduction in availability of tourism accommodation during AyM's operational phase.	*Whilst the O&M phase of AyM will support the creation of new job opportunities related to operational activity (assumed to be in the region of 40 to 50 full-time equivalent (FTE) jobs in the socio-economic assessment (see Volume 3, Chapter 3), it is not anticipated that these will result in the displacement of visitor numbers and/ or the availability of visitor accommodation within the local study area. The nature of the operational jobs will be permanent and are likely to be taken up by residents from within the local area (i.e. including potential in-migrants) rather than transitory workers who have a need for temporary accommodation.*

4.4.7 Methodology for baseline data gathering

72 The baseline analysis presented in the assessment is based on three key sources: (1) a desk-based study, (2) consultation with key stakeholders, and (3) a walk-over survey.

73 The desk-based element of the assessment consisted of:

- A review of legislation and policies (as outlined in Table 1 and Section 4.2);
- Online searches for information about outdoor recreation resources within AyM's LAI;
- Online searches for receptor groups and their patterns of use of resources;
- Review of key employment data sources (such as the Business Register and Employment Survey (BRES)) published by the Office for National Statistics (ONS) for the tourism economy;

- Review of evidence (both published and unpublished) about the volume and value of the tourism economy in North Wales and key comparator areas, as well as the character of the local visitor offer, branding and types of visitors;
- Interrogation of online datasets, such as Denbighshire County Council's interactive map (Denbighshire County Council, n.d.), LANDMAP, Google Earth, Google Street View and Strava Global Heatmap
- Review of published evidence relating to the impact of offshore wind farms and their associated infrastructure on visitor behaviour local visitor economies
- An assessment of changes in tourism employment in seaside towns in proximity to offshore wind farms before, during and after construction.

74 Informal consultations were held with several parties (outlined in Section 4.3 above). The purpose of these consultations was to ensure that all significant resources were considered, patterns and levels of use of resources understood, and to secure access to quantitative datasets, including those which are not publicly available (such as traffic and footfall counters).

75 The assessment has also been informed by a walk-over survey conducted following the identification of key resources based on early desk-based research and stakeholder consultations. The walk-over survey was undertaken on February 12th, 2021. The purpose of the walk-over survey was to 'ground-truth' information and evidence found through the desk-based research, including to:

- Provide an indication of usage levels;
- Provide context and visualisation for discussion of resources with other parties; and
- To discover otherwise un-recorded resources that may have recreation or access significance.

76 Uncertainty and limitations in the collection of baseline data are presented in Section 4.6.

4.4.8 Methodology for ES assessment

77 This section presents an overview of the methodology adopted in the assessment of AyM on tourism and recreation receptors. In general, the approach adopted is in line with that outlined in the Scoping Report, and no changes have been made since the scoping phase.

78 EN-1 (DECC, 2011) states that all relevant socio-economic effects (including projects' impacts on tourism, and the effects on maintaining coastal recreation sites and features) should be considered. The assessment considers the likely significant effects relevant to tourism and recreation associated with both onshore and offshore infrastructure. For instance, in considering the impact on onshore recreation and the volume and value of tourism activity, the assessment considers both onshore and offshore infrastructure. Whereas in considering the project's impact on offshore recreation, the assessment only takes into consideration the offshore infrastructure.

Assessing impact on volume and value of tourism economy

79 The assessment of AyM's impact on the volume and value of the tourism economy draws primarily on desk-based research about the impact of both onshore and offshore wind farms on visitor numbers and the visitor economy, which then applies the evidence to the characteristics of AyM. The steps undertaken to assess AyM's impact on the tourism economy, drawing on the professional judgement of the assessors, include:

- Consideration of the findings of published research assessing the impact of both onshore and offshore wind farms on visitors and visitor economies in the UK (and elsewhere, albeit limited). This includes impacts generated by both the wind turbines and their towers, as well as the transmission and grid infrastructure required to connect a wind farm to the National Grid. The Applicant is not aware of any empirical evidence for existing wind farms off the coast of North Wales which considers visitors' attitudes before and after an offshore wind farm was built. Where available, reports assessing the impacts of tourism to local economies elsewhere in the UK and overseas have been considered.

- Examination of the characteristics of the tourism sector within the defined study area, including visitor centres, types of visiting activity, and types of visitors (subject to the availability of specific and up to date information).
- Stakeholder discussions with economic development and/or tourism officers for local authorities along the North Wales coast, in addition to industry representatives from the local area to understand any issues that the growing presence of offshore wind farms along the North Wales coast (including Gwynt y Môr (GyM), Rhyl Flats and North Hoyle) might be having on the local visitor economy.
- Assessment of the scale, location and nature of the proposed offshore and onshore infrastructure, and proposed construction methods in relation to the main centres of tourism and types of visitors. This includes drawing on other aspects included in this ES, such as noise and vibration (Volume 3, Chapter 10 (application ref: 6.3.10)), socio-economics (Volume 3, Chapter 3 (application ref: 6.3.3)), traffic and transport (Volume 3, Chapter 9 (application ref: 6.3.9)), air quality (Volume 3, Chapter 11 (application ref: 6.3.11)), public health (Volume 3, Chapter 12 (application ref: 6.3.12)), landscape and visual impact assessment (Volume 3, Chapter 2 (application ref: 6.3.2)) and seascape, landscape and visual assessment (Volume 2, Chapter 10 (application ref: 6.2.10)).

Onshore recreation

80 The methods used in undertaking the assessment of AyM on onshore recreation were informed by the IPROW guide *Environmental Impact Assessment: Appraising Access* (IPROW, 2020), subject to constraints and COVID-19 restrictions. In particular, the COVID-19 rules placed significant delays upon the walk-over survey and prevented an overnight stay such that all surveying was done in a single day's trip. While recognising that this was not ideal, it is considered that this was the best available option at the time, and that adequate coverage of key resources was achieved for the purposes of the assessment.

81 For the online research of resources and usage, a number of standard queries were entered into a search engine and the first two pages of suggested sites reviewed (excluding irrelevant, paid-for suggestions).

Offshore recreation

82 The assessment of AyM on offshore recreation has drawn on a desk-based review of research available, in addition to consultation with key stakeholders as well as operators of offshore recreation activities (e.g. divers, and other water sport clubs). The tourism and recreation assessment has also drawn on other aspects from within the ES, such as marine water and sediment quality (Volume 2, Chapter 3 (application ref: 6.2.3)), shipping and navigation (Volume 2, Chapter 9 (application ref 6.2.9)), commercial fisheries (Volume 2, Chapter 8 (application ref: 6.2.8)) and other marine users and activities (Volume 2, Chapter 12 (application ref: 6.2.12)). This has helped to build a picture of the existing environment and the potential magnitude of impacts and significance of effects.

4.5 Assessment criteria and assignment of significance

83 With the exception of onshore outdoor access, there is no formalised technical guidance and/ or criteria for assessing the effect (and therefore significance) of offshore wind farms on tourism and recreation receptors. The significance of effect upon outdoor access and recreation is assessed in accordance with IPROW's guidance; otherwise the likely effects of AyM on the other receptors (including the volume and value of tourism, and offshore recreation) is based on professional judgement.

84 The approach considers the sensitivity of each receptor based on the baseline position and performance against benchmark areas, in addition to the likely magnitude of impact based on stakeholder discussions and a review of other ES aspects.

85 The tourism and recreation assessment has assigned significance as per the approach outlined within the Scoping Report (innogy Renewables UK, 2020), and draws on both a receptor's sensitivity as well as the magnitude of impact.

86 The sensitivity of each receptor is evaluated as either high, medium, low or negligible based on the baseline position and its performance against benchmark areas, together with consideration of the importance of the receptor in policy terms, as outlined in Table 11.

Table 11: Sensitivity of tourism and recreation receptors

SENSITIVITY	DEFINITION FOR ONSHORE/OFFSHORE RECEPTORS	DEFINITION FOR TOURISM RECEPTORS
High	*Effects can be felt by users of a type that are of high sensitivity either because they are identified as having a high priority in policy and/or are largely dependent on the recreation or access resources which the area has to offer and have few alternative resources available locally.*	*A receptor is considered to be of high sensitivity where tourism is identified as being a high-ranking policy priority within the LSA (or for the local authorities within it). This is relevant where the study area has highly concentrated employment in tourism in comparison with the GB average.* *A Location Quotient (LQ) of 1.3 (i.e. 30% more concentrated than the GB average) for employment in the tourism sector (as defined by the United Nations World Tourism Organisation (UNWTO)) will define a receptor as having high sensitivity.*
Medium	*Effects can be felt by users of a type that are of medium sensitivity either because they are identified as medium priority in policy and/or are not particularly dependent on the specific recreational resources which the area has to*	*A receptor is considered to be of medium sensitivity where tourism is a policy priority within the LSA, or for the local authorities within it, (as a result of economic potential and/or need). For the purposes of the assessment, this means moderate concentrations in tourism employment,*

SENSITIVITY	DEFINITION FOR ONSHORE/OFFSHORE RECEPTORS	DEFINITION FOR TOURISM RECEPTORS
	offer and have some alternative resources available locally.	*which translates into a LQ of between 1.0 and 1.3 when compared with the GB average.*
Low	*Low sensitivity is assigned to receptors that are not given specific mention in policy, or which are primarily used by casual and/or local users with many alternative recreational resources available to them.*	*A receptor is considered to be of low sensitivity where tourism is not identified as a policy priority within the LSA, or for the local authorities within it. This means that overall employment in tourism has low levels of concentration, which translates into a LQ of between 0.7 and 1.0.*
Negligible	*Negligible sensitivity is assigned to receptors that would not normally be expected to experience any adverse impact.*	*A receptor is considered to be of negligible sensitivity where tourism is not identified as a policy priority within the LSA, or for the local authorities within it. This means overall low levels of concentrations of employment, typically a LQ of under 0.7.*

87 In the assessment of the volume and value of the tourism economy, the assessment of the magnitude of impact is determined using a qualitative approach, based on the applied review of research evidence and is informed by stakeholder discussions.

88 For the assessment of the magnitude of impact on recreation, the assessment follows the guidance set out by IPROW (2020), as outlined in Table 12.

Table 12: Criteria for assessing magnitude of impact.

MAGNITUDE	DEFINITION
High	*Proposals will cause a substantial change (i.e. greater than 30%) to existing patterns and levels of use of recreational resources, either permanently or for a sustained period of time (i.e. several months to permanent) and only poor-quality alternatives are available.*
Medium	*Proposals will cause a modest change (i.e. between 10% and 30%) to existing patterns and levels of use of recreation resources, or a more substantial change for a temporary, medium-term period (of weeks to a few months).*
Low	*Proposals will cause a slight (i.e. of under 10%) or short-term (i.e. less than one month) change to existing patterns and levels of use of recreation resources, with a slight reduction in overall numbers and a low level of displacement.*
Negligible	*Very minor (i.e. of under 5%) or very short-term (a few days) changes in levels and/or patterns of use.*
No change	*No discernible changes in levels and/or patterns of use.*

89 The nature of the effect is defined as follows:

- Beneficial – an advantageous effect on the identified study area;
- Adverse – a detrimental effect on the identified study area; or

- Neutral – neither a beneficial nor adverse effect.

90 The likely effect is also defined in terms of the timescale along which the effect on the receptor could be felt. For the purposes of the assessment, the effects generated as a result of both construction and decommissioning phases are classified as 'short-term'. Whereas, effects that arise during AyM's operational phase are classified as 'long-term'.

91 Effects are classified as being either significant or not significant in EIA terms. Any effects described as moderate and major in scale (see Table 13) are considered significant in EIA terms, whilst those of minor and/or negligible scale are considered as not significant.

Table 13: Matrix to determine effect significance.

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

4.6 Uncertainty and technical difficulties encountered

92 The most up-to-date information available has been used in the preparation of the baseline for the existing tourism and recreation environments within the relevant study areas. However, for some socio-economics statistics (such as employment data) there is often a lag between when the data is gathered and information is published by the ONS. These data limitations will not have a material effect on the predictability or accuracy of the impact assessment.

93 It is assumed that the construction phase (i.e. including the development, manufacture of the various components (WTGs, towers, foundations, substations and cables), installation and commissioning) will last up to five years. Five years is the maximum anticipated construction period and hence is a worse case assumption.

94 There is limited availability of data about the volume and value of tourism for local authority areas along the North Wales coast. In many cases, tourism data has a limited time-series, and is often presented on a yearly basis, which may not account for the in-variability (due to the seasonal nature of tourism). The tourism employment figures included within this assessment are based on a (standard industrial classification (SIC) code-based) definition by the United Nations World Tourism Organisation (UNWTO, 2019) for tourism industries. This definition is broader than the definition of the accommodation and food services sector (as set out within the BRES). Such data faces the same issues as the employment data mentioned above, but is the best data available for the assessment.

95 It is methodologically challenging to identify the impact of energy infrastructure (both in terms of their construction phase, as well as their operational infrastructure), as there are a number of factors which can be more significant in influencing both long- and short-term visitor patterns. This includes the weather, availability of alternative destinations, changes in preferences, local investment in the sector and changes to the local offer.

96 The latter point is especially relevant for 2020 and 2021, where it is recognised that there have been changes in the patterns and quantities of outdoor recreation and tourism undertaken during the COVID-19 restrictions. However, it is not currently clear how significant these changes are, and their lasting effect on patterns and volume of use.

97 As is common when considering a local network of access and recreation resources, there is no quantitative data available for usage of most PRoW and public open spaces, and so assessment is reliant upon inferred data. In particular, use has been made of Strava Global Heatmap to provide a visual range in levels of use. However, this is only reliable for showing use by visitors using Strava. There can be no firm conclusion that the ratio of Strava users to non-users will be the same across all areas or PRoW as this will depend upon the inherent characteristics of a path and how attractive they are to Strava users, as well as to demographic make-up of the user base for the resource.

98 Exeter University has developed an on-line tool for enumerating visits to outdoor recreation resources and the financial value of that resource. The tool, known as *ORVal* (which stands for Outdoor Recreation Valuation Tool), represents a more rigorous approach to assessing usage of a parcel of land and its evaluations are accepted as being sufficiently reliable by the Government's *Green Book* (HM Treasury, 2020b). However, the focus of *ORVal* on networks rather than individual path sections limits its usefulness for the current analysis. Furthermore, advice on the ORVal website includes the following:

> "the model does not capture the idiosyncrasies of individual greenspaces. Its predictions should be interpreted as indicating the visits and values that might be expected from an 'average' greenspace of that description in that location."

99 In other words, the apparently accurate figures produced by the tool are a product of the tool and not an actual count of visits and, as such, can only be used as an indication of probable use.

100 Aerial photography, such as Google Earth, has been used as an independent verifier of levels of use, in as much as heavier levels of user traffic tend to leave more obvious signs on the ground that are visible in aerial photography. Again, this is an imperfect tool as local conditions can have a big impact on the presence (or absence) of visible signs. For example, aerial photography is of little use for wooded paths or on those that share a vehicular track with a hard surface. Furthermore, it is noted that aerial photographs are, inherently, a snapshot from a particular time and there is no guarantee that they have been taken at a typical period.

101 Verification by a site visit is an important sense check of the remote assessment, providing information that is not available online. The various lockdowns (both national and local) and other restrictions implemented in 2020 and 2021 to slow the spread of COVID-19 during the study period, have had significant but as yet unquantified impacts on outdoor recreation and visitor behaviour. No scientifically rigorous reports have yet been published, but it is apparent that evidence seen during the site visit represents atypical conditions. Anecdotally, the evidence that is emerging suggests that use of outdoor recreation resources increased considerably during the early stages of the pandemic where those resources were local to residential areas, whilst other day and staying visitor activity has fallen due to the travel and accommodation restrictions.

102 Conversely, use initially decreased significantly in more remote areas and on resources where the primary use is utilitarian, for example, commuter routes. A notable example is at Saint Asaph Business Park. The site visit there suggested very low levels of use of the bridleways. These paths would be expected to be well used as a lunchtime opportunity for fresh air and a change of scenery by workers at the business park. It seems likely that the restrictions on attending work-places has reduced numbers using the bridleways and so it is assumed that traffic on these paths would have been much higher in pre-COVID times.

103 How use will change post-COVID is a further uncertainty. While it is probable that the large changes in volumes and patterns of use will, over time, trend back towards pre-COVID levels, the speed with which this happens and the permanent changes it brings, remain uncertain.

104 To accommodate these uncertainties, an approach using the 'worst case' scenario as outlined within the Maximum Design Scenario (MDS) (see Table 22) has been adopted. This assumes that the higher levels of use near residential areas will continue and that, in remoter areas and on utilitarian routes, traffic levels will quickly return to pre-COVID numbers.

4.7 Existing environment

4.7.1 Tourism Economy

The size and importance of the tourism economy

105 This section provides an overview of the scale of the visitor economy across the LSA. The LSA area attracts a large number of visitors, and tourism makes an important contribution to the local economy.

106 Whilst much of the tourism market is seasonal, and is based on the more traditional seaside destinations, the LSA benefits from several all-weather attractions, which encourage tourism all year around.

107 Based on data published by the Welsh Government, the average number of visits to North Wales approached 27 million per year between 2017-19, a decline of 12% when compared with 2011-13 (of 30.7 million trips). This was driven by a notable drop in the number of day trips (-15%), in addition to a drop in the overall proportion of day trips (from 88% throughout 2011-13, down to 85% over 2017-19). Overall, the decline in day visits in North Wales is marginally lower than the trend seen across Wales (-16%) and the UK (-8%). Although the number of overnight visits in North Wales (i.e. both domestic and international) increased (by +6%) since 2011-13, the average length of overnight stay has declined slightly from 4.05 nights per visit in 2011-13 to 3.65 nights in 2017-19. Once again, this is reflective of wider trends seen across Wales.

108 Notably, at the local authority level, the drop in the number of both day (-20%) and overnight (-10%) visits to Denbighshire translates in a larger than average (-19%) drop in the number of visits in the area. The Isle of Anglesey saw the largest drop in visits (-21%) driven by 27% decline in the number of day trips. It is important to note, however, that the Isle of Anglesey experienced an increase (+10%) in the number of staying visits, the average length of stay increased from 3.7 to 4.1 nights as well.

Table 14: Average Annual Number of Visits, 2011-13 to 2017-19, 3-year rolling average (000s)

	DAY TRIPS		OVERNIGHT TRIPS*		TOTAL TRIPS	
	2011-13	*2017-19*	*2011-13*	*2017-19*	*2011-13*	*2017-19*
Conwy	*6,980*	*6,460*	*948*	*1,088*	*7,928*	*7,548*
Denbighshire	*5,020*	*4,010*	*705*	*637*	*5,725*	*4,647*
Flintshire	*3,620*	*3,690*	*220*	*225*	*3,840*	*3,915*
Gwynedd	*7,110*	*5,430*	*1,559*	*1,775*	*8,669*	*7,205*
Anglesey	*3,180*	*2,320*	*573*	*632*	*3,753*	*2,952*
North Wales	*27,000*	*23,000*	*3,721*	*3,952*	*30,721*	*26,952*

Source: Welsh Government (2021c).

**Please note that this includes both domestic and international visitors.*

109 Total visitor expenditure in North Wales was around £1.47 billion per annum over 2017-19, which is slightly (c. 1%) lower when compared with 2011-13 (£1.49 billion per annum). Overall, the data indicates that there has been an increase of around 13% in the impact generated per visit (from £49 per visit in 2011-13 to £55 per visit in 2017-19). A detailed look at average spend per visit suggests that whilst the impact generated per overnight visit increased by 10% (from £177.10 in 2011-13 to £195.09 in 2017-19), the spend per day visitor has remained unchanged (from £30.78 in 2011-13 to £30.57 in 2017-19). Further analysis of spend per night by overnight visitors indicates that, whilst the average length of stay has fallen, average spend per night has increased by a little over a fifth (or just under £10, from £43.78 in 2011-13 to £53.45 in 2017-19).

Table 15: Annual Average Visitor Expenditure, 2011-13 to 2017-19 (£ million)

	DAY TRIPS		OVERNIGHT TRIPS		TOTAL TRIPS	
	2011-13	*2017-19*	*2011-13*	*2017-19*	*2011-13*	*2017-19*
Conwy	*£235*	*£212*	*£192*	*£245*	*£427*	*£457*
Denbighshire	*£116*	*£126*	*£111*	*£115*	*£227*	*£241*
Flintshire	*£66*	*£50*	*£33*	*£25*	*£99*	*£75*
Gwynedd	*£214*	*£203*	*£281*	*£316*	*£495*	*£519*
Anglesey	*£155*	*£44*	*£93*	*£124*	*£248*	*£168*
North Wales	*£831*	*£703*	*£659*	*£771*	*£1,490*	*£1,474*

Source: Welsh Government (2021c)Visitor expenditure shows remarkable variation at the local authority level.

110 Since 2011-13, visitor expenditure in the Isle of Anglesey fell by 32% driven by a drop in day visitor expenditure (-72%). The average spent per day visit fell from £49 over 2011-13 to £19 over 2017-19. Moreover, the decline in both day (-24%) and staying (-25%) visitor expenditure in Flintshire resulted in a 24% drop in overall visitor expenditure.

Table 16: Annual Average Indicators for North Wales, 2011-19

	2011-13	2017-19	CHANGE 2011-13 TO 2017-19	
			NO	%
Average spend per trip	*£48.50*	*£54.69*	*+£6.19*	*+13%*
Spend per overnight trip	*£177.10*	*£195.09*	*+£17.99*	*+10%*
Length of overnight trip (days)	*4.05*	*3.65*	*-0.40*	*-10%*
Spend per night	*£43.78*	*£53.45*	*+£9.67*	*+22%*
Spend per day trip	*£30.78*	*£30.57*	*-£0.21*	*-1%*

Source: Welsh Government (2021c)

111 Despite the declining volume of tourism, Denbighshire saw visitor expenditure rise by 6%. Average expenditure per day visit over 2017-19 increased to £31 (vs £23), resulting in a 9% increase in day visitor expenditure. At the same time, average expenditure per overnight visit reached £181 (vs £157), driving a 4% increase in staying visitor spend.

112 Data from the Scarborough Tourism Economic Activity Monitor (STEAM) estimates that in 2018 tourism contributed £3.2 billion (in 2018 pricing) to the North Wales economy and supported a little over 42,300 FTE jobs. Tourism employment was concentrated in Gwynedd (37%), Conwy (28%) and Denbighshire (14%).

Table 17: Economic Impact of Tourism, 2018

	ECONOMIC IMPACT (£M)	TOTAL EMPLOYMENT (FTE)
Conwy	*£904*	*11,800*
Denbighshire	*£509*	*6,100*
Flintshire	*£276*	*3,200*

	ECONOMIC IMPACT (£M)	TOTAL EMPLOYMENT (FTE)
Gwynedd	*£1,119*	*15,600*
Anglesey	*£311*	*4,000*
North Wales	*£3,241*	*42,300*

Source: North Wales Tourism (2019)

Tourism employment

113 Estimates for the volume of employment that tourism activity supports differ according to the data sources used. Employment estimates derived from economic impact models tend to give a much higher figure than the BRES does. The key difference is that BRES data captures only the direct employment associated with tourism-related activity, but not the non-tourism supported jobs linked to multiplier spend from tourism (i.e. the indirect and induced employment associated with supply chain and wage expenditure).

114 Although it offers only a partial picture of the contribution of tourism to the employment base, BRES data is also available at the national level. This makes the comparison of tourism-related employment in the study area with other comparator areas possible.

115 According to the latest BRES estimates (ONS, 2021), there are around 40,000 jobs supported directly by tourism-related sectors in North Wales, which equates to 13% of total employment. With a LQ of 1.2, this is broadly in line with, albeit slightly higher than, the proportion seen across Great Britain (LQ 0.9) and Wales (LQ 1.0). The concentration of tourism-related employment varies within North Wales. In Denbighshire, employment in tourism (with LQ 1.1) is similar to the national average. Whereas, with a LQ over 2.0, tourism-related employment in Anglesey and Conwy, highlights the key role that tourism plays locally.

Table 18: Employment and specialisation in tourism, 2020

	TOURISM (000S)	% TOURISM	LQ VS GB
Conwy	*9*	*20%*	*1.8*
Denbighshire	*5*	*11%*	*1.1*
Flintshire	*6*	*8%*	*0.8*
Gwynedd	*10*	*17%*	*1.6*
Anglesey	*5*	*22%*	*2.0*
North Wales	*40*	*13%*	*1.2*
Wales	*147*	*11%*	*1.0*

Source: ONS (2021)

Accommodation stock

116 At present, data on the number of bedrooms by type of accommodation (i.e. serviced, self-catering, camping, boat moorings, etc.) is not available. However, an estimate of the number of serviced accommodation rooms across North Wales can be derived from available data.

117 On the basis that approximately 4.39 million visitor nights were spent in serviced accommodation in 2018 (North Wales Tourism, 2019), with an average of 62% occupancy across the year (Welsh Government, 2021e), it can be estimated that this equates to a figure in the order of 19,400 serviced accommodation rooms across North Wales.

Visit Wales visitor survey insights

118 The *Wales Visitor Survey: 2019* (Welsh Government, 2021d) provides useful insights for the assessment of the tourism baseline. Information is provided on the activities undertaken and places visited by UK staying, UK day as well as overseas visitors.

119 More than three fifths (65%) of the surveyed domestic overnight visitors to North Wales indicated that they visited the beach, which is higher than the proportion across Wales (58%). Domestic overnight UK visitors to North Wales are also more likely to visit country or forest parks (45% vs 38% in Wales) and walk for more than 2 miles (41% vs 35% in Wales). Half of UK staying visitors to North Wales, as well as Wales more broadly, did some general sightseeing.

120 Visits to the beach are also popular with UK day visitors to North Wales. More than a quarter (26%) of day visitors had visited the beach, compared to 18% across Wales. Moreover, day visitors to North Wales are more likely to do some general sightseeing (24% vs 19% in Wales). The survey also found a higher proportion of first-time day visitors to North Wales (15%) than to West Wales (3%) or Mid and South Wales (7% for both). Day visitors travelling with a pet were also more likely in North Wales compared to other areas (18% vs 14% on average).

121 The most popular activities among overseas visitors to Wales are visiting a castle or other historic attractions (60%) and general sightseeing (59%). Although general sightseeing in North Wales (58%) is comparable to other Welsh areas, overseas visitors to the other areas are less likely to visit castles or other historic attractions (50%). In line with the Welsh average, about half (51%) of overseas tourists in North Wales visited country or forest parks. There is a lower proportion of overseas visitors to beaches in North Wales (45%) than average (49%). Country/forest parks and beaches in Mid and West Wales appear to be particularly more popular with overseas visitors.

122 The *Wales Visitor Survey* asked visitors about any perceived weaknesses with regards to their visit to Wales. Overall, participants often struggled to highlight any prominent negative aspects to their visits, and there was widespread desire to return. The two key issues raised by participants of the *Wales Visitor Survey* included people finding certain locations very busy at times struggling to find parking, and the price of certain attractions. A number of disappointments were also identified. None of these included comments about offshore wind farms, or wind farms more generally.

Conwy Visitor Survey

123 In May 2020, the tourism team at Conwy County Borough Council conducted a visitor survey. The *Conwy Visitor Survey* (Conwy County Borough Council, 2020) provides useful insights into visitors to the CCBC area. 1480 recipients completed the survey in total. Respondents received the survey through a variety of different channels including Visit Conwy social media pages and the Visit Conwy marketing database. We also asked local businesses to share the survey with their customers.

124 The survey indicates that the highest proportion of respondents reside in North West England. This is a key market for tourism in the CCBC area. The location with the second highest number of respondents is Wales.

125 The highest proportion of respondents to the survey were couples who are aged 65+. This group of people is one of the key markets in the area. Couples aver 45 and families are also important audiences. However, the main visitor audience is couples who are aged over 45; the family market forming the second largest audience.

126 The most popular time for visiting Conwy is the summer months, with July being the most popular month in 2020 (the highest proportion of respondents responded that they would like to travel to Conwy in July 2020, compared to other months in 2020/21, providing restrictions have been eased). The majority of respondents (68%) said their preferred holiday type would be traditional or small seaside towns. 64% respondents said they would like to stay for a few days or one week on their next holiday to the county. The most common forms of accommodation are caravans and hotels.

127 The main reasons why visitors want to holiday in the CCBC area are listed below (note this is based on an open-ended question):

- 29% visitors said it's a beautiful location and they love the area
- 20% visitors said they regularly travel to the area
- 13% visitors said it's close to home so they don't have to travel very far
- 10% visitors have a second home in the area
- 9% visitors travel specifically to visit the countryside / mountains

- 5% visitors travel specifically for the beaches and coast.

Nature of tourism offer

128 The ten most popular attractions in North Wales jointly generated close to 3.9 million visits in 2018. Conwy is home to five of the ten most visited North Welsh attractions.

Table 19: Top ten attractions to North Wales, 2018.

ATTRACTION	NO OF VISITS	DISTRICT
Tir Prince Fun Park, Raceway & Market	*900,000**	*Conwy*
Walkers on Snowdon	*650,000**	*Gwynedd*
Newborough National Nature Reserve & Forest	*478,204**	*Isle of Anglesey*
Gwydir Forest Park	*352,723**	*Conwy*
Poncysyllte Aqueduct & Trevor Basin Visitor Centre	*342,620*	*Wrexham*
Bodnant Garden	*260,153*	*Conwy*
Nova Prestatyn	*250,000**	*Denbighshire*
Great Orme Country Park Visitor Centre	*210,008*	*Conwy*
Caernarfon Castle	*205,009*	*Gwynedd*
Conwy Castle	*201,961*	*Conwy*

Source: Beaufort Research Ltd for Visit Wales (2020)

** Figures estimated by operators.*

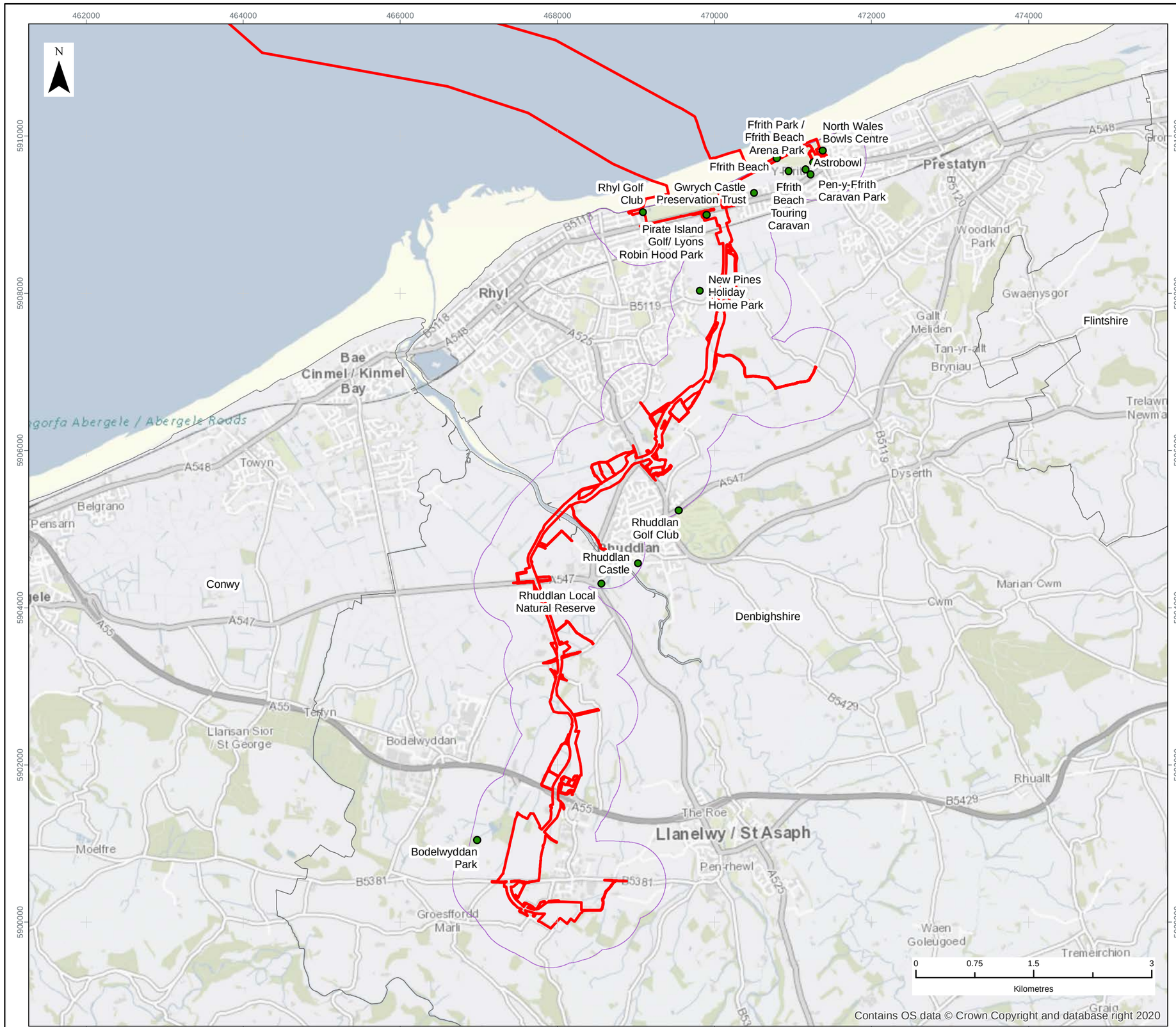
129 Table 20 below provides an overview of the nature of tourism offers for a select number of visitor locations along the North Wales coast. The construction of, and operational AyM, will be mostly visible from these visitor locations. This is based on a review of key viewpoints considered within the seascape, landscape and visual impact assessment (see Volume 2, Chapter 10). The analysis presented in the table below highlights that whilst seascape and landscape views are an important aspect of the visitor economy along the North Wales coast, the areas' offer is significantly wider and caters for a variety of interests and people of all ages.

Table 20: Overview of Nature of Tourism Offer to Visitors to locations in North Wales.

LOCATION	NATURE OF TOURISM OFFER
Rhyl, *Prestatyn, Kinmel Bay and Abergele*	*The area of North Wales coast from Prestatyn to Abergele can be characterised as a traditional popular coastal resort appealing to families with young children.* *The local tourism offer is dominated by sandy beaches at Rhyl Central Beach (identified as Rhyl's busiest beach), Prestatyn, Kinmel Bay and Towyn. The area is also popular with enthusiasts of water sports, stand-up board paddlers, and bathers.* *Inland from the beachfront there are several attractions that appeal to a wide range of users of all ages, such as the Rhyl SeaQuarium, Rhyl Library, Museum and Arts Centre (which displays a history of the town and its people), Rhyl Town Hall (Grade II listed building), and the Pavilion Theatre. Other visitor (and onshore recreation) attractions include the Kinsale Golf Club and Driving Range, the Rhyl Miniature Railway, the Marsh Track (a 1.3 km closed circuit road cycling track and BMX race track) and the Tir Prince Leisure Park (consisting of American-style harness racing and big amusement park rides) at Towyn.*
Abergele to Rhos-on-Sea	*The coastline between Abergele and Rhos-on-Sea is similar in nature to the coastline further to the east (i.e. between*

LOCATION	NATURE OF TOURISM OFFER
(including Colwyn Bay)	*Rhyl and Abergele), in that it is characterised by sandy beaches that appeal to wide range of users, including families with young children. The nature of the tourism offer along this section of the coastline tends to cater for local (i.e. more residential) visitors.* *The sandy beach is backed by a three-mile promenade which extends into neighbouring areas.* *Colwyn Bay is home to the Welsh Mountain Zoo – National Zoo of Wales which includes several rare and endangered species.* *Recent developments to the visitor offer include the arrival of Michelin award-winning chef Bryn Williams's Bistro. On the edge of Eirias Park is a 50-acre park with a boating lake, bowling-green, playground and the Colwyn Leisure Centre. The old town is characterized by Victorian architecture, and the Theatr Colwyn (Wales's oldest working theatre and cinema) is still operational.*
Great Orme & Llandudno	*The visitor offer of Llandudno and the Great Orme is also characterised by its local beaches. However, the area's offer is much broader than either of the two areas identified above, and hence appeals to a broader market. This includes conference visitors and attendees to major events at Venue Cymru, as well as visitors to Llandudno's many beachfront hotels and seaside attractions and facilities.* *The Great Orme has a tramway and cable car (longest in Britain) and the visitor centre at the summit all of which contribute to the area's unique and varied tourism offer. The Great Orme is also home to pitch 'n' putt golf, and provides an opportunity for stunning views extending as far as the Lake District.* *Other aspects of the area's visitor offer include Happy Valley (sheltered grassy hollow on Great Orme's eastern flank), the Alice Trail (inspired by Lewis Carroll's Alice's*

LOCATION	NATURE OF TOURISM OFFER
	Adventures in Wonderland), and Llandudno Pier (the longest Victorian pier in Wales). The area is also popular with climbers, as well as skiing and boarding enthusiasts (at Llandudno Snowsports).



LEGEND

- Order Limits
- Tourism Attractions
- Local Authority Districts
- Local Area of Influence

Data Source: Contains Ordnance Survey data © Crown copyright and database right

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE: Tourism receptors located within local area of influence

VER	DATE	REMARKS	Drawn	Checked
1	3/14/2022	For Issue	MI	MI

FIGURE NUMBER:

Figure 2

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:50,000	A3	WGS84	UTM30N

Fferm Wynt Alltraeth AWEL Y MÔR Offshore Wind Farm

C:\Users\Ioan97328\Hatch Ltd\H-363168 Awel Y Mor OSW ES support - Documents\2_WIP\ArcMap\AYM_Tourism_Tourism_Receptors_ES_14_03_22.mxd

4.7.2 Onshore recreation

Public Rights of Way

130 All of the outdoor recreation resources included within the assessment are located within a 500 m buffer from either side of the onshore OL. Further details of resources within the 500m buffer are outlined in detail within Volume 5 Annex 4.1 (application ref: 6.5.4.1) from which a shortlist of key resources was drawn up and is presented in Table 21 below.

131 Table 21 below sets out the list of onshore recreation resources that, on the basis of levels of use are considered to be key assets, and therefore potentially affected by the onshore ECC and proposed substation between landfall location and the connection point to the National Grid located to the south of St Asaph Business Park. All the paths listed below were subject to site survey. The table includes descriptions of the resources, and their estimated, relative levels of use. The locations of these resources are shown in Figure 3 below.

132 Please note that no evidence has been found for significant recreational use of the River Clwyd within the LAI and, as such, this does not feature in Table 21 below. Similarly, there is no evidence that any popular, or currently promoted Health Walks are located within the LAI.

Table 21: Key onshore recreation resources based on levels of use.

RESOURCE	DESCRIPTION	LEVELS OF USE	NOTES
Ffrith Beach	*Sandy beach located between Splash Point, Rhyl and Prestatyn. Backed by promenade and Rhyl Golf Course.*	*ORVal predicted use of around 135,000 visits per annum.*	*Large, sandy beach within easy walking distance of both Rhyl and Prestatyn populations.*
Promenade NCN5 *Wales Coast Path*	*Good quality asphalt road behind seawall. Part of the National Cycle Network (NCN) and designated as part of the Wales Coast Path (WCP).*	*Cycle counter recorded 62,400 bike trips during 2017. ORVal conservatively suggests around 27,400 visits per annum.* *Strava Heatmap indicates very frequent use. ORVal figure is taken to be an under estimate with weight given to the counter data.*	*High quality, accessible route.*
Ffrith Park paths	*Access road to beach and informal*	*Strava Heatmap suggests that the main access road is*	*Although now no longer the scale of visitor attraction it once was, Ffrith Park is used as access to the*

RESOURCE	DESCRIPTION	LEVELS OF USE	NOTES
	walking routes west to beach.	*frequently used by walkers and regularly used by cyclists.* *An informal footpath heading due west to/ from the beach is also frequently used by walkers, though it is not used by cyclists to any significant extent.*	*beach for locals and visitors. Access is mainly along the service road to the promenade, with a ramp to the beach. This will also be an access route for AyM vehicles to the landfall site.* *The park is provided with a network of internal routes and several access points.*
Link Path	*Narrow asphalt track across the golf course from A548 to Promenade.*	*Strava Heatmap suggests frequent use by cyclists and walkers.*	*The track carries public access rights and provides a direct link from holiday parks to the beach/ promenade.*
Cycle path along A548	*Off-carriageway cycle path.*	*Cycle counter recorded over 20,800 visits during 2019.*	*Well-marked, off-carriageway cycle path. Only a single cyclist seen using it during walk-over survey.*
Bruton Park/ Maes Bruton	*Community woodland and public open space*	*ORVal predicts around 37,000 visits annually. Strava Heatmap suggests frequent use.*	*Relatively high use compared to PRoW nearby (but not to levels of Wales Coast Path).*

RESOURCE	DESCRIPTION	LEVELS OF USE	NOTES
	with extensive path network.		*Well-used paths with several dog walkers on day of walk-over survey. Infrastructure in good condition.*
Byway open to all traffic (BOAT) 206/44	*Byway opens up onto Other Route with Public Access (ORPA) at black and white posts.*	*Strava Heatmap trace suggests regular/frequent use, particularly by walkers.*	*Byway used regularly by walkers and a few mountain bikes.* *Poor drainage in places, and enclosed by hedges. No signs of use by horseriders.* *Track is part of the Along the Seafront Trail ride, and may be much busier with cyclists in the summer.*
Footpath 206/20 North Wales Path	*Continuation of 206/12 on asphalt access road then cross-field path across stream to Pentre Lane.*	*Strava Heatmap shows frequent use, but it appears that more users follow Pentre Lane.*	*Across pasture field to footbridge. Signs of regular, but not heavy, recent use.* *North of footbridge the field showed signs of recent flooding. This may have resulted in reduced traffic prior to the survey.*

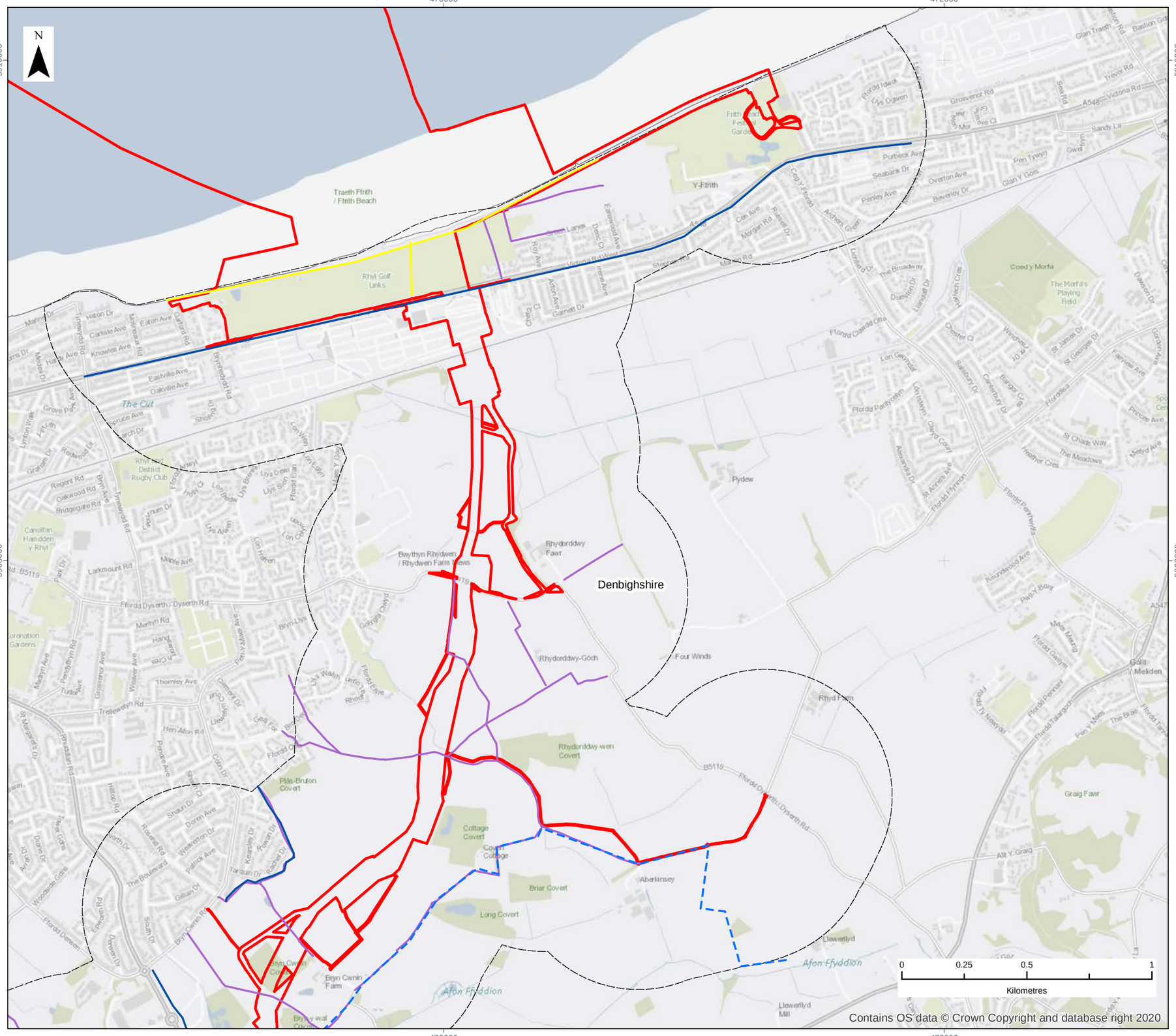
RESOURCE	DESCRIPTION	LEVELS OF USE	NOTES
Pentre Lane	*Narrow asphalt lane between hedges. No through road, serving several farms, fields and woodland.*	*Regular/frequent walker-use on classified road.* *Strava Heatmap trace for cyclists suggests regular, but less frequent use by cyclists.*	*In places, this is very narrow with high hedges right to the road (and with no verge). Difficult for cars to pass walkers.* *Agricultural vehicles or heavy goods vehicles cannot be passed very easily. Not ideal as a diversion route.*
Bridleway 206/12 North Wales Path	*Unsealed farm/land access track.*	*Regular vehicular use.* *ORVal suggests around 17,700 visits per annum. Strava Heatmap indicates regular use by pedestrians, but irregular use by cyclists.*	*Well-used farm/access track with regular vehicle movements. Stoney surface so can't estimate recreational traffic.* *Barbed wire fence to the north side and hedge on the south side of the track (designated a bridleway at this section).*
Footpath 206/30 and 206/29 *NCN84*	*Asphalt path running atop the eastern embankment of the River Clwyd.*	*On-site counter has recorded around 29,400 cycle trips during 2019.*	*Around 20 walkers and several cyclists were seen during a 30-minute visit.*

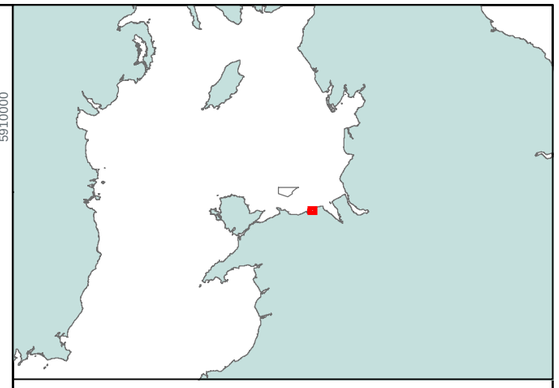
RESOURCE	DESCRIPTION	LEVELS OF USE	NOTES
North Wales Path		*Strava Heatmap suggests that this is one of, if not the busiest route locally for both pedestrian and cyclist users.* *ORVal indicates that about 88,000 visits can be expected per annum.*	*The path has a good surface, is free from motor vehicles and affords views across the river and floodplain. It offers a fairly direct link between the west of Rhyl and Rhuddlan, and is part of a continuous cycle route, via Sarn Lane to Bodelwyddan.*
Footpath 201/12 *ATR SUP030*	*An unsurfaced footpath running on top of the western embankment of the River Clwyd.*	*Strava Heatmap suggests only light use by cyclists but regular to frequent use by pedestrians.*	*There is a locked gate at the southern end, with a stile to east side, so not an accessible route.* *Lightly walked at time of survey, but likely to be used more when the caravan park is open and occupied. Although shown on the Active Travel maps for the county, it is understood that there are currently no plans to develop this as a commuting route (Ben Wilcox-Jones pers. comm.).*

RESOURCE	DESCRIPTION	LEVELS OF USE	NOTES
Bridleway 201/10	*North-south running bridleway adjacent to St. Asaph Business Park.* *Well surfaced gravel path, covered in leaf litter, also with hedge/tree encroachment from the sides.*	*High use on Strava Heatmap trace from road section adjacent, but only low use trace on the bridleway itself. This suggests that there is significant commuter cycling, but minimal recreational cycling, including on the bridleway.* *In contrast, pedestrian trace indicates frequent/ high levels of pedestrian use.*	*Site survey showed light use (mainly by walkers) as there is no sign of tyre tracks near to the junction with 201/9.* *It is possible that the evidence of overall low level of use seen onsite is a reflection of COVID-19 restrictions, rather than normal levels of use. The Strava Heatmap suggests significant levels of walking recorded from 2017 onwards, which are assumed to give a truer picture.*
Bridleway 201/9	*East-west bridleway between St. Asaph Business Park and Bodelwyddan (via A55 cycle path).*	*Pedestrian trace and cyclist trace indicates light level of pedestrian use of the bridleway and only occasional cyclist use.*	*A Walk your way to health walk leads off from the bridleway into a small nature reserve. The path through the reserve peters out. There is a bird hide in the reserve that looks hardly used.*

RESOURCE	DESCRIPTION	LEVELS OF USE	NOTES
			The bridleway itself is only lightly used and is damp so holds any marks of users. *Only one or two mountain bike tracks found.* *A few hoof-prints (only a handful) from a single horse found on the eastern section (east of spine road). A few more hoof-prints also found on the western side, but very sparse.*
Bodelwyddan Park	*A DCC- managed park and castle grounds, including extensive parkland, woodland, formal gardens and a lake.* *Development of a country park at the Castle is proposed in*	*ORVal suggests that the park, if it were public open space, would attract 45,600 visits per annum. Strava Heatmap shows frequent pedestrian use of the castle grounds, but almost no traces within the wider parkland.*	*The castle and grounds are outside of the LAI. The parkland extends well into the ZOI, but there is no evidence that this is currently used by the public in any significant numbers. The parkland is largely shielded by woodland and tree belt on its eastern border.*

RESOURCE	DESCRIPTION	LEVELS OF USE	NOTES
	the vicinity of the castle.		





LEGEND

- Order Limits
- Local Authority District Boundaries
- Local Area of Influence
- Public Right of Way
- Cycle Route
- National Cycle Network 5 / Wales Coast Path
- National Cycle Network 84 / North Wales Path
- North Wales Path

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE: PRoW & other onshore recreation receptors within 500m buffer of OL - Landfall

VER	DATE	REMARKS	Drawn	Checked
1	3/10/2022	For Issue	MI	MI

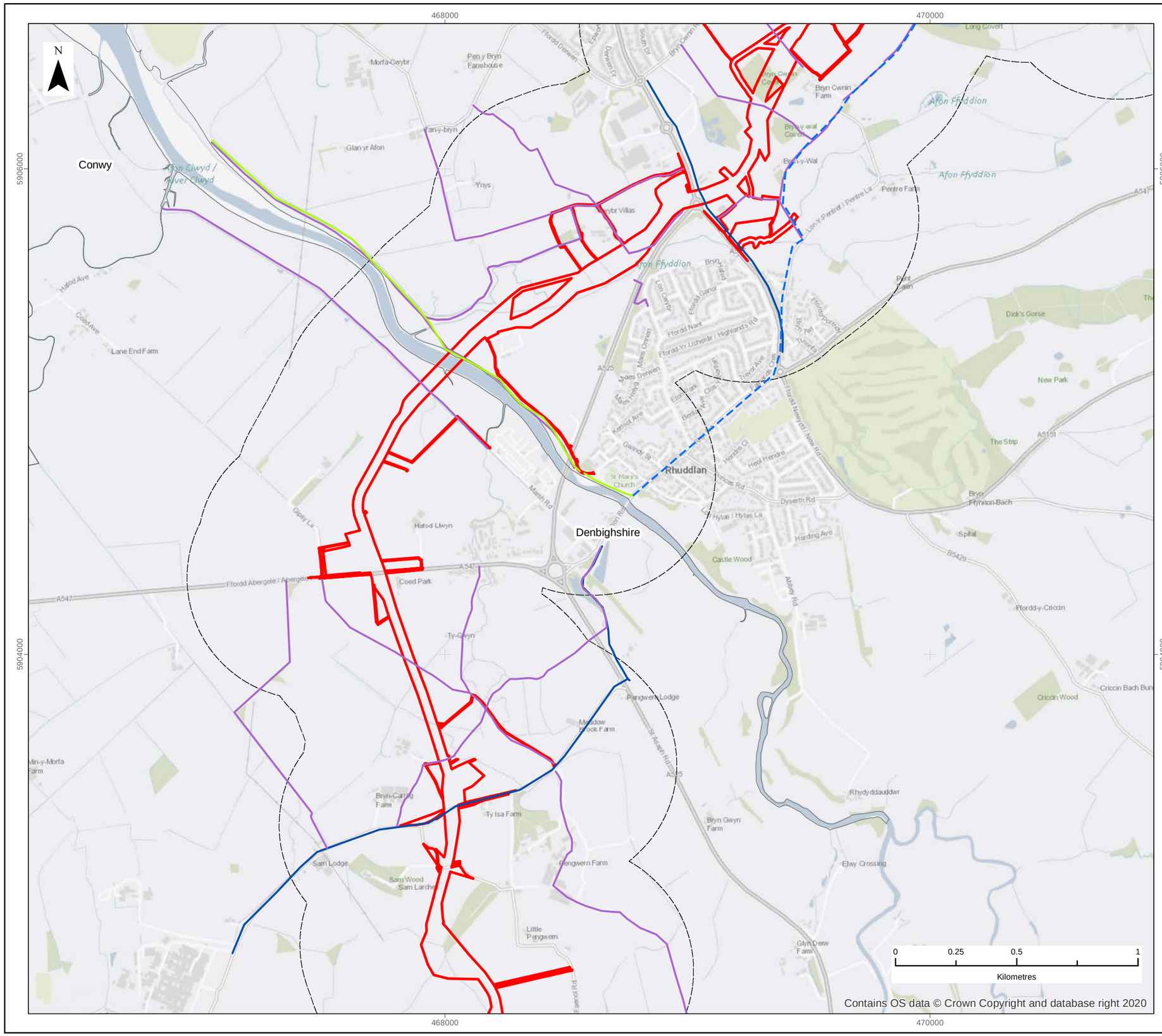
FIGURE NUMBER:

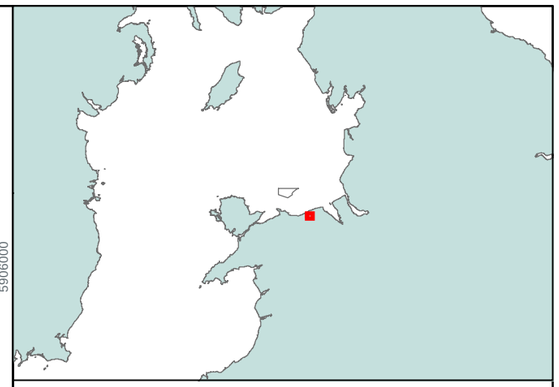
Figure 3

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:16,000	A3	WGS84	UTM30N

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

C:\Users\loan97328\Hatch Ltd\H-363168 Awel Y Mor OSW ES support - Documents\2_WIP\ArcMap\AYM_Tourism_PROW_receptors_LANDFALL_ES_10_03_22.mxd





LEGEND

- Order Limits
- Local Authority District Boundaries
- Local Area of Influence
- Public Right of Way
- Cycle Route
- National Cycle Network 5 / Wales Coast Path
- National Cycle Network 84 / North Wales Path
- North Wales Path

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE: PRoW & other onshore recreation receptors within 500m buffer of OL - Mid-route

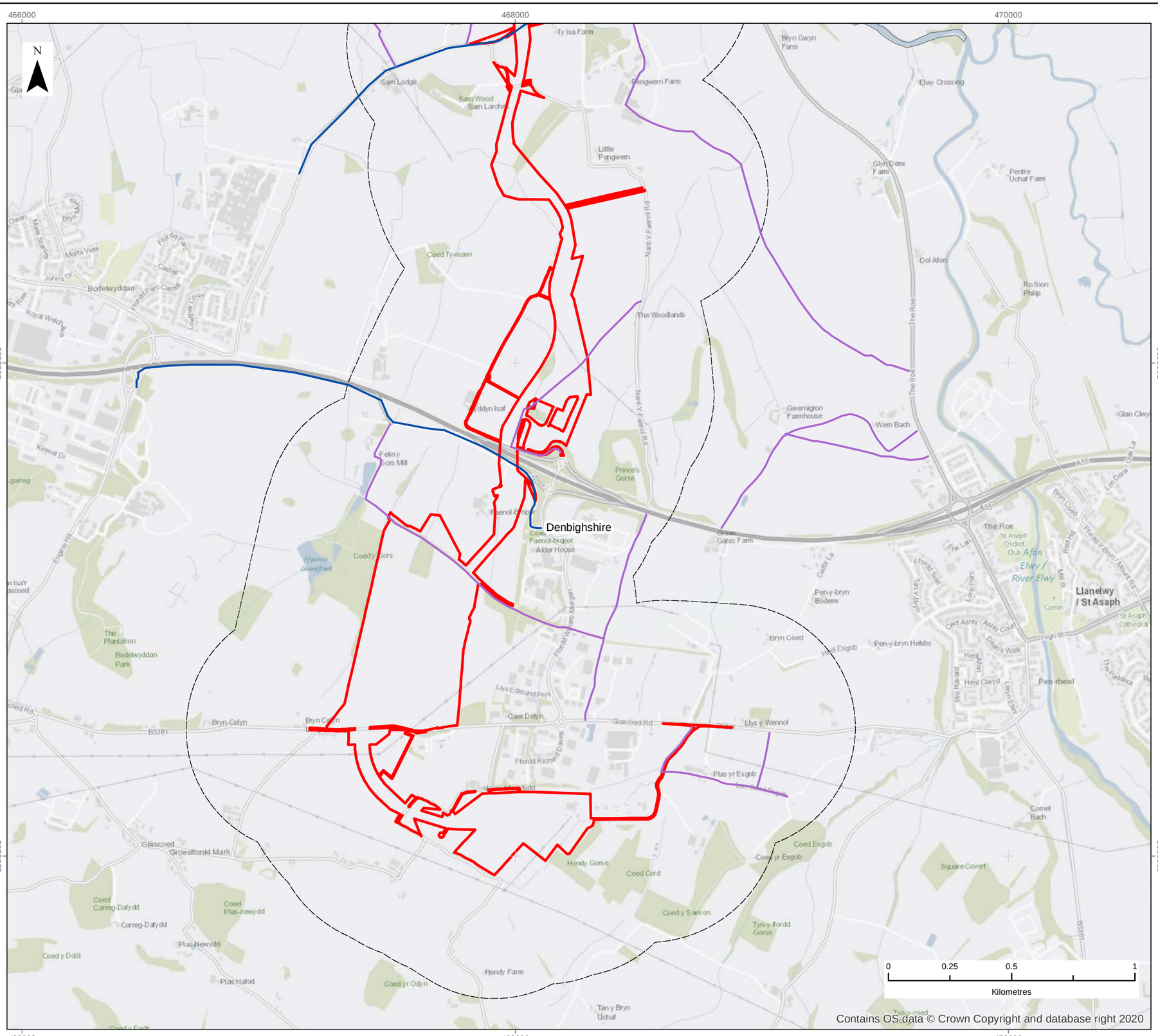
VER	DATE	REMARKS	Drawn	Checked
1	3/10/2022	For Issue	MI	MI

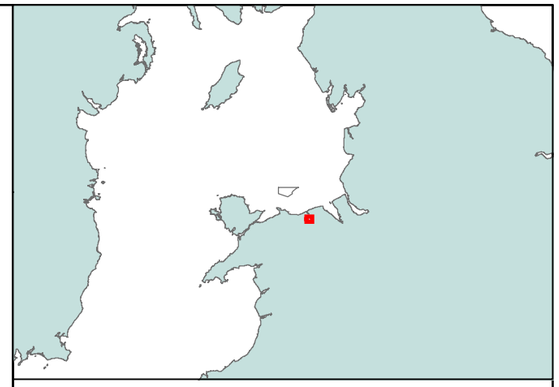
FIGURE NUMBER:

Figure 4

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:16,000	A3	WGS84	UTM30N

Fferm Wynt Alltraeth AWEL Y MÔR Offshore Wind Farm





LEGEND

- Order Limits
- Local Authority District Boundaries
- Local Area of Influence
- Public Right of Way
- Cycle Route
- National Cycle Network 5 / Wales Coast Path
- National Cycle Network 84 / North Wales Path
- North Wales Path

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE: PRoW & other onshore recreation receptors within 500m buffer of OL - Substation

VER	DATE	REMARKS	Drawn	Checked
1	3/10/2022	For Issue	MI	MI

FIGURE NUMBER:

Figure 5

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:16,000	A3	WGS84	UTM30N

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

C:\Users\loan97328\Hatch Ltd\H-363168 Awel Y Mor OSW ES support - Documents\2_WIP\ArcMap\AYM_Tourism_PROW_receptors_SUBSTATION_ES_10_03_22.mxd

133 In addition to the resources physically crossed and/or within the LAI of the onshore infrastructure, the potential visual impact of the WTG on onshore recreation receptors has also been considered. The ZTV, as defined within the seascape, landscape and visual impact assessment (see Volume 2, Chapter 10) includes extensive lengths of the Wales Coast Path between Point of Ayr and the north-east coast of Anglesey. The ZTV includes resources such as the Great Orme Country Park, and parts of Snowdonia National Park, as well as numerous individual viewpoints.

134 In line with the Scoping Report, a review has been undertaken of relevant studies into the potential impact of WTGs on tourism and visitor behaviour (as outlined in Section 4.7.4 below).

135 The review has found few studies looking specifically at the impact of wind farms on outdoor recreation. Instead, studies tend to focus on the economic impacts from tourism. For the purposes of this assessment it has been assumed that, as outdoor recreation is an important component of tourism, tourism measures can be broadly accepted as analogues for outdoor recreation activity. The review's key findings are that:

- Visual impact is greatest when the seascape is experienced from a secluded coastline or coastal PRoW where the focus is the view and not the activity. That is, where the receptor has visited a location on, say, the Wales Coast Path specifically for the view rather than to walk the Wales Coast Path (Natural Resources Wales, 2019).
- The consensus of the studies reviewed is that there is no positive or negative impact of windfarms on tourism (Scottish Power Renewables, 2020 and Aitchison, 2012).
- The majority of recreational users on ex-post and ex-ante projects perceive that the project will have 'no impact' on their personal behaviour (ERM, 2014).

136 No data has been found for use of the Wales Coast Path before and after the development of existing arrays (i.e. GyM, and North Hoyle offshore wind farms). However, data for visits to the Great Orme have been supplied by the Ranger (Pidcock, S. 2021. *Pers comm*.) and have been plotted as shown in Figure 6 below.

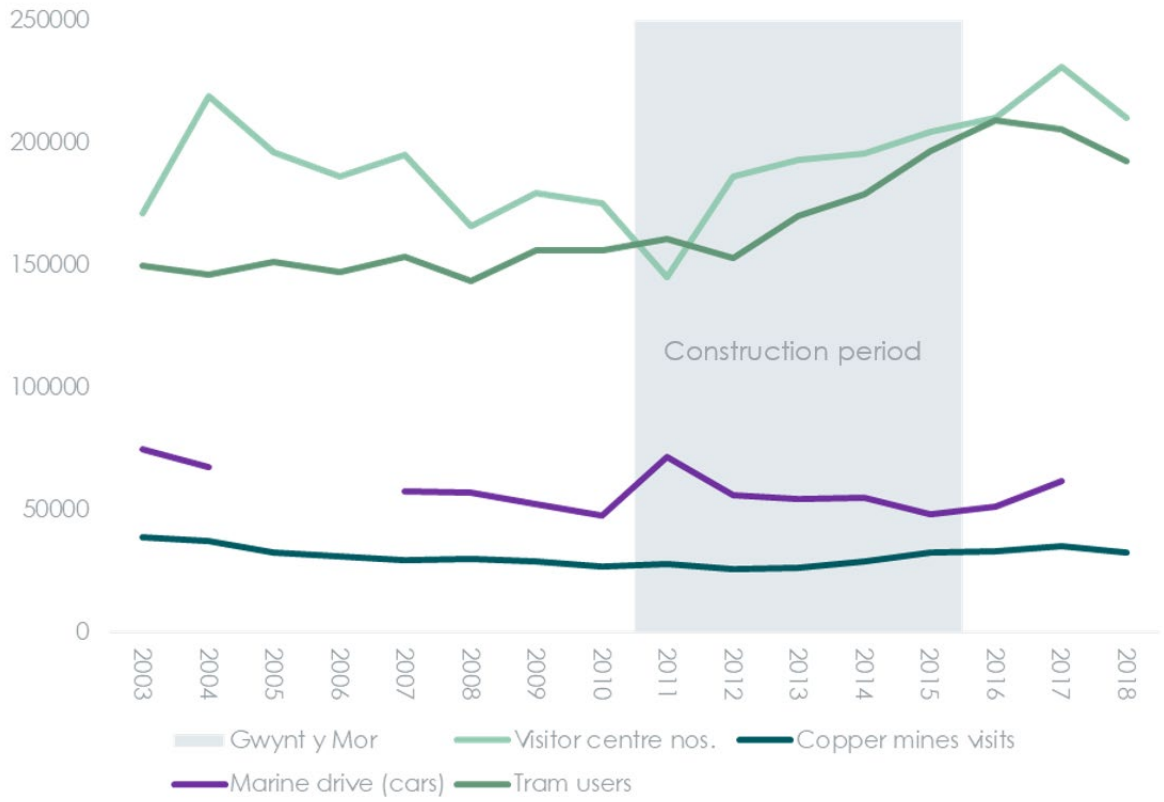


Figure 6: Visits to the Great Orme before and after construction of GyM, 2003-2018

137 None of the data sets plotted are comprehensive for visitors to Great Orme, but the various types of data show a more or less consistent pattern of visits over time, with no sustained drop in numbers during or after the construction of GyM, notwithstanding the atypical results for visits to the visitor centre in 2011.

138 On the basis of the findings of the research review and visitor data from Great Orme, it is concluded that the presence of WTGs will have no significant impact on onshore recreation. Onshore recreation receptors in the ZTV, but outside of the LAI are not expected to be significantly affected.

Cycleways

139 Cycleways located within the study area, either directly impacted by the onshore ECC or indirectly as part of a wider route, are considered fully in the traffic and transport assessment (see Volume 3, Chapter 9 (application ref: 6.3.9)). However, as they are often as important for recreational journeys as for commuting, it is important that they are also reviewed here. It should be noted that the data presented is for cycle journeys only. All of the cycleways are also open to walkers and, although not recorded, it is to be expected that, for most routes, pedestrians will be the majority of the traffic.

140 From north to south, the onshore ECC crosses:

- National Cycle Network route 5 (NCN5) – this uses the promenade between Rhyl and Prestatyn and is a traffic-free route shared with pedestrians;
- Cycleway alongside A548 – segregated, shared use path between Rhyl and Prestatyn adjacent to the carriageway;
- Link path – shared, traffic-free route between NCN5 and A458 cycleway;
- A525/A547 cycleway – link route between Rhyl and Rhuddlan adjacent to the carriageway;
- NCN84/North Wales Path – Traffic-free, shared use cycleway running on top of the east embankment of the River Clwyd;
- Sarn Lane – segregated, shared use cycleway alongside the carriageway on Sarn lane between Rhuddlan and Bodelwyddan; and
- A55 cycleway – segregated, shared use cycleway following the south side of the A55 from Rhuddlan to Bodelwyddan.

141 Denbighshire County Council uses traffic counters on a number of these routes and has provided data for them.

NCN5 (Counter site 1002)

142 Figure 7 below shows the average daily count by month, and identifies a strong seasonal pattern with a broad peak of cycle traffic in the warmer months.

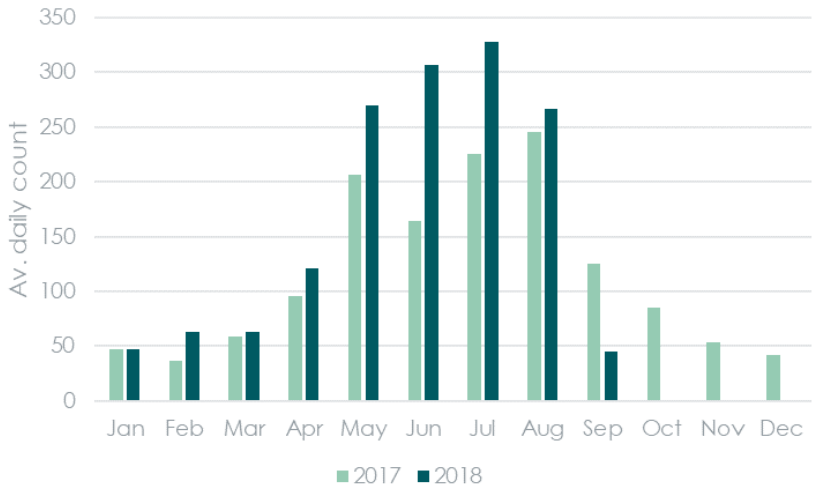


Figure 7: Average daily count by month, NCN5 (counter site 1002)

143 Data for August 2018 shows no strong daily pattern, though it should be noted that the data is for the holiday period.

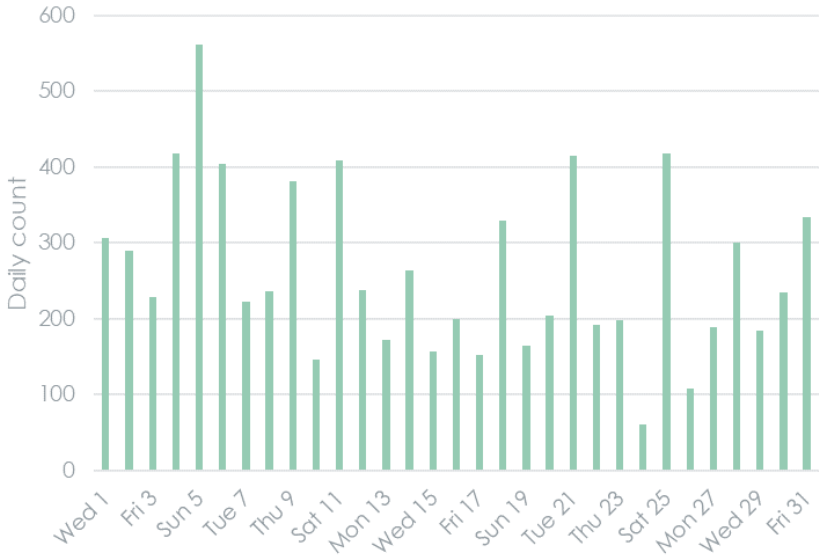


Figure 8: Total daily user count for NCN5, August 2018

144 The onshore ECC will pass underneath this route using a trenchless installation technique such as horizontal directional drilling (HDD) and will therefore not impede traffic flow. However, construction traffic will need to cross the route, causing intermittent interruptions of a few minutes at a time to NCN5/Promenade users.

A548 Cycleway (Counter site 912)

145 The data show that there is a bias for higher average daily users towards the warmer months, but the curve is much less pronounced than for the parallel Promenade route. These results are consistent with the A548 cycleway carrying primarily utility cyclists while the Promenade route has a higher preponderance of leisure traffic.

146 The route will be crossed using a trenchless installation technique, which will not impede traffic flow.

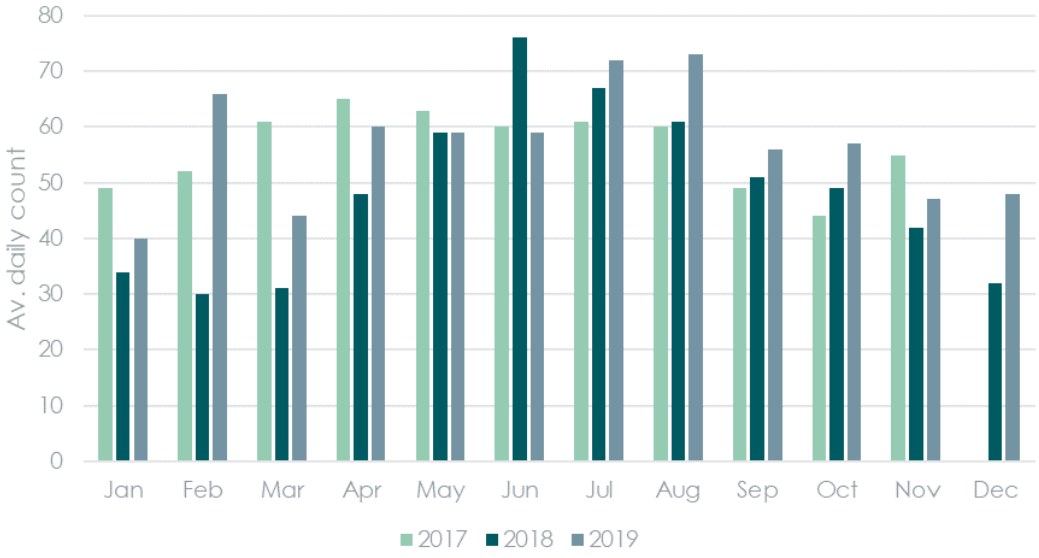


Figure 9: Average daily users by month, A548 Cycleway, 2017-19

Link Path

147 There is no counter installed on the Link Path, however as the Path will be crossed using a trenchless installation technique, it is not anticipated that the construction of AyM will impede traffic flow.

A525/ A547 Cycleway (Counter Site 1005)

148 The data for the A525/ A547 Cycleway shows a clear seasonal pattern with most traffic during the warmer months. The cycleway will be crossed using a trenchless installation technique and so the construction of AyM will not impede traffic flow.

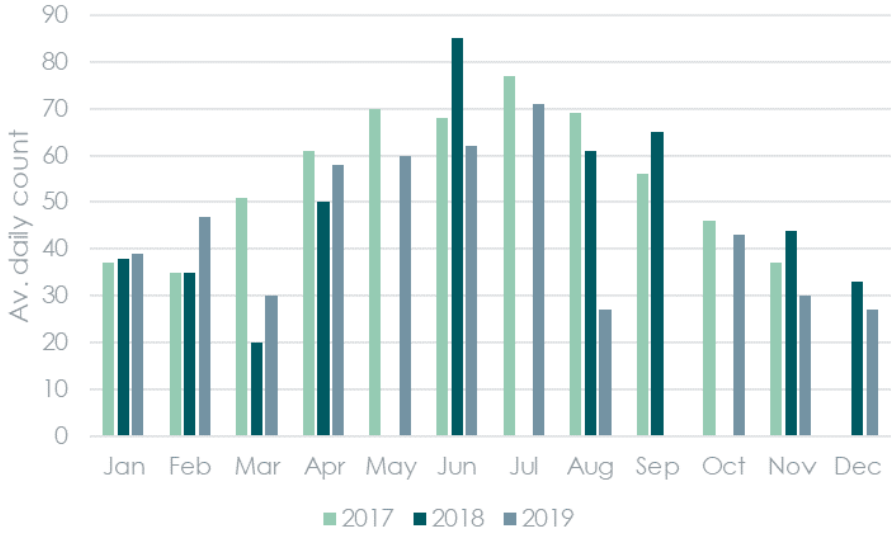


Figure 10: Average daily count by month, A525/ A547 Cycleway, 2017-19

NCN84/ North Wales Path (Counter Site 922)

149 The data shows a clear seasonal pattern with most traffic during the warmer months.

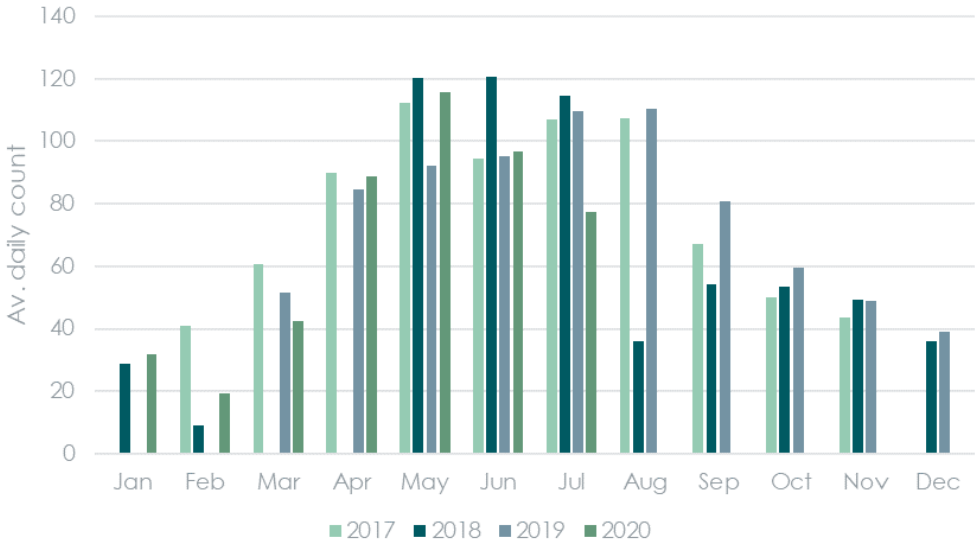


Figure 11: Average daily bicycle movements by month, NCN84/ North Wales Path, 2017-19

150 The data also shows that there is a relatively high level of use (i.e. over 100 bicycle movements) throughout the week, which peaks on Sundays (to over 200 movements).

151 The route will be crossed using a trenchless installation technique, and therefore the construction of AyM will not impede traffic flow.

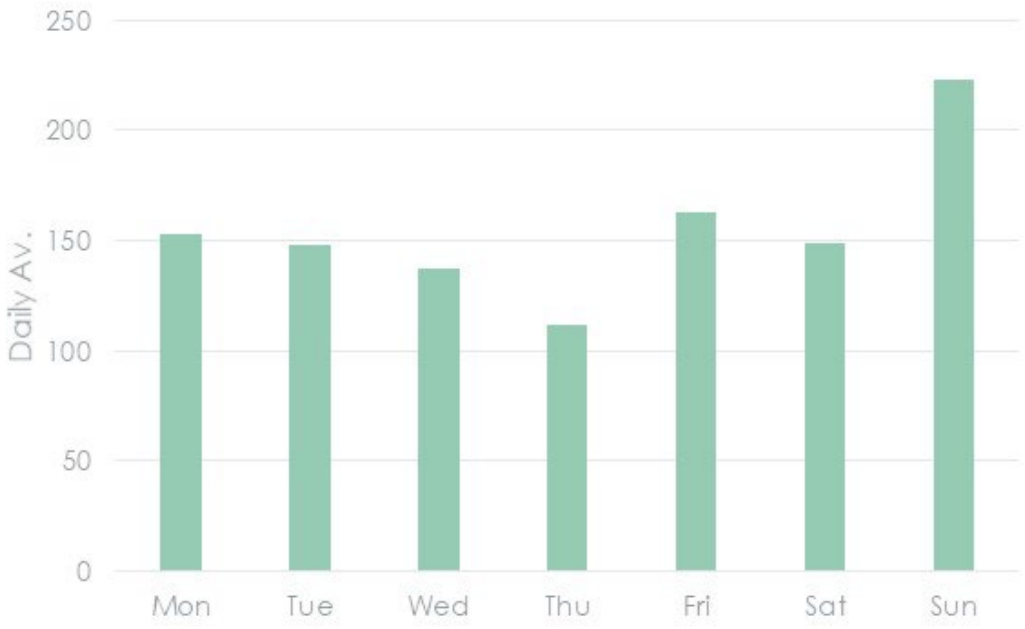


Figure 12: Average daily count by day of week, July 2020

Sarn Lane (Counter Site 914)

152 Traffic count data for Sarn Lane shows that there is a seasonal pattern with increased use by cyclists during the warmer months.

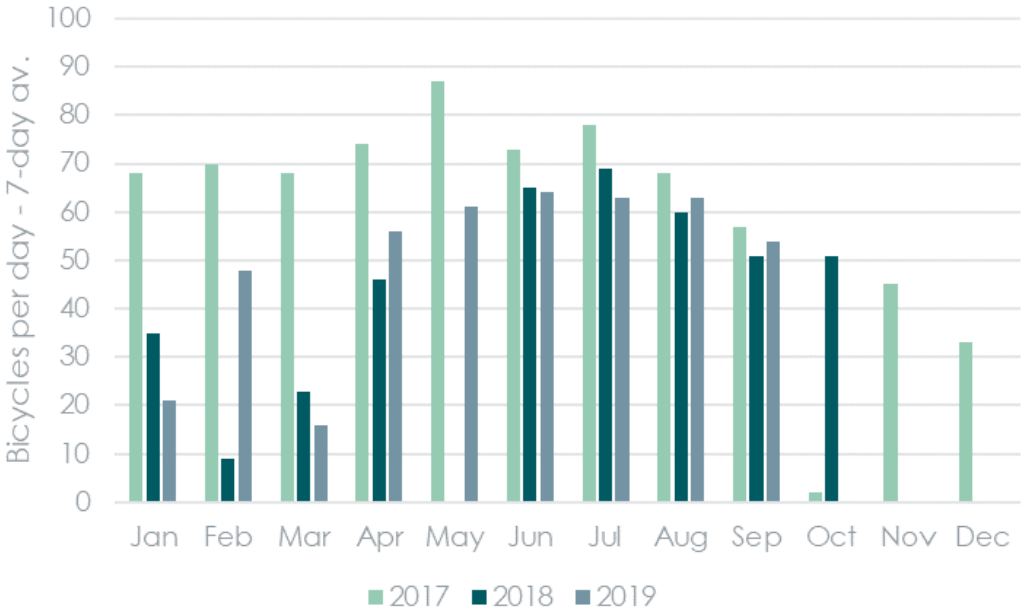


Figure 13: Average daily bicycles by months, Sarn Lane, 2017-19

153 Daily data for September 2019 shows that there is a clear weekly pattern of use for the Sarn Lane cycleway, with most use occurring on weekdays, consistent with bicycle traffic on this route being largely utilitarian.

154 Sarn Lane's cable crossing will be via a trenchless installation technique and, therefore, the construction of AyM will not significantly impede traffic flow.

Figure 14: Daily bicycle traffic on Sarn Lane, September 2019

A55 Cycleway

155 There is no counter installed on the A55 Cycleway, and there is no data which shows its current levels and/or patterns of use. The A55 cycleway will be crossed using trenchless installation, and so the construction of AyM will not impede traffic flow.

Promoted routes

156 A number of promoted walking and cycling routes will be crossed by, or are in close proximity to, the onshore ECC, including:

- The Wales Coast Path;

- NCN5;
- Along the Seafront Trail;
- North Wales Path; and
- NCN84.

157 The Wales Coast Path is crossed at the promenade, which it shares with NCN5 and the Along the Seafront Trail. The Along the Seafront Trail also uses the eastern embankment of the River Clwyd, which it shares with NCN84 and the North Wales Path. The ECC will also be within close proximity of the North Wales Path/ NCN84 at the River Clwyd crossing. The North Wales Path will be crossed by the ECC in the vicinity of Bryn Cwnin Farm to the south east of Rhyl.

158 No promoted horse-riding or off-road cycling routes have been found to be crossed by, or in close vicinity to, the onshore ECC.

4.7.3 Offshore recreation

159 The key offshore recreation activities along the North Wales coast that are likely to be impacted by construction, operation and decommissioning activities related to AyM include:

- Bathing;
- Water sports;
- Scuba diving; and
- Recreational sailing.

Bathing

160 Bathing is a popular recreational activity along the North Welsh coast due to an array of sandy bays within the study area and in the surrounding areas.

161 With respect to beach use, the Blue Flag Award is an internationally recognised designation which will attract tourists to beaches in the area. Go North Wales identifies Blue Flag designated beaches at the following locations:

- Benllech Beach (on the north east coast of Anglesey and west of AyM)
- Llanfairfechan Beach (to the west of Conwy and west of AyM)

- Prestatyn Central (north east coast and east of AyM).

162 Also related to good bathing status is the Bathing Water Directive (2006/7/EC) to help safeguard public health in relation to clean bathing waters. The directive remains applicable to UK waters following the UK's Exit from the European Union as retained legislation, as described in Volume 1 Chapter 2 Policy and Legislation. According to Natural Resources Wales, water quality at the popular seaside resorts of Rhyl and Rhyl East were deemed respectively sufficient (1 out of 3 stars) and good (2 out of 3 stars) in 2021.

163 Moreover, the Red Wharf Bay is in an area of outstanding natural beauty, whilst the area around the Talacre beach and dunes is a Site of Special Scientific Interest.

164 Quality effects on the local bathing waters are considered in the assessment considering marine water and sediment quality (see Volume 2, Chapter 3).

Water sports

165 The bathing waters within the study area are attractive for many water sports, such as wind surfing, kite surfing, jet skiing, stand-up paddle boarding as well as kayaking/canoeing.

166 Rhyl is home to Pro Kitesurfing School and Club, which is affiliated with the International Kiteboarding Organisation (IKO). It is located next to PKS Watersports, a beachfront retail outlet, which is UK's first Liquid Force, North Kiteboarding, Slingshot and Core Demo Centre.

167 Colwyn Jetski Club runs RYA personal watercraft (PWC) proficiency courses throughout the year. Colwyn bay is also home to Colwyn Canoe Club; a well-established and family-orientated club. The Marine Club, which is based in Menai Bridge, also offers RYA training with RibRide, which holds the Blue Flag Award – Sustainable Tour Operator.

Scuba diving

168 North Wales Sub-Aqua Club (NWSAC) is located in Llandudno, within easy reach of some excellent dive sites as shown in Figure 15. The club is an affiliate of the Sub-Aqua Association and offers SCUBA diver training.

Figure 15: North Wales' dive sites ('North Wales Dive Site Directory', 2008)

Recreational Angling

169 Recreational angling - using a rod and line - can be separated into two distinct forms: shore fishing and boat fishing, with levels of activity dependent on the seasonality and availability of target species.

170 Recreational angling in Wales is represented by Angling Cymru: an umbrella body that encompasses the Welsh Federation of Sea Anglers. Angling Cymru is recognised by Sports Wales and the Welsh Government. The body's Strategy Framework 2014-2021 estimates that the sport contributes more than £150 million to the Welsh economy each year.

171 Moreover, in 2018, the Welsh Federation of Sea Anglers and Conwy County Borough Council hosted the 35th World Championship for Men and the 26th World Championship for Ladies in shore angling.

172 The impacts on non-commercial fisheries are considered in more detail in the assessment of commercial fisheries (see Volume 2, Chapter 8), whilst the impact on recreational fishing is considered in more detail in the assessment of other marine users (see Volume 2, Chapter 12).

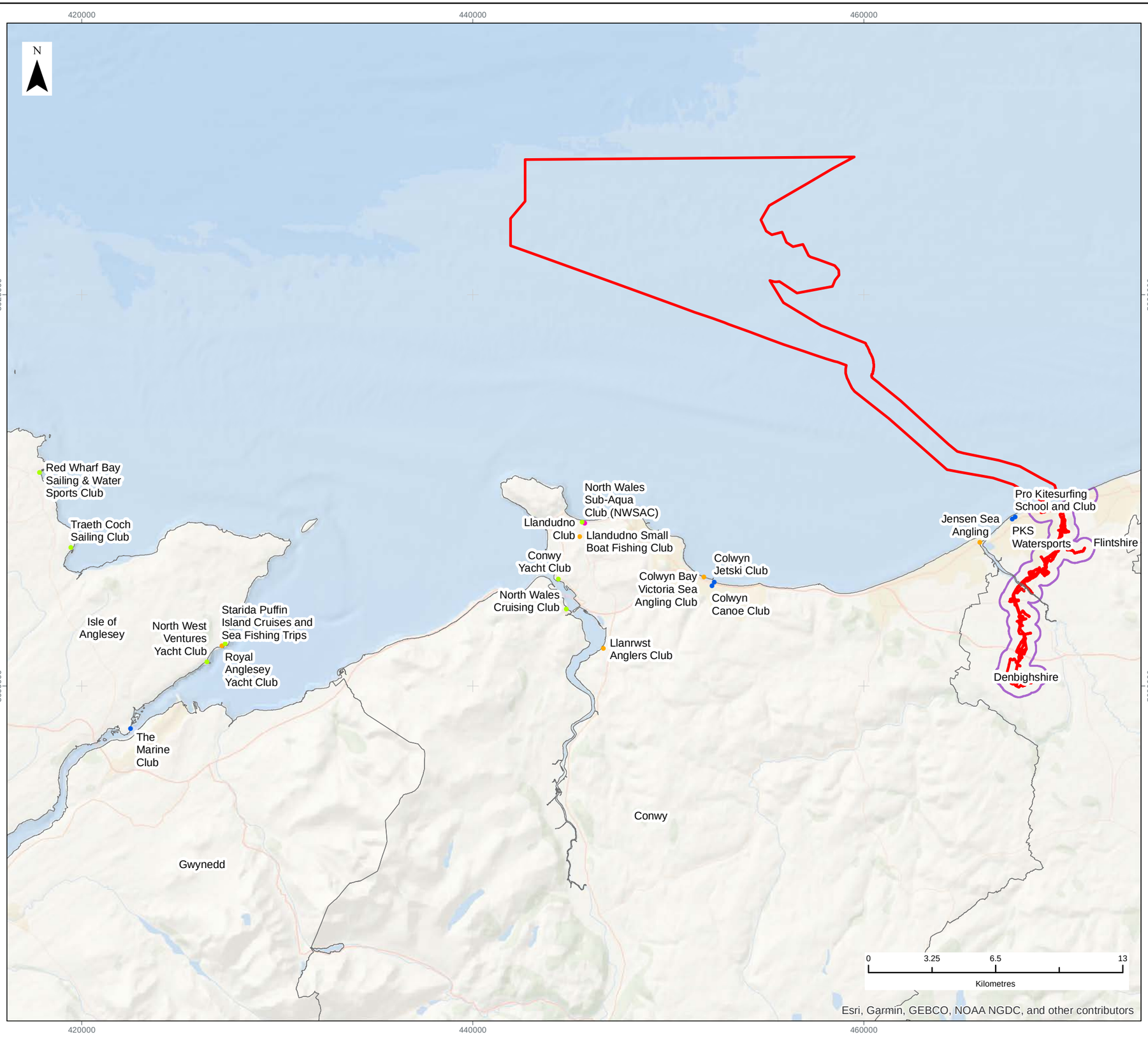
173 There are examples of sea angling clubs in the area, including the Llandudno Small Boat Fishing Club and Colwyn Bay Victoria Sea Angling Club. The Llanrwst Anglers Club can also be found along the River Conwy.

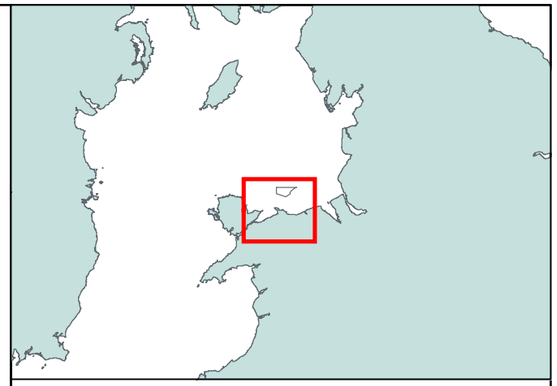
174 Charter companies offering fishing trips along the coast include Jensen Sea Angling in Rhyl. Alongside recreational angling, Starida Puffin Island Cruises and Sea Fishing Trips in Beaumaris also offer wildlife tours.

Recreational Sailing

175 There are several popular sailing spots along the coast. Menai Straits is ideal for beginners and improvers, with venues offering courses throughout the year. Clubs at this location include the Royal Anglesey Yacht Club and North West Ventures Yacht Club. Traeth Coch Sailing Club and Red Wharf Bay Sailing & Water Sports Club are located in the Red Warf Bay area.

176 Conwy Estuary is also a popular sailing spot. The nearby marina hosts several providers offering courses for all levels of sailors. Clubs in this area include the Conwy Yacht Club and the North Wales Cruising Club. A few other sailing clubs can be found dispersed along the Clwyd Coast, including the Llandudno Club.





LEGEND

- Order Limits
- Local Area of Influence

Type of offshore recreation

- Recreational angling
- Recreational sailing
- Scuba diving
- Water sports

Data Source: Contains Ordnance Survey data © Crown copyright and database right

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE:

North Wales offshore recreation receptors

VER	DATE	REMARKS	Drawn	Checked
1	3/14/2022	For Issue	MI	MI

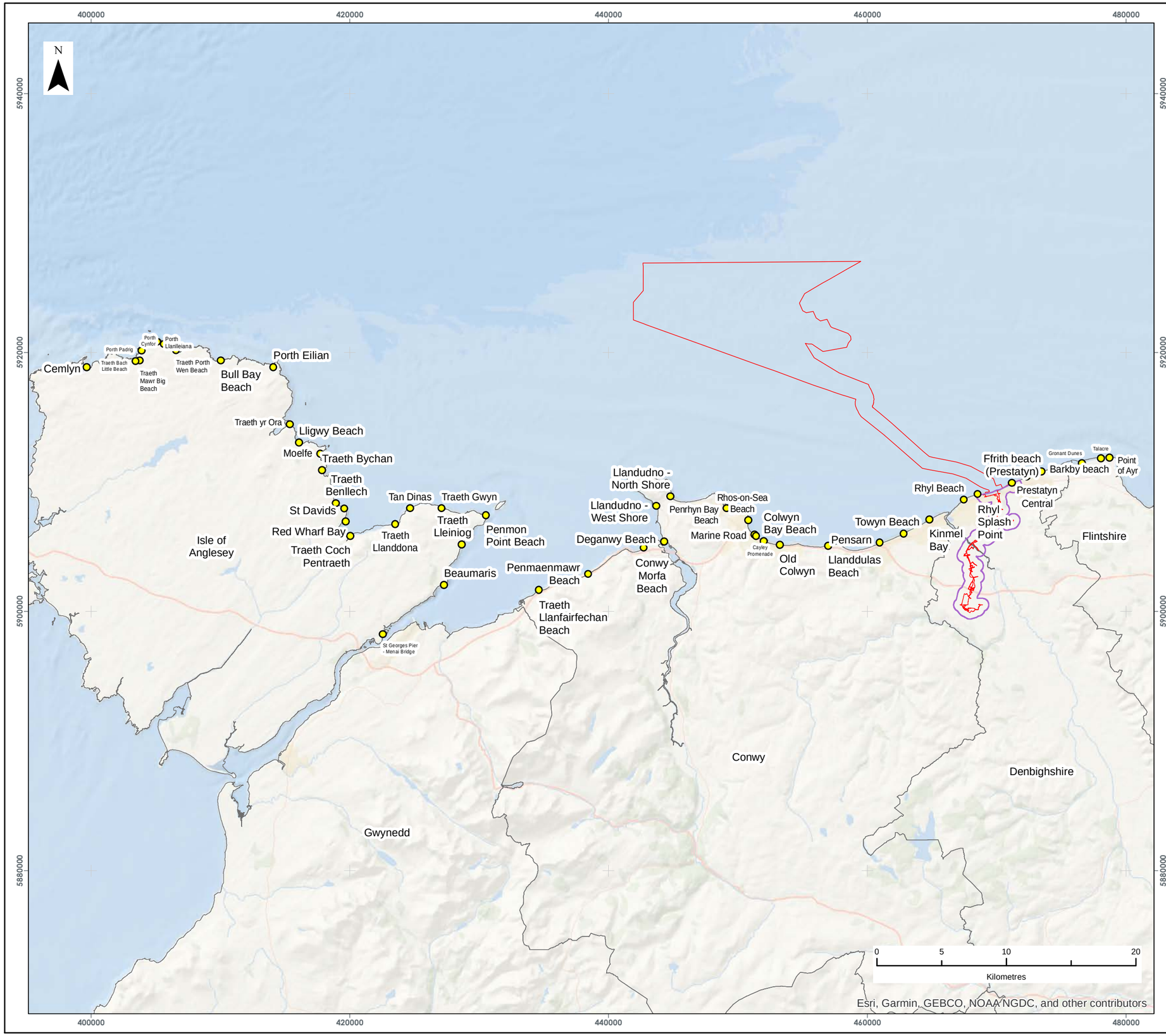
FIGURE NUMBER:

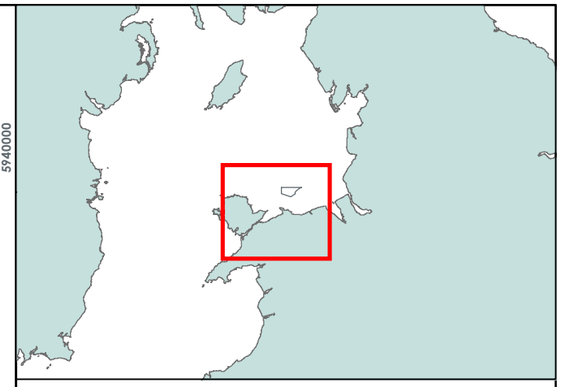
Figure 16

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:200,000	A3	WGS84	UTM30N

Fferm Wynt Alltraeth
AWEL Y MÔR
Offshore Wind Farm

C:\Users\loan97328\Hatch Ltd\H-363168 Awel Y Mor OSW ES support - Documents\2_WIP\ArcMap\AYM_Tourism_offshore_receptors_ES_14_03_22.mxd





LEGEND

- Order Limits
- North Wales Beaches
- Local Authority District Boundaries

PROJECT TITLE:

AWEL Y MÔR OFFSHORE WINDFARM

FIGURE TITLE: **North Wales offshore recreation receptors – bathing**

VER	DATE	REMARKS	Drawn	Checked
1	3/14/2022	For Issue	MI	MI

FIGURE NUMBER:

Figure 17

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:300,000	A3	WGS84	UTM30N

Fferm Wynt Alltraeth
AWEL Y MÔR Offshore Wind Farm

4.7.4 Tourism Perception of Wind Farms

177 This section of the baseline provides a review of research examining the relationship between wind farms (both onshore and offshore) and their associated infrastructure, on local visitor economies. Overall, there is a limited body of evidence relating to the extent to which offshore wind farms impact upon tourism, with the majority of the research to date being focused on onshore farms.

178 The primary research base can be divided into three broad groups focusing on (1) ex-ante research, (2) ex-post research and (3) wider research.

Ex-Ante Research

179 The ex-ante research covers a group of studies which have been carried out to ascertain and/ or explore potential reactions to wind farm developments. This group makes up the majority of the research base, and includes both scheme-specific studies, which tend to focus on impacts on a highly localised area, as well as larger area assessments, which consider the cumulative effect that wind farm developments across a larger impact area could have on tourism activity.

180 Some of the most helpful UK-based studies of offshore wind farm developments are studies carried out in relation to North Hoyle (Arup Economics and Planning, 2002) and Gwynt y Môr (RWE NPower Renewables, 2005) wind farms off the coast of North Wales. These were amongst the first offshore wind farm schemes nationally.

181 The majority of scheme-specific ex-ante studies rely predominantly on perceptions-based survey research to draw conclusions about the potential for wind farm developments to affect visiting behaviour in the future. Although there is a lot of variation in the survey methods adopted (including study areas, sampling techniques and questions asked, and analytical techniques) making it difficult to directly compare the studies on a like-for-like basis, these assessments typically explore two types of effects, including:

- The extent to which the presence of a wind farm may have an effect on the visitor experience; and

- Visitors' views on whether the development of a wind farm might affect their future visiting behaviour.

182 This approach tends to lead to a high level of uncertainty about the scale of potential impacts, particularly as the evidence base is mixed and findings vary across studies. One of the key issues arising from the research which is based on ex-ante surveys of visitors is that it is relies on perceptions prior to development and hence hypothetical questioning about how a wind farm may affect visitor enjoyment and future behaviour.

183 Furthermore, much of the focus of the research has tended to be on the impact of wind turbines, rather than the onshore transmission and/ or grid infrastructure (unless developments are using pylons in areas which have sensitivity to landscape designations or scale of tourism activity). This is due to the concerns of stakeholders typically being around the visual impacts of turbines, with less concern about the transmission infrastructure unless it relies on pylons.

Ex-Post Research

184 This part of the research base is limited in its coverage. Ex-post studies explore and provide evidence of the actual effects of specific wind farm developments. Relevant studies in this group are focused on assessing the observed changes in visitor behaviour after a wind farm has been built and is operational. These studies explore observed effects as reported by visitors, sector bodies, tourism and other businesses.

185 Whilst there are several offshore wind farms which have been operational for several years (including wind farms off the North Wales and Norfolk coast), these have not yet been subject to any publicly available ex-post study in relation to tourism impacts as far as is known.

Wider Research

186 Alongside the thematic groups outlined above, there is also a wider body of literature which encompasses:

- **Studies which provide secondary analysis of the evidence base** (such as McGowan and Sauter (2005) and The Tourism Company (2012)) – Whilst some of these evaluations are helpful, there are many which draw selectively on the available evidence and, as a result, may not provide a full assessment of the evidence.
- **Studies from overseas** (such as North Carolina State University (2016)) - A slightly greater evidence base of studies has emerged from countries where the offshore wind sector has been established for longer. This includes both ex-ante and ex-post research.
- **General perceptions-based studies** (such as RCUK (2009) and Soini *et al*. (2011)) – Exploring attitudes towards wind farms and associated infrastructure in general (i.e. not in connection to a specific development and/ or proposal).
- **General tourism surveys** (such as Failte Ireland (2012) and Cardiff City and County Council (2012) – Which explore what tourists value about a particular tourism destination and factors which enhance or detract from their experience.

187 It should be noted that, across all strands of the research base, there is limited coverage in peer-reviewed academic literature. The lack of peer-reviewed academic research in this area does not invalidate the evidence that exists, although it does highlight the extent to which the evidence base is not yet well-established. It is therefore necessary when reviewing the evidence that exists, to consider the reliability of the methodologies used in available studies, particularly where survey research and impact assessment methods are used.

Impact on Tourism

188 Overall, the research typically finds a large majority of visitors and tourism-related businesses in local areas affected by potential offshore wind farm developments do not expect any impact. Alem et al (2020) provide a recent qualitative meta-analysis of studies assessing the socio-economic impacts of offshore wind farms, including tourism and recreation impacts. it concludes '*Overall, the majority of the body of evidence appears to suggest that offshore wind farms do not impact recreational users and tourists. Studies have shown that the perception of impact on tourism depends on individual attitudes toward aesthetics, or renewable energy, rather than on empirical analysis of how the behaviours and expenditures of visitors are influenced'.*

189 A major research study for the National Grid (ERM, 2014) exploring the tourism impact of major energy infrastructure in the UK states that *"A clear finding is that the majority of recreational users on ex-post and ex-ante projects perceive that the project will have 'no impact' on their personal behaviour and spend"*. Likewise, the proportions of visitors reporting that they were more or less likely to visit as a consequence of a wind farm development are typically small. The proportion expecting negative impacts (in terms of the visitor economy and/ or their own behaviour) is usually marginally greater than those expecting positive impacts.

190 A number of research studies have concluded that there is the potential for a negative impact on tourism economies from offshore wind farm development, although these tend to rely just on perception surveys of visitors prior to development, or combine these surveys with revealed and stated preference or other analytical techniques. For example, Voltaire et al (2017) combines a perception survey of visitors with stated preference methods to assess the economic welfare impact of future offshore wind farm development off the coast of Catalonia arising from the potential impact on the behaviour of visitors. The study predicts a large loss of economic welfare arising from the discouragement of visitors if offshore wind development were to take place in the future. However, a significant limitation of ex-ante studies of this type is the reliance upon hypothetical questioning through perceptions surveys for their main data source.

191 Whilst the perceptions-based research points towards potential for some visitors to be discouraged from making future visits to an area affected by a wind farm development, this is usually balanced (and in some cases exceeded) by visitors reporting that they will visit more frequently. This conclusion is reinforced by research studies (such as Gossop (2007) and BiGGar Economics (2008)) which have assessed the impacts post development, pointing towards there being no evidence of significant lasting impact of wind farm development and operation (either positive or negative) on tourism. More recently Alem et al., (2020) recognised that there is limited evidence pointing to a negative impact from OWFs on tourism. However, the study notes that there may be significant local concern about tourism impacts and that this evidence should be communicated to the local community as early as possible in the planning phase.

192 The research also suggests that visitors and tourism-related businesses recognise the potential for positive impacts associated with extra expenditure within the sector and local economy arising from the construction activity, or in some instances the additional interest in the viewing of the development. Smythe et al (2020) conducted a study through which tourism and recreation professionals participated in focus groups to discuss experiences with and observations of the 30-MW Block Island Wind Farm, the first offshore wind farm in the United States, located several miles offshore from an iconic tourism destination (New Shoreham, Rhode Island). Analysis of the discussions revealed diverse viewpoints but largely positive encounters; though some perceptions of negative impacts were identified. Perspectives were shaped in part, by experiences with the planning process. Most participants described the project's appearance in neutral or positive terms. Overall, the wind farm appears to be an attractor of visitors, either as a novel sight or as a recreational fishing destination. Participants felt the wind farm should be promoted for tourism but cautioned that interest may be short-lived and there may be less support for larger offshore developments. The findings support tourism and recreation sector engagement throughout offshore wind project planning and operation.

193 Finally, the research also typically focuses on measuring opinions of what the impacts on the visitor economy could be prior to implementation of the scheme, with research being undertaken with a mix of visitors, tourism businesses, local residents and other stakeholders. However, there are few ex-post empirical studies identifying negative impacts on local visitor economies post-completion. A study by Glasgow Caledonian University (2008) suggests that even where there have been negative effects, these often occur in the form of displaced tourism with visitors diverting to neighbouring areas.

194 There is a complex range of factors which explain the attitudes of visitors to wind farm development and the consequences upon visiting behaviour. There is a need to be cautious in generalising but the evidence base (see for example Devine-Wright, 2007) points towards a tendency for younger people and those in higher socio-economic groups to be more accepting of wind farm development, in part influenced by their wider attitudes towards renewable energy and its role in addressing climate change. This sentiment is echoed in a 2010 paper (Ladenburg, 2010) which finds an overall positive attitude towards offshore wind farms, and suggests that attitudes tend to covariate negatively with household income and positively with level of education. In addition, this paper found that attitudes towards offshore wind farms appear to be significantly associated with demographics, but also suggests that attitudes are dependent on type and frequency of usage of the beach and coastal zone.

195 A long-term tracker survey of public opinion of energy related topics undertaken by the UK government department of Business, Energy and Industrial Strategy (BEIS, 2012-2021) provides robust evidence of the general public's attitudes to renewable energy in general and offshore wind farm development specifically. The percentage of the adult population sampled that are opposed to renewable energy has fallen from 5% in 2012 to 2% in 2021 (based on 2121 and 4,229 respondents respectively), whilst the percentage aged over 65 which oppose renewables has fallen from 10% to 1% over the same period. In terms of opposition of offshore wind farms, the overall percentage that are opposed has fallen from 7% in 2012 to 4% in 2021, whilst the percentage aged over 65 that are opposed has fallen from 14% to 5%. The same series of opinion polls reveal that 80% of over-65s are now concerned about climate change, up from 56% in 2012.

196 The research base does not suggest that the quality of the landscape is an important factor in determining visitors' reactions to wind farm developments. A study by Failte Ireland (Failte 2021) on visitor awareness and perceptions of the Irish landscape provides evidence of the relationship between large infrastructure projects and tourism and landscape in Ireland. Sixteen popular and long-established tourist sites around Ireland were chosen as the study areas to represent a range of types of landscape where this research would occur. The sites were chosen to represent situations where development is visible from those locations (10 locations) – or on the route there (6 locations). The key finding in relation to the perception of Arklow Bank Offshore Wind Farm from Brittas Bay (the wind farm sits less than 15km from Brittas Bay) was that no respondents mentioned any developments standing out at Brittas Bay itself or any changes to be made, however 18% of respondents mentioned wind turbines on the way to the study location. Generally, the findings suggest that the visibility of large infrastructure projects had negligible effects on the viewer's enjoyment of the landscape.

197 In addition, the research also states that visitors and tourism-related businesses usually recognise the potential for positive impacts associated with the extra expenditure in the sector, and the local economy arising from construction activity (or in some instances the additional interest in visiting the development).

198 Research by the Prof. Cara Aitchison at the University of Edinburgh on behalf of the Scottish Government's Renewables Inquiry (Aitchison, 2012) concluded by saying that *'the findings from both primary and secondary research relating to the actual and potential tourism impact of wind farms indicates that there will be neither an overall decline in the number of tourists visiting an area, nor any overall financial loss in tourism-related earnings as a result of a wind farm development'.*

199 The literature suggests therefore that wind farm developments will not have a significant effect on the overall volume and value of tourism activity in most instances. Various studies (such as University of the West of England (2004); Ipsos MORI (2014); Glasgow Caledonian University (2008); Ladenburg (2010) and Regeneris Consulting and The Tourism Company (2014)) suggest that the majority of visitors do not expect their behaviour to be influenced (either positively or negatively) by the presence of wind farm developments.

200 Overall, the available evidence outlined above suggests that offshore wind farm developments generate very limited, or no negative impact on tourist and recreational users during the construction and operational phases.

4.8 Key parameters for assessment

201 This section identifies the MDS, also referred to as the project design envelope, against which the assessment of the project's impact on tourism and recreation is undertaken. By adopting a parameter-based design envelope, the assessment considers the MDS whilst also retaining the flexibility needed to make improvements in the future in ways that cannot be predicted at the time of ES submission.

202 The design parameters that have been identified as relevant for the tourism and recreation assessment are outlined in Table 22 below and are in line with both offshore and onshore project descriptions provided in Volume 2, Chapter 1 and Volume 3, Chapter 1 respectively.

Table 22: Maximum design Scenario.

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
CONSTRUCTION		
Landfall - partial, temporary obstruction of beach	*Up to 3 export cable ducts will be installed underneath Ffrith beach using trenchless installation techniques, most likely Horizontal Directional Drilling (HDD), with separate exit pits required for each trenchless installation crossing. The drilling is likely to start from the (onshore) landfall construction compound to an exit pit located in the intertidal or shallow subtidal, between Mean High Water Spring (MHWS) and 1,000 m seaward of MHWS.* *During construction, the trenchless installation exit pit area will be cordoned off to accommodate up to 3 working areas, each 75 m x 10 m.* *The trenchless installation and duct installation works will require up to 10 months on-site works.* *Access to the landfall area (beach) will require a maximum 22 HGV two-way vehicle movements per day routed either:*	*Under the MDS, it is assumed that this construction activity takes place over peak summer season.* *Public access to the beach is maintained, outside the work area. The work area itself is temporarily closed to the public.*

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
	▲ from the east via the A548 Rhyl coast road and an existing access road connecting to Fergusson Avenue, which connects to the promenade and a slipway onto the beach (); ▲ from the west via Garford Road and an existing access onto Rhyl Golf Course and the promenade where there is an existing slipway onto the beach; or ▲ from the west via the existing Rhyl Golf Course site entrance.	
Cable installation – temporary closure and/ or diversion of PRoW	*The recreation assessment takes into consideration all public outdoor recreation assets (including PRoW) within a 500 m buffer from the onshore OL. The assessment has taken into consideration the whole of the onshore ECC route.* *The onshore construction corridor will generally be up to 40 m to 60 m wide to accommodate storage of the topsoil, subsoil and a temporary haul road, as well as any equipment required for that section of work.* *Onshore construction is anticipated to progress in stages) with construction for each section taking up to*	*Up to 43 PRoW are anticipated to fall within the LAI of identified for the assessment. This includes PRoW which are crossed by the temporary onshore ECC and/ or other which follow the same path (and which are therefore located within 500 m of the onshore OL).* *The assessment has considered worst case design parameters when considering effects on*

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
	18 months from enabling works to final reinstatement. It is expected that the actual period of closure or diversion needed for any particular PRoW crossing will generally be no more than four months prior to re-opening and all closures or diversions will be managed in accordance with the approved PAMP. However, the adjacent haul road may stay in use throughout the full 18-months, requiring traffic control measures at crossing points. Additional work may be required throughout the construction period (including for cable pull through and onshore commissioning), however in these cases any disruption will be limited. *Individual PRoW may need to be closed and/ or diverted for generally no more than four months during cable duct installation across the path, However, it may be up to 18-months before the original (or better) conditions are reinstated and the path fully re-opened.*	*users of outdoor recreation assets*
Construction of onshore substation – visual impact	*The overall site footprint for the proposed onshore substation is anticipated to be up to 8.75 hectares (including construction compound).*	*Users or bridleway 201/9 will pass close to the onshore substation site, which will dominate the*

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
	Duration of the construction programme for the onshore substation is anticipated to take up to 27-months.	*southern view for a distance of around 200 m.*
Construction activity – interruption of PRoW for vehicle movements	*Users may find that their free passage along PRoW crossed or used by haul roads may be interrupted for several minutes to allow work vehicles to pass* *Users could be subject to these intermitted interruptions for a period of up to 18-months.*	*Traffic control will be needed where there are live crossing points. On haul road crossings this may be required for a period of up to 18-months, which represents the worst-case scenario.*
Impact of construction activity on displacement of tourism visitors	*There is potential for some temporary relocation of workers during the construction period, which creates demand for local accommodation and which may lead to competition for accommodation with tourist visitors.* *The number of workers required to support onshore construction activity is generated as part of the socio-economics assessment (Volume 3, Chapter 3).* *The socio-economics assessment (Volume 3, Chapter 3) shows that the installation and commissioning related to AyM has potential to support 150 FTE jobs per annum. Of these 30 FTE jobs will be related to onshore installation*	*Five years represents the worst-case scenario for both onshore and offshore construction works (i.e. from start to finish). A construction port outside North Wales may be selected and accommodation vessels used, bringing the number of non-North Wales workers down to around 60 jobs per annum. A Wales-based onshore construction port, and no*

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
	and commissioning, and the rest (i.e. 120 FTE jobs) involved in offshore construction. A further 210 FTE jobs are likely to be required to support offshore construction, and which are likely to be held by non-UK-based workers. *Under the worst-case scenario, it is assumed that each non-North Wales worker will reduce visitor accommodation by one bedroom.* *Furthermore, it is assumed that onshore construction will take up to five years from start to finish.*	*accommodation vessels represent the worst-case scenario in terms of disruption to tourism visitors.* *Besides the potential to displace visitors in the busier periods, there also is an important benefit to the visitor economy as a result of the additional demand for accommodation from non-home-based workers during the quieter holidays months. This can provide a valuable extra source income for a range of accommodation, hospitality and retail businesses.*
Offshore construction – impact on offshore recreation activities	*Offshore construction of AyM may require activities that cover seabed preparation, installation and turbine and offshore substation(s) foundations, followed by cable laying, as well as WTG and topside installation.*	*The assessment has considered the range of activities and their locations, including the maximum design scenarios and*

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
	Overall it is anticipated that all offshore construction (i.e. including commissioning) takes up to 36-months from start to finish. The level of offshore activity and presence of vessels will vary depending on the stage in the construction process. *Work related to AyM's foundations may involve seabed preparation (i.e. the clearing/ levelling of surface for foundation installation). At present a number of WTG foundation types are being considered (such as monopiles, gravity base, suction buckets and multi-leg options). Under the worst-case scenario, it is assumed that monopiles requiring up to 5,000 kJ of (maximum) hammer energy may be required. This would have the largest impact in terms of underwater noise disruption.* *It is assumed that up to two offshore substation platforms will be required, with the maximum topside height being 107m above MHWS.* *Array and export cable installation* *Turbine installation may require up to 67 round trips by up to three vessels and is anticipated to take up to 9 months.*	*associated construction management practices. These have been considered in relation to the main offshore recreation activities.*

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
	The approach to offshore export and array cable installation is yet to be determined, but may include simultaneous lay and burial via ploughing, cutting or jetting or post-lay burial via cutting, jetting, dredging of mass flow excavation. *In some cases, where burial cannot be applied, or where the minimum cable burial depth cannot be achieved, it is necessary to use alternative methods such as rock placement, concrete mattresses or other solutions to protect the cable from external damage.*	
OPERATION		
Inspection and repair – vehicular access to link boxes	*Maintenance of the onshore cable is expected to be minimal. Periodic testing will be required every two to five years.* *Access to the cable will be via link boxes located approximately every 500 m (although in reality this may vary).* *Unscheduled maintenance or emergency repair visitors would typically involve a small number of vehicles and*	*Occasional access to link boxes will be needed for maintenance and/ or repair activities.*

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
	may include the occasional heavy goods vehicle (HGV), depending on the nature of the repair.	
Onshore, and offshore recreation	*The operational lifetime of the project is anticipated to be approximately 25 years.*	*For the purposes of assessment, the operational lifetime of the project is assumed to be 25 years*
Visual impact of WTG	*Under the MDS, it is assumed that AyM will consist of up to 34 of the largest WTG; each with an assumed rotor diameter of 306 m, with the maximum blade tip height being 332m above MHWS.* *It is assumed that the ZTV of the largest WTG extends for up to 50 km from the offshore array. More detail about the areas from where WTGs are visible is included within the seascape, landscape and visual impact assessment (Volume 2, Chapter 10).*	*A maximum blade tip height of 332m above MHWS represents the MDS for AyM. The assessment has also considered the potential visual impact for up to 50 smaller WTG (with a blade tip height of 250m above MHWS). However, the ZTV of the smaller WTG is assumed to be less expansive than the worst-case scenario adopted.*
DECOMMISSIONING		
At this stage, it is assumed that at the end of the operational lifetime of AyM, all infrastructure will be completely removed. However, closer to the time of decommissioning, it may be decided that removal of infrastructure, such		

POTENTIAL EFFECT	MAXIMUM ADVERSE SCENARIO ASSESSED	JUSTIFICATION
as export cables, would lead to a greater environmental impact than leaving some components in situ. In this case, it may be proposed that export cables (both onshore and offshore), turbine/offshore substation(s) foundations, landfall infrastructure and access points to the onshore ECC are to remain in situ where appropriate and that any requirements for decommissioning at landfall will be agreed with statutory consultees. *For the purposes of the assessment, it is assumed that the effects of decommissioning activities of AyM will be similar to, but no worse than the impacts identified during the construction phase, and will include:* • Dismantling and removal of electrical equipment; • Removal of cabling (and where required leaving *in situ*); • Removal and demolition of buildings, fences and services equipment; and • Reinstatement and landscaping works.		

4.9 Embedded mitigation

203 Mitigation measures that have been identified and adopted as part of the evolution of the project design (embedded into the project design) and that are relevant to tourism and recreation are listed in Table 23. General mitigation measures, which would apply to all parts of the project, are set out first. Thereafter mitigation measures that would apply specifically to tourism and recreation issues associated with the array, export cable corridor, landfall, onshore ECC and substation, are described separately.

Table 23: Embedded mitigation relating to tourism and recreation

PARAMETER	MITIGATION MEASURES EMBEDDED INTO THE PROJECT DESIGN
GENERAL	
Project design	*The project has undertaken extensive site selection (including successive design iterations) which has involved incorporating tourism and recreation considerations within the design parameters, such as:* • Whenever possible, avoiding proximity to visitor and onshore recreation (including PRoW) facilities. • Wherever possible, link pits will be located off PRoW. • Refinement of design to remove TJB and construction compound from Rhyl Golf Club. • Refinement of the offshore array to reduce AyM's overall visual impact (in line with the seascape, landscape and visual impact assessment in Volume 2, Chapter 10 (application ref: 6.2.10)).
PRoW consents and temporary diversions	*Local Highways Authority (LHA) consent or consent in the DCO is required for disturbance to the surface of highways (i.e. including PRoW). The LHA will advise on appropriate reinstatement.*

PARAMETER	MITIGATION MEASURES EMBEDDED INTO THE PROJECT DESIGN
	Where practical, for temporary diversion or stopping up of PRoW suitable alternative provision will be made for continued public access. *Where possible, all PRoW will be kept open to minimise impact to users. Where this is not possible, a suitable diversion will be created where possible. A Public Access Management Plan (PAMP) will be drawn up as part of the Code of Construction Practice (CoCP) in order to determine the least possible impact regime at each location. In some instances where a PRoW crosses the onshore ECC, due to the likely infrequent use, and number of available alternative routes, it may be necessary to temporarily close the PRoW for the duration of the construction works, without offering a formal diversion but providing suggested alternative routes via site signage. An outline PAMP (application ref: 8.13.8) which establishes the principles for management of PRoW is provided as part of the Outline Code of Construction Practice (outline COCP (application ref: 8.13.8))* *PRoW closures and/ or diversions will be communicated to the LHA and other relevant organisations (including Community Councils) in advance of works commencing. Information will include the duration and proposed alternative routes, and will be posted on-site and online in advance of works.*
CONSTRUCTION	
Onshore cable	*Disruption to major recreation resources (including NCN5. WCP, NCN84 and NWP – on the River Clwyd embankment) will be minimised by the use of HDD (or other trenchless crossing technique) at landfall and under the River Clwyd. This means that there will be no physical interruption to these key routes.*

PARAMETER	MITIGATION MEASURES EMBEDDED INTO THE PROJECT DESIGN
Traffic control	*Where PRoW are crossed by work and/or access routes, traffic control measures will be put in place. These measures, such as manned crossings or gated crossings are committed to within the outline PAMP.*
Rolling construction	*Works will generally progress in stages along the route of the onshore ECC, so that individual sections will be affected for a minimum amount of time, rather than for the full onshore construction period (i.e. up to 18-months).* *Construction of the onshore infrastructure is anticipated to progress in sections. Trenches will be reinstated following installation of the cable conduits so that PRoW (and/or original conditions) can be reinstated as soon as practical, rather than waiting for months for the cable installation itself.* *It should be noted that, in the worst-case scenario, the haul roads may stay in use for the complete construction period but with traffic control in place throughout.*
Perimeter fencing	*The construction working area will be enclosed within fencing, enabling continued use of nearby routes whilst work is underway close to, but separated from them. The type of fencing will be selected to suit the location and purpose and will be agreed with DCC.*
Notice to Mariners	*Advanced warning and accurate location details of construction Safety Zones and advisory passing distances will be given via Notices to Mariners and Kingfisher Bulletins.*
Safety zones	*Safety zones (of up to 500 m) will be sought during construction, operation and decommissioning phases.*
Diver safety	*A soft-start programme will be implemented. Consideration will be given to the potential for divers to be in the water outside of the advisory exclusion zone at the start of pile driving. This consideration will also include*

PARAMETER	MITIGATION MEASURES EMBEDDED INTO THE PROJECT DESIGN
	diving activities that could result in divers drifting into the advisory exclusion zone as part of their dive.
OPERATIONS	
Inspection and maintenance	*The export cable and its infrastructure is designed to require zero maintenance over the operational period. Inspection will be facilitated through link boxes and test pits. The use of these will not impact on recreation in the vicinity.* *If maintenance or cable repair is required, this is typically achieved by isolating the affected section of the cable circuit and, if necessary, by removing and replacing it through the installed ducts. In some circumstances, minor further excavations are required at the location of the fault* *The cable may be repaired at any point along the cable route, although this is extremely infrequent and only affects a small working area.*
DECOMMISSIONING	
At this stage, it is assumed that at the end of the operational lifetime of AyM, all infrastructure will be completely removed. However, closer to the time of decommissioning, it may be decided that removal of some infrastructure, such as export cables, would lead to a greater environmental impact than leaving some components in situ. *For the purposes of the assessment, it is assumed that the effects of decommissioning activities of AyM will be similar to, but no worse than the impacts identified during the construction phase. As such, it is assumed that the same form of embedded mitigation as that identified for the construction phase will also be implemented during the decommissioning phase.*	

4.10 Environmental assessment: construction phase

4.10.1 Impact of construction activity on onshore recreation

Overview

204 This section of the assessment considers the extent to which access to and the enjoyment of (active) onshore recreation activity may be affected by the construction of AyM. It focusses on construction of the landfall, the onshore ECC and the onshore substation.

205 An overview of the proposed approach to construction of the onshore infrastructure of AyM is provided in the onshore project description chapter (see Volume 3, Chapter 1), and the MDS against which the assessment is based is outlined in Table 22 above.

206 The evidence presented within the baseline analysis (see Section 4.7) indicates that there are several onshore receptors that may be affected by onshore construction activity, some of which include:

- Public rights of way and cycle paths (such as NCN5 and the Wales Coast Path);
- Ffrith Beach and Ffrith Park; and
- Promoted routes.

Magnitude of impact

207 This section assesses the magnitude of impact of the several construction processes upon the relevant onshore recreation receptors identified above (and outlined in more detail in Section 4.7). Please note that this section generally only considers receptors identified as being of **medium** and/or greater sensitivity (as per Table 25 below) as no impacts are considered to be of 'High' magnitude. The assessment of magnitude of impact, together with reasons for the conclusions are set out in Table 24 below.

Table 24: Magnitude of impact for construction phase

ACTIVITY	RECEPTOR	MAGNITUDE	REASONS
Landfall construction	*Ffrith Beach*	*Medium*	*During the works at Landfall, public access will be maintained on the beach, wherever possible, (outside of the two 150 m x w100 m works areas) with suitable means made available for the public to pass around the works area.*
Landfall construction	*Ffrith Park*	*Medium*	*Vehicular access to the beach will be via Ferguson Avenue and roads across Ffrith Park. Pedestrian and cycle traffic will be temporarily interrupted during vehicle movements. The intermittent interruptions will be over a maximum of six months in two blocks of three months each.*
Landfall construction	*NCN5, Wales Coast Path and Link Path*	*Negligible*	*HDD (or other trenchless crossing technique) will mean that there is no physical break in the route. However, there may need to be brief, intermittent traffic control as a result of construction vehicles crossing the receptors in order to access the beach*

ACTIVITY	RECEPTOR	MAGNITUDE	REASONS
			causing short-term, minor interruptions to users.
Cable installation	PRoW	Low	PRoW will be kept open or provided with acceptable temporary diversions wherever possible, in accordance with the outline PAMP. Any interruptions to PRoW will generally be for a maximum of four months (although it may take up to 18-months until final restoration).
	Bruton Park/ Maes Bruton	Negligible	The Park lies about 180 m from the onshore ECC and OL and is not on an access route. Any visual and/ or noise impact is likely to be temporary and attenuated by the wooded nature of the park, and no significant changes are expected to the patterns or levels of use.
	NCN84 and North Wales Path	Negligible	HDD (or other trenchless crossing technique) will take the cable under the embankment sections of NCN84 and the North Wales Path without interrupting users. There may be some slight noise and visual impacts, but

ACTIVITY	RECEPTOR	MAGNITUDE	REASONS
			these will be localised and temporary and are not expected to cause a significant change in the patterns and/ or levels of use.
	River Clwyd	*No change*	*HDD (or other trenchless crossing technique) will take the cable under the River Clwyd, and river users will therefore be unaffected.*
	Cycleways	*Low*	*All of the cycleways within the ES boundary will be crossed by HDD (or other trenchless crossing technique), and will therefore be generally unaffected by construction activity. However, the NCN 5 coastal path will have limited HGVs sharing the same route.*
Construction vehicle movements	*PRoW*	*Low*	*Manned or gated crossings will be used to separate PRoW users from works vehicles. These may result in interruptions to users' journeys of not more than a few minutes at a time and are expected to result in only very minor changes in patterns and*

ACTIVITY	RECEPTOR	MAGNITUDE	REASONS
			levels of use of the affected PRoW.
Construction of onshore substation	*Bridleway 201/9*	*Low*	*Bridleway 201/9 will be visually impacted by the construction of the onshore substation.*

Sensitivity of the receptor

208 The receptors using each of the resources identified in the baseline analysis (see Section 4.7) have been assessed for sensitivity in accordance with the approach set out in Table 11. The results and reasoning for the assessment are shown in Table 25 below.

Table 25: Sensitivity of onshore receptors

RECEPTORS (USERS OF ...)	SENSITIVITY	REASONS
Ffrith Beach	*Low*	*Only a small proportion of the available beach will be unavailable and for a limited period of time. Other beaches are available within the locality.*
Ffrith Park	*Low*	A selection of surfaced routes is available through the park offering alternative routes for walkers and cyclists. *Interruptions to full access will be intermittent and for no more than three-month blocks, with a total period of six months.*
NCN5	*High*	*NCN5 is a nationally important, long-distance cycle route. However, the affected length represents only a small fraction of the NCN5 and users do have the option of using the cycleway alongside*

RECEPTORS (USERS OF ...)	SENSITIVITY	REASONS
		the A548 as a safe and convenient alternative.
Wales Coast Path	*High*	*The Wales Coast Path is considered to be of similar status to a national trail. However, the affected length represents only a small fraction of the WCP and, if necessary, walkers can divert either on to the beach or alongside the A548 to find alternatives.*
Link Path	*Medium*	*The link path is probably of most use during holiday periods when the nearby holiday camps are occupied and is expected to be of little use at other times. If the link path were to be interrupted, an alternative route exists about 600 m to the east.*
A548 Cycleway	*Medium*	*If the cycleway were to be interrupted, users could divert onto the promenade or, for cyclists, use the carriageway.*
Bruton Park/ Maes Bruton	*High*	*Bruton Park is of local importance, offering open, green space access within walking distance of a residential area. If access to the park was interrupted, users would need to travel to find alternative provision.*
BOAT 206/44	*Medium*	*Users of the byway have a number of alternative routes available to them, including designated cycleways, minor roads and other PRoW.*
Footpath 206/20	*Medium*	*This path forms part of the North Wales Path, a regionally important path. A proportion of users will be attempting to follow the defined route. However, an*

RECEPTORS (USERS OF ...)	SENSITIVITY	REASONS
		alternative would be to divert around Pentre Lane.
Pentre Lane *(Part of North Wales Path and 'Along the Sea Front' cycle route)*	*Medium*	*If Pentre Lane was unavailable, walkers could divert via footpath 206/20. This option would not be available to cyclists or horse riders, who would have a longer diversion via the A547 cycleway, Bryn Cwnin Road and byway 206/44.*
Bridleway 206/12	*Medium*	*The bridleway is part of the regionally important NWP and so a proportion of the users will be trying to follow the designated route. An alternative route is available, although it is indirect and lengthy.*
Footpaths 206/30 & 206/29 *NCN84* *North Wales Path*	*High*	*Two regionally important routes use these paths; the North Wales Path and NCN84. Walkers choosing to walk along the river between Rhyl and Rhuddlan have a choice of banks. However, cyclists can only use the eastern embankment, which is shared with users of the North Wales Path. No similar alternative is available for cyclists, although a more urban alternative is available.*
River Clwyd	*Medium*	*The river is not recognized as being of special significance for recreation.*
Footpath 201/12	*Medium*	*As noted above, walkers have the option of using either bank of the River Clwyd*
Bridleway 201/10	*Medium*	*If use of the bridleway was interrupted, alternative, but less rural, routes are*

RECEPTORS (USERS OF ...)	SENSITIVITY	REASONS
		available using the Business Park roads or other minor roads and cycleways. *The main use is thought to be by workers, who would also have the option of bridleway 201/9.*
Bridleway 201/9	*Medium*	*For cyclists and walkers, the business park roads and the A55 cycleway offer alternative options, as well as bridleway 201/10. Horse riders would only have the alternative of bridleway 201/10. However, horse riding generally takes place from horse boxes driven to and parked at the business park. These riders would have a choice of bridleways within a short drive.*

Significance of residual effect

209 Table 26 below brings together the results of the assessment of receptor sensitivity and the magnitude of impact upon those receptors to determine the significance of residual effect, in accordance with the matrix presented in Table 13 above.

Table 26: Significance of impacts on key onshore recreation receptors

RECEPTOR	SENSITIVITY	MAXIMUM IMPACT	SIGNIFICANCE	CONCLUSION
Ffrith Beach	*Low*	*Medium*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Ffrith Park	*Low*	*Medium*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
NCN5	*High*	*Negligible*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Wales Coast Path	*High*	*Negligible*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Link Path	*Medium*	*Low*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*

RECEPTOR	SENSITIVITY	MAXIMUM IMPACT	SIGNIFICANCE	CONCLUSION
A548 cycleway	*Medium*	*Low*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Bruton Park/ Maes Bruton	*High*	*Negligible*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
BOAT 206/ 44	*Medium*	*Low*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Footpath 206/20	*Medium*	*Low*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Pentre Lane	*Medium*	*Low*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*

RECEPTOR	SENSITIVITY	MAXIMUM IMPACT	SIGNIFICANCE	CONCLUSION
Bridleway 206/12 (part of North Wales Path)	*Medium*	*Low*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Footpath 206/30 & 206/29 *NCN84* *North Wales Path*	*High*	*Negligible*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
River Clwyd	*Medium*	*Negligible*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Footpath 201/12	*Medium*	*Negligible*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*

RECEPTOR	SENSITIVITY	MAXIMUM IMPACT	SIGNIFICANCE	CONCLUSION
Bridleway 201/10	*Medium*	*Low*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*
Bridleway 201/9	*Medium*	*Low*	*Minor adverse*	*The significance of the effect is therefore concluded to be **minor adverse**, which is not significant in terms of the EIA Regulations.*

210 The analysis presented in Table 25 shows that of all the onshore receptors assessed, the construction of AyM is anticipated to have a ***minor adverse*** effect, which is not significant in EIA terms. It is assumed that the effect of construction activity of AyM is direct and temporary in nature (up to ten months) during construction works on Ffrith Beach.

4.10.2 Impact of construction activity on offshore recreation

Overview

211 This section of the assessment considers the extent to which access to, and the enjoyment of, offshore recreation may be affected by construction activity related to AyM. This assessment draws on the proposed approach to offshore construction which is set out in more detail in Volume 2, Chapter 1.

212 The evidence presented within the baseline analysis (see Section 4.7) indicates that there are several offshore receptors that may be affected by offshore construction of AyM, which include:

- Bathing;
- Water sports;
- Scuba diving; and
- Recreational sailing.

Magnitude of impact

213 The assessment of the magnitude of impact on offshore recreation draws on the various construction activities taking place within the offshore zone and considers how these will interact with (and affect) offshore recreation activities.

214 Overall, it is anticipated that offshore construction activity will take up to 27-months from start to finish (excluding turbine and foundation commissioning).

Landfall construction and excavation of trenchless installation exit pits

215 To reduce the impact of landfall construction, trenchless installation techniques will be used to install ducts that will house the cables under Ffrith Beach. Whilst details plans are still being developed, it is anticipated that drilling will start from the landfall construction compound and extend to a trenchless installation exit pit located in the intertidal or shallow subtidal, between MHWS and 1,000 m seaward of MHWS. During construction, the trenchless installation exit pit area will be cordoned off to accommodate up to 3 working areas, each 75 m x 10 m.

216 The trenchless installation and duct installation works will require up to 10 months of on-site works. The location of the trenchless installation exit point, and therefore the length of the trenchless installation itself, is yet to be determined, however it is anticipated that the impact of landfall construction on offshore recreation activities will be limited to the immediate area around the trenchless installation exit pit. On this basis, the magnitude of impact of landfall construction on recreation activity is therefore assessed as **negligible**.

Turbine foundation and seabed preparation

217 As the project's design is still evolving, several potential turbine foundations are being considered (such as monopiles, multi-leg pin-piled jackets, or suction foundations). These will, in turn require different levels of seabed preparation which could include clearing of large boulders, levelling and/ or dredging of soft sediments and dealing with unexploded ordnance.

218 The level of seabed preparation will depend on the type of foundation chosen, with monopiles requiring the least preparation often limited to within the footprint of the monopile itself. Whereas, suction-based options require more intense seabed preparation, and generally require larger areas to be covered.

219 Seabed preparation has potential to disturb and impact upon water quality (considered in more detail in Volume 2, Chapter 3), but the impact of these activities is anticipated/ likely to be contained locally, temporary and mobile in nature. On this basis, the magnitude of impact of seabed preparation is therefore assessed as **low**.

Installation of turbine and (offshore) substation foundations

220 Installation activity will ultimately depend on the type of foundation selected, and may require different techniques to anchor them to the bottom of the seabed. Under the worst-case scenario it is assumed that the installation of monopile foundations (requiring up to 5,000kJ of hammering energy) may be the most disruptive for offshore recreation activity in particular scuba diving (through noise levels and underwater quality).

221 On the basis of the above, the magnitude of impact on offshore recreation users is anticipated to be **medium**

Installation of export and array cables

222 Whenever possible, cables (i.e. both inter-array as well as export cables) will be buried below the seabed with a number of burial options currently retained within the design envelope. Cable protection (such as rock placement, concrete mattresses or other solutions) may also be required where cable burial cannot be achieved, when crossing existing assets (such as pipelines and or cables) and for unforeseen events (such as cable repairs). The approach to cable installation for both export and array cables will be similar, and is outlined in some detail in the offshore project description of AyM (see Volume 2, Chapter 1).

223 Overall, it is anticipated that installation of the export cable will take up to six months, whilst the installation of inter-array cables will take up around 12 months. The emerging construction programme suggests that the two activities can overlap, however there is potential for the installation to take longer should the overlap of activities may not be possible.

224 Current estimates suggest that 12 vessels will be needed for the installation of the offshore export cable (six vessels per export cable) and a further 12 vessels for installation of the inter-array cables. Should concurrent installation be possible, there is potential for up to 24 installation vessels being located offshore at peak cable installation activities. Disruption to offshore recreation activities will be limited to exclusion zones around work areas, and will be temporary and mobile in nature.

225 On the basis of the above, the magnitude of impact on offshore recreation activity is therefore assessed as **medium**.

Installation of WTG and offshore substation(s)

226 Plans for the installation of WTG and the offshore substation(s) are still being developed. The installation process for WTG will follow a similar process to that outlined below:

- WTG components are picked up from a suitable port facility (usually pre-assembled);
- These are then transited out to the array area either on barges and /or special installation vessels (such as Jack Up Vessels or Dynamic Positioning vessels);
- Components will then be lifted onto the pre-installed foundation or the transition piece; and
- Each WTG will be assembled at site, with technicians fastening components together as they are lifted into place.

227 The topside of offshore substations is generally built onshore, placed on top of a barge/transfer vessel, and then lifted onto its foundations using heavy lifting equipment (similar approach to that outlined above for WTG).

228 The indicative offshore construction programme suggests that installation and commissioning activity for the offshore substation(s) will take up to 15 months, whilst installation of the WTGs will take up to nine months. Offshore activity will vary depending on the work being undertaken offshore, however, early indications suggest that up to 15 vessels may be used in the installation of WTGs, in addition to other vessels used for the installation of the offshore substation(s).

229 Overall, it is anticipated that no more than 35 vessels (of different sizes) will be operating simultaneously at peak (offshore) construction activity.

230 Based on the above, the magnitude of impact of the installation of WTG and offshore substation(s) on offshore recreation is therefore assessed as **medium**.

Table 27: Magnitude of impact on offshore recreation receptors

RECEPTOR(S)	ACTIVITY	IMPACT(S)	MAGNITUDE OF IMPACT
Bathing	*Landfall construction*	*Potential for reduced access to the beach, the intertidal or shallow subtidal between MHWS and 1,000 m seaward of the MHWS during landfall construction and excavation of trenchless installation exit pits.*	*Medium*
	Excavation of trenchless installation exit pits		
Scuba diving	*Turbine foundation and seabed preparation*	*Seabed preparation has potential to disturb water quality, but the impact is anticipated to be local in nature.*	*Low*

RECEPTOR(S)	ACTIVITY	IMPACT(S)	MAGNITUDE OF IMPACT
Scuba diving	*Installation of turbine and (offshore) substation foundations*	*The installation of turbine and (offshore) substation(s) foundations will create additional noise as a result of the pile driving activities.*	*Medium*
Water sports, and recreational sailing	*Installation of export and array cables*	*Temporary reduced access to the offshore area as a result of exclusion zones required during construction.*	*Medium*
Water sports, and recreational sailing	*Installation of WTG and offshore substation(s)*	*Temporary reduced access to offshore area as a result of exclusion zones required during construction*	*Medium*

Sensitivity of the receptor

231 The sensitivity of offshore recreation is considered in Table 28 below.

Table 28: Summary of the receptor groups and study areas used.

RECEPTOR	CONTEXT	SENSITIVITY
Bathing	*Landfall construction has potential to reduce access to Ffrith Beach, and parts of the intertidal and subtidal zones. There are several blue flag beaches bathers can access along the North Wales coast, including:* • Benllech Beach; • Llanfairfechan Beach; and • Prestatyn Central.	*Low*
Water sports	*The bathing waters within the study area are attractive for many water sports (e.g. paddle boarders, wind and kite surfing, jet skiing as well as kayaking/ canoeing).* *Construction activity may impact upon water quality, and restrict access. The effect is anticipated to be located to within the offshore array area, with water quality along both the North Wales coast and North West region remaining relatively unimpacted.*	*Low*
Scuba diving	*Scuba diving is a popular activity along the North Wales coast, thanks to a number of excellent dive sites found in the area.* *Construction activity has potential to increase turbidity, reduce access due to exclusion zones, and subject divers to potentially unhealthy levels*	*Low*

RECEPTOR	CONTEXT	SENSITIVITY
	of noise. The soft-start programme being considered will act as a live warning and allow any divers in the water at the time of foundation installation starts to put more distance between themselves and construction activities. *Despite this, the impact of underwater noise has potential to (at least) temporarily displace scuba diving activities for a period of up to 12-months whilst seabed preparation and foundation installation takes place. As outlined within the baseline section, there are several alternative diving sites along the North Wales coast.*	
Recreational sailing	*There are several popular sailing spots along the North Wales coast, including ones which are good for beginners and improvers (such as the Menai Straits). Other key locations include the Conwy Estuary as well as the Clwyd coast.* *The impact on shipping and navigation is considered elsewhere within the assessment (see Volume 2, Chapter 9 (application ref 6.2.9)), however any impacts to recreational sailing are anticipated to be limited primarily to within the offshore array, and temporary.* *Once AyM is operational, some restrictions to how close recreational*	*Low*

RECEPTOR	CONTEXT	SENSITIVITY
	and commercial vessels can come to within WTG and the offshore substation(s), however it is anticipated that access within the array will be reinstated.	

Significance of residual effect

232 As outlined in Section 4.9 there are several general and specific mitigation measures that will be embedded within the project design.

233 Table 29 below presents an overview of the significance of residual effect on each of the offshore receptors considered, based on the interaction between the assessment of magnitude of impact and sensitivity of receptor.

Table 29: Assessment of significance of residual effect

RECEPTOR	SENSITIVITY OF RECEPTOR	(LARGEST) MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Bathing	*Low*	*Medium*	***Minor adverse** (Not Significant)*
Water sports	*Low*	*Medium*	***Minor adverse** (Not Significant)*
Scuba diving	*Low*	*Medium*	***Minor adverse** (Not Significant)*
Recreational sailing	*Low*	*Medium*	***Minor adverse** (Not Significant)*

234 The assessment of construction activity on AyM is not anticipated to have any significant residual effects on offshore recreation receptors.

235 It is assumed that the effect of construction activity of AyM is direct and temporary in nature.

4.10.3 Impact of construction activity on tourism receptors

Overview

236 This section considers the extent to which onshore construction activity related to AyM may have a direct effect on tourism and visitor attractions (henceforth referred to as tourism receptors) located within 500 m of the OL. This assessment draws primarily on the research undertaken as part of other aspect chapters submitted as part of the ES assessment, including:

- Volume 3, Chapter 2: Landscape and Visual Impact Assessment (application ref: 6.3.2);
- Volume 3, Chapter 8: Onshore Archaeology and Cultural Heritage(application ref: 6.3.8);
- Volume 3, Chapter 9: Traffic and Transport(application ref: 6.3.9); and
- Volume 3, Chapter 10: Noise and Vibration(application ref: 6.3.10).

Magnitude of Impact

237 The baseline analysis has identified that are up to eight tourism receptors located within 500 m of the OL. The analysis of magnitude of impact draws on the receptor's distance relative to the OL, in addition to a review of the various potential effects that can impact each receptor.

Table 30: Magnitude of impact on users of tourism receptors impacted by onshore construction activity of AyM

COMMUNITY RECEPTOR	DISTANCE TO DOL	MAGNITUDE OF IMPACT	JUSTIFICATION
*Rhyl Golf Club (its users and the golf club as a business)**	*Within OL*	*Negligible*	*Although the golf course falls within the OL, the use of trenchless installation techniques means that there will not be any above ground works on the golf course (although access for non-intrusive monitoring would be required), therefore disruption caused by construction activity will be limited and constrained to the trenchless installation compound that is located to the south of the railway (which will not impact the golf club).*
Ffrith Park/Ffrith Beach Arena Park	*20 m*	*Negligible*	*Located outside OL, but very close to one of the proposed access routes leading to the onshore construction compound. The use of trenchless installation techniques means that the disruption caused by construction activity will be limited and constrained to the trenchless installation compound. It will likely experience some noise impacts and increased traffic activity related to construction activity. Embedded measures will be implemented to reduce and/or mitigate these impacts.*
Pen-Y-Ffrith Caravan Park	*180m*	*Negligible*	*Located 180m from the OL, the use of trenchless installation techniques means that the disruption caused by construction activity*

COMMUNITY RECEPTOR	DISTANCE TO DOL	MAGNITUDE OF IMPACT	JUSTIFICATION
			will be limited and constrained to the trenchless installation compound. It will likely experience some noise impacts and increased traffic activity related to construction activity. Embedded measures will be implemented to reduce and/or mitigate these impacts.
Ffrith Beach Touring Caravan Park	*190m*	*Negligible*	*Located 190m from the OL, the use of trenchless installation techniques means that the disruption caused by construction activity will be limited and constrained to the trenchless installation compound. It will likely experience some noise impacts and increased traffic activity related to construction activity. Embedded measures will be implemented to reduce and/or mitigate these impacts.*
Astrobowl	*150m*	*Negligible*	*Located 150m within the OL, the use of trenchless installation techniques means that the disruption caused by construction activity will be limited and constrained to the trenchless installation compound. It will likely experience some noise impacts and increased traffic activity related to construction activity. Embedded measures will be implemented to reduce and/or mitigate these impacts.*
North Wales Bowls Centre	*38 m*	*Low*	*Located just outside (38 m) the OL, there is potential impact related to noise and increased traffic, however implementation of a construction management plan will work to minimise these impacts.*

COMMUNITY RECEPTOR	DISTANCE TO DOL	MAGNITUDE OF IMPACT	JUSTIFICATION
Pirate Island Golf at Lyons Robin Hood Park	*Within OL*	*Medium*	*Robin Hood Park is located within the project's OL, however, cables will be installed beneath the caravan park using trenchless installation techniques . The potential for impacts related to noise and vibration, increased traffic and the visual landscape have been identified. However, the use of trenchless installation techniques will reduce the overall impacts of construction activity.*
Lyons Robin Hood Holiday Park	*38m*	*Low*	*Lyons Robin Hood Holiday Park is located within the project's OL. There is potential for impacts related to noise, increased traffic and the visual landscape to be experienced. However, the use of trenchless installation will reduce the overall impacts of construction activity.*
New Pines Holiday Home Park	*150m*	*Low*	*Located just outside (150 m) the OL, the New Pines Holiday Home Park can expect to experience some visual and noise impacts, and an increase in traffic. Nonetheless, the visual and noise impacts will be reduced/kept to a minimum by the implementation of measures aimed at mitigating adverse impacts. Please note that construction activity will have a greater impact on properties along the edge of the New Pines Holiday Home Park, with the magnitude of impact falling as one moves away.*

COMMUNITY RECEPTOR	DISTANCE TO DOL	MAGNITUDE OF IMPACT	JUSTIFICATION
Rhuddlan Castle	*450 m*	*Low*	*Rhuddlan Castle is located 460 m from the edge of the OL and is not anticipated to experience any direct effects as a result of construction activity. There is potential for visual, noise and traffic impacts to arise as a result of construction activity. Overall, noise and visual impacts are likely to be limited due to distance from OL, and the intervening structures and hedgerows. Some visual impact is, however, likely from the top/observation points. There is also the potential for increased traffic along A525, which has been identified as a potential access route.*
Rhuddlan Local Nature Reserve	*440 m*	*Negligible*	*Located right at the edge of the LAI, the overall magnitude of impact on the Rhuddlan Local Nature Reserve is anticipated to be negligible, especially as potential views and noise related to onshore construction will be obstructed by views of the Sun Valley and Clwyd View Caravan Parks, local businesses (including restaurants and hotel accommodation) and the A525.*
Rhuddlan Golf Club	*490 m*	*Low*	*Rhuddlan Golf Club is located right at the edge of the LIA, and none of it is anticipated to interact directly with onshore construction activity. There is potential for visual and noise impacts, however these are likely to be reduced due to distance to construction activity, intervening hedges and buildings and mitigation measures*

COMMUNITY RECEPTOR	DISTANCE TO DOL	MAGNITUDE OF IMPACT	JUSTIFICATION
			implemented to reduce the overall magnitude of impact. May experience an increase in construction-related traffic as the A547 is proposed as one of several construction access routes.

Sensitivity of the receptor

238 Table 31 provides an overview of the level of sensitivity for each of the tourism receptors considered as part of the assessment.

Table 31: Sensitivity of tourism receptors

RECEPTORS (USERS OF ...)	SENSITIVITY	REASONS
Rhyl Golf Club (its users and the golf club as a business)	*Low*	*Golfers have a number of alternative courses and one driving range within ten miles of the onshore ECC or Rhyl Golf Club itself.*
Ffrith Park/Ffrith Beach Arena Park	*Low*	*Ffrith Park is not expected to be directly impacted by construction activity. Furthermore, there are several open space alternatives users can access, including large stretches of Ffrith Beach (to the east of landfall construction).*
Pen-Y-Ffrith Caravan Park	*Low*	*There are numerous coastal caravan parks within ten miles.*
Ffrith Beach Touring Caravan Park	*Low*	*There are numerous coastal caravan parks within ten miles.*
Astrobowl	*Medium*	*Rhyl has an alternative ten pin bowling alley, however beyond this there is a lack of ten pin bowling alleys within 10 miles.*
North Wales Bowls Centre	*Low*	*Visitors / bowlers have a number of alternatives where they are able to bowl and compete in competitions as there are a number of bowling clubs and facilities within 10 miles.*

RECEPTORS (USERS OF ...)	SENSITIVITY	REASONS
Pirate Island Golf at Lyons Robin Hood Park	*Low*	*Whilst some disturbance may be expected, the use of trenchless installation techniques will mean that the Lyons Robin Hood Park will be by-passed by construction activity.*
Lyons Robin Hood Holiday Park	*Low*	*There are numerous coastal holiday home parks / caravan sites within 10 miles.*
New Pines Holiday Home Park	*Low*	*There are numerous coastal holiday home parks / caravan sites within 10 miles.*
Rhuddlan Castle	*Medium*	*Rhuddlan Castle is a Grade 1 listed building and an important location in Welsh history.*
Rhuddlan Local Natural Reserve	*Low*	*There are several alternatives to the Rhuddlan Local Natural Reserve within a ten-mile radius. Furthermore, the reserve is not expected to experience any direct impacts as a result of construction activity*
Rhuddlan Golf Club	*Low*	*There are several alternative courses located within ten miles of the onshore ECC or the Rhuddlan Golf Club itself.*

*Due to the potential impact on the golf club, the impact on users and the golf club itself is included in the assessment of Rhyl Golf Club.

Significance of residual effect

239 Table 32 below brings together the results of the assessment of receptor sensitivity and the magnitude of impact upon those receptors to determine the significance of residual effect in accordance with the matrix presented in Table 13.

Table 32: Significance of impacts on tourism receptors

RECEPTOR	SENSITIVITY	MAXIMUM IMPACT	SIGNIFICANCE
Rhyl Golf Club – Its users	*Low*	*Negligible*	***Negligible*** (Not Significant)
Rhyl Golf Club – As a business	*Low*	*Negligible*	***Negligible*** Not Significant)
Ffrith Park/Ffrith Beach Arena Park	*Low*	*Negligible*	**Negligible** Not Significant)
North Wales Bowls Centre	*Low*	*Low*	**Minor adverse** Not Significant)
Pirate Island Golf at Lyons Robin Hood Park	*Low*	*Medium*	**Minor adverse** Not Significant)
Rhuddlan Castle	*Medium*	*Low*	**Minor adverse** Not Significant)
Rhuddlan Local Natural Reserve	*Low*	*Negligible*	**Negligible** Not Significant)
Rhuddlan Golf Club	*Low*	*Low*	**Minor adverse** Not Significant)

4.10.4 Impact of construction activity on the volume and value of the tourism economy

Overview

240 The assessment considers the extent to which the volume and value of tourism economy within the wider study area and local study area (as identified in Figure 1) may be affected by construction activity (both onshore and offshore) of AyM. The assessment considers both the wider study area (i.e. the ZTV from which AyM's WTG can be visible, and which extends for 50 km) as well as the LSA (defined as the local authorities along the North Wales coast), only focusses on the visitor economy of the latter. The AyM offshore wind farm will be located around 40 km from major tourism areas in North West England (i.e. Southport and Blackpool), whilst from other locations (such as West Kirby and Hoylake) AyM will appear as a minor addition along the horizon (located behind other operational offshore wind farms). This is confirmed in the analysis presented as part of the seascape, landscape and visual impact assessment (see Volume 2, Chapter 10).

241 On this basis, the assessment of the impact of AyM's construction on the volume and value of the tourism economy focusses on key tourism areas along the North Wales coast (identified as the local study area in Table 19, which includes Anglesey, Gwynedd, Conwy, Denbighshire and Flintshire).

242 The baseline analysis (see Section 4.7) of the research examining the relationships between the visual impacts of offshore wind farms and their construction upon tourism activity, and the associated visitor economy, demonstrates that:

- Whilst there is potential for some visitors to be discouraged from making future visits to an area affected by the construction of a wind farm development, this is usually balanced (and in some cases exceeded) by visitors reporting that they will visit more frequently.
- The research also points out that visitors and tourism-related businesses recognise the potential for positive impacts associated with extra expenditure to the local economy arising from construction activity or, in some cases, the additional interest in learning about the project and seeing its construction and operation.

- The research typically focusses on measuring opinions of what the impacts in the visitor economy could be prior to implementation of the scheme. However, the limited available ex-post research suggests that even where there have been negative effects, these are typically limited to displaced tourism, with visitors diverting to neighbouring areas.

243 The relationship between visitors' attitudes to wind farm developments, their construction (i.e. construction of onshore and offshore infrastructure) and the consequences upon visitors' behaviours is complex. Overall, the research does not suggest that the extent to which tourists are attracted to an area by the quality of the landscape is important in determining their reactions to wind farm developments. In addition, the analysis presented in Section 4.7 states that visitors and tourism-related businesses recognise the potential for positive impacts associated with the increase in local expenditure arising from construction activity and the potential change in visitor profile.

244 The impact of operational offshore infrastructure is outlined in Section 4.11 below which presents an assessment of the completed offshore array. It is assumed that the impact of construction activity on the receptor will slowly build up to that identified throughout the operational period (i.e. once all WTG are operational). However, for the purposes of the assessment, it is assumed that the magnitude of the impact of construction activity on the visitor economy will be in line with that identified once the project is fully operational, but its timing will be limited to the latter stages of construction.

Magnitude of impact

245 Overall, the research described in Section 4.7.4 suggests that activity related to the construction of onshore and offshore infrastructure of offshore wind farm developments does not have a significant effect on the overall volume of and value of tourism activity. In most instances, the available research (such as University of the West of England (2004); Ipsos MORI (2014) and Glasgow Caledonian University (2008)) suggests that visitors do not expect their behaviour to be influenced (either positively and/ or negatively) by the presence of construction activity related to wind farm developments.

246 Data on total visitor expenditure (used as a proxy for economic impact) by both day trips and overnight trips from 2011 onwards suggests that total annual expenditure across North Wales has averaged a little over £1.4 billion per annum. This includes the period over which the GyM offshore wind farm was being constructed. Data on tourism employment (based on the definition set out by the UNWTO) from 2009 onwards shows employment growth in North Wales (+23%) and Wales (+27%) albeit volatile, compared to 23% across GB. Tourism employment in North Wales ranged from a minimum of 32,400 workers in 2011 to a maximum of 43,500 in 2019.

247 A recent study by Scottish Power Renewables (2020) echoes the analysis presented above, and suggests that based on its analysis of 11 areas with offshore wind farms located within 40km of the shoreline (including Burbo Bank Extension, West of Duddon Sands and Walney – all located along the North West coast of England), there is no evidence that points to a relationship between the construction of offshore wind farms and an overall reduction in tourism activity, visitor spending or tourism-related employment.

248 In addition, Volume 5, Annex 4.2 (application ref: 6.5.4.2) presents further analysis of tourism employment trends for seaside towns located close to operational wind farms located in the UK. The aggregate tourism employment in the seaside towns in proximity to specific offshore wind farms considered in the analysis (based on the average annual levels) showed either little change or growth in the number of jobs between the pre- and post- construction period in most instances. Given the timing of the OWF construction and the availability of suitable data, the analysis included six wind farms and the 23 seaside tourism towns in close proximity. Many of these seaside towns are visitor destinations that are Victorian in their origins and character, like Llandudno.

249 On the basis of the analysis outlined above, the magnitude of impact of construction activity on the volume and value of the tourism economy at local study area level is therefore assessed as **negligible**.

250 As identified within the baseline analysis (Section 4.7) there are a number of specific locations where the visitor economy plays a major role, and which have potential to experience a different order of magnitude than that outlined above for the economy of the local study area. These locations are set out in Table 20 above. Table 34 below provides an overview of the magnitude of impact for each of the three areas identified.

Table 33: Assessment of magnitude of impact on tourism economy at the local level

LOCATION	MAGNITUDE OF IMPACT	JUSTIFICATION
Rhyl, Prestatyn, Kinmel Bay and Abergele	*Negligible*	*The local beaches at Rhyl, Prestatyn and Kinmel Bay are major visitor attractions and a key draw for visitors seeking a more traditional 'bucket and spade' holiday or day trip along the North Wales coast. That being said, the area's visitor offer is varied and caters to a wide range of interests, (including cultural activities, and/or more specific interests such as the closed-circuit road cycling and BMX track or the Rhyl Miniature Railway).* *For many of the visitors to the area the quality of the landscape does not necessarily feature as a top priority, with the seascape already characterised by views of GyM and other offshore wind farms.* *There is no evidence which suggests that the volume and value of tourism has suffered as a result of the visibility of existing wind farms from along this stretch of coast.*
Abergele to Rhos-on-Sea	*Negligible*	*The area's sandy beaches are very popular with local families with young*

LOCATION	MAGNITUDE OF IMPACT	JUSTIFICATION
(including Colwyn Bay)		*children and bathers. Recent developments have upgraded the quality of the tourism offer for both visitors and local residents alike. The area's visitor offer includes Theatr Colwyn, and attractions such as the Welsh Mountain Zoo – National Zoo of Wales.* *There is no evidence which suggests that the volume and value of tourism will suffer as a result of the construction and operation of AyM.*
Great Orme and Llandudno	*Low*	*During the Turbine installation phase of construction, the offshore WTG of AyM will be visible from both the Great Orme and along the Llandudno waterfront. There is the potential for some impact on visitor numbers, which is likely to occur at the latter stages of construction, with potentially a small proportion of visitors being discouraged by the development activity. The popularity of Llandudno amongst older visitors is a consideration here, although the evidence of growing support for renewable energy and reduced opposition to offshore wind farms (in the context of a climate emergency) amongst this group will help to reduce the impact. There is also the potential for any discouraged visitors to be replaced by other visitors as the local tourism sector and market adapts (as well as the possibility of these displaced visitors deciding to visit other areas of North Wales). If this replacement effect were to*

LOCATION	MAGNITUDE OF IMPACT	JUSTIFICATION
		occur quickly, the impact would be minimal. *Llandudno has also specific facilities which are not available elsewhere across North Wales and/ or are unique to the area (including conferences, exhibitions and live music), from which the visitors are unlikely to be deterred as a result of the development.* *Overall, it is anticipated that the addition of AyM on the local horizon will have a low negative impact on overall visitor numbers. and for this to be short term in nature (arising in the latter stages of the construction programme as more WTGs are installed on the horizon).*

Sensitivity of the receptor

251 The analysis presented within the baseline assessment (see Section 4.7) shows that tourism currently supports around 40,000 FTE jobs within North Wales, and around 147,000 FTE jobs across Wales, giving the sector a level of specialisation (i.e. LQ) that is 1.2 times the national average across North Wales. Within North Wales, the overall level of specialisation (i.e. LQ) is considerably higher than the national average for Conwy (LQ 1.8), Anglesey (LQ 2.0), and Gwynedd (LQ 1.6).

252 The Tourism Sector Deal (HM Government, 2019) policy highlights the key role the sector is anticipated to play in supporting growth of the national economy. This is echoed at the Wales level, Welcome to Wales: Priorities for the visitor economy (Welsh Government, 2020) which envisions growing tourism for the good of Wales (which entails economic growth that delivers benefits for people and places, including environmental sustainability, social and cultural enrichment and health benefits). North Wales, with its diverse offer, is identified as an important priority.

253 On the basis of the above, the sensitivity of the receptor is therefore assessed as **high**.

Significance of residual effect

254 With the sensitivity of the receptor assessed as **high**, and the magnitude of impact assessed as **negligible** at the local study area, the residual effect of AyM construction on the volume and value of the tourism economy of the local study area as a whole is of ***minor adverse***, which is Not Significant in EIA terms.

255 In addition, the assessment has also considered the significance of residual effect on three visitor areas along the North Wales coast. The assessment of significance of residual effect at the local level is outlined in Table 34. It shows that the construction of AyM has potential to have a ***local minor adverse*** (i.e. Not Significant) residual effect on two of the local visitor areas. The construction of AyM has potential to have a ***local moderate adverse*** (i.e. Significant) residual effect on the local visitor economy of the Great Orme and Llandudno. This is expected to be short term in its duration, arising in the latter stages of the construction programme as more WTGs are installed on the horizon.

Table 34: Assessment of significance of residual effect at the local level

LOCATION	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Rhyl, Prestatyn, Kinmel Bay and Abergele	*High*	*Negligible*	***Minor adverse*** *(Not Significant)*
Abergele to Rhos-on-Sea	*High*	*Negligible*	***Minor adverse*** *(Not Significant)*
Great Orme and Llandudno	*High*	*Low initially, rising to low in the latter stages of the*	*Minor adverse initially, rising to moderate*

LOCATION	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
		construction programme	*adverse in the latter stages of the construction programme.*

256 It is assumed that the effect of construction activity of AyM is indirect and temporary in nature.

257 There are opportunities for AyM to support and engage with local stakeholders to promote and realise potential positive benefits to the tourism sector within Llandudno and Great Orme area. These could include the provision of information, interpretation and promotion which would explain the construction and operation of AyM and its role in the renewable energy transition and addressing climate change as well as the provision of a tourism liaison officer to aid in the delivery of benefits to the tourism sector. These actions could potentially benefit the sector during the construction phase of AyM.

4.10.5 Impact of construction activity on the displacement of tourism visitors

Overview

258 The analysis of the socio-economic impacts of construction activity of AyM (presented in Volume 3, Chapter 3) has identified that installation and commissioning activity related to AyM has potential to support around 150 FTE jobs per annum. Of these, around 30 FTE jobs will be related to onshore installation (and therefore located within close proximity to the onshore ECC), with the rest (i.e. around 120 FTE jobs) involved in offshore construction (and therefore located within close proximity to the construction port should one be located within the North Wales study area). A further 210 (non-UK) workers may also be required to support offshore construction activity.

259 There is potential for offshore workers to be accommodated offshore on specific accommodation vessels. Furthermore, there is potential for these workers to be based elsewhere, should a construction port outside North Wales be selected.

260 However, under the worst-case scenario (as outlined in Table 22) it is assumed that up to 360 non-North Wales workers may need to be based in North Wales to support both onshore and offshore construction activities.

261 The baseline analysis presented in Section 4.7 of this assessment indicates that it is not possible to quantify the number of bedrooms that can accommodate overnight stays. However, estimates generated as part of the baseline analysis indicate that there are currently in the order of 19,400 serviced accommodation rooms across North Wales. This figure excludes any non-serviced accommodation, as well as incidental capacity in the form of spare rooms within private homes that can also be used to accommodate workers supporting the construction of AyM. An online search on accommodation sharing sites (such as AirBnB) for the availability of overnight accommodation has returned more than 300 'stays' within the North Wales study area.

Magnitude of impact

262 In this assessment, the uptake of overnight accommodation is considered as a proxy for the displacement of tourism visitors. Demand for accommodation can range from 30 to 360, depending on the location of the construction port. Under the worst-case scenario, it is assumed that a local construction port would see demand for up to 360 non-North Wales workers working on both the onshore and offshore infrastructure. This is estimated to represent around 2% of the serviced accommodation stock in North Wales. Once other forms of accommodation are included, the overall impact on the availability of accommodation for visitors can be expected to be lower.

263 On this basis, the overall magnitude of impact on the receptor at the North Wales study area is therefore assessed as **low**.

264 Displacement impacts associated with the presence of workers involved in onshore construction (i.e. around 30 non-North Wales-based workers) is likely to be concentrated within Denbighshire and its immediate surroundings. Whereas, the impact resulting from the presence of other non-North Wales based workers required to support offshore construction is likely to be dependent on the location of the construction port. At present, several construction port options are being considered, including up to five ports within the North Wales study area (which include Mostyn, Rhyl, Conwy, Port Penrhyn and Holyhead).

265 Table 35 below presents an overview of the magnitude of impact of construction activity on the displacement of visitor tourists for each of the potential port locations within the North Wales study area.

Table 35: Assessment of magnitude of impact on the impact of construction activity on the displacement of visitor tourists

LOCATION OF PORT	MAGNITUDE OF IMPACT	JUSTIFICATION
Mostyn	*Negligible*	*Mostyn is the most easterly option in North West Wales that is currently being considered. The port of Mostyn is not located within close proximity of major visitor areas and hence the availability of hotel accommodation is somewhat limited. However, the area surrounding the port is characterised by a number of small villages, many of which offer local accommodation. Furthermore, its proximity to the strategic road network means that its typical catchment has potential to extend over larger areas (and into North West England).*

LOCATION OF PORT	MAGNITUDE OF IMPACT	JUSTIFICATION
Rhyl	*Negligible*	*Rhyl and Conwy are two of the major visitor centres along the North Wales coast, and have a large quantity of serviced and self-catered accommodation. Furthermore, their location on the local road network (primarily in relation to the A55) means that any non-local workers can easily access these locations within a typical 60-minute catchment, thereby reducing the need to be based within very close proximity of each of the two ports.*
Conwy	*Negligible*	
Port Penrhyn	*Negligible*	*Port Penrhyn's location just outside Bangor, in addition to its location on the A55, would suggest that the presence of additional workers would have very little impact on the current accommodation offer.*
Holyhead	*Negligible*	*Holyhead's location at the North Eastern tip of Anglesey makes it the most 'remote' location. However, there is sufficient accommodation capacity to meet the additional demand in Holyhead and areas within a 1 hour drive time of the port (including Bangor and Caernarfon).*

Sensitivity of the receptor

266 The baseline analysis outlines that the latest report (Welsh Government, 2020a) on overnight accommodation in North Wales, identifies average occupancy rates of around 62% across the year. This is dependent on the time of the year, with the summer season likely to have higher occupancy rates.

267 It is noted that the figure of 62% excludes any non-serviced/ self-serviced and incidental accommodation. It is assumed that even at peak season, the demand generated by the additional (i.e. non-local) workers can be easily accommodated within both formal and informal accommodation without resulting in the displacement of tourism visitors from within the local study area.

268 On this basis, the sensitivity of the receptor is therefore assessed as **medium**.

Significance of residual effect

269 With the sensitivity of the receptor assessed as medium, and the magnitude of impact identified as low, the significance of the residual effect on the receptor (i.e. displacement of tourism visitors within the local study area as a whole) is therefore assessed as ***minor adverse***, which is Not Significant in EIA terms.

270 However, the impact arising from both onshore and offshore construction is likely to be concentrated locally. Whilst the overall impact related to onshore construction (i.e. where demand from non-North Wales-based workers is likely to average around 30 workers) is likely to be limited, the impact associated with offshore construction (i.e. up to 330 workers) is likely to be dependent on the port selected, the nature of, and tourism activity of the area in which the chosen port is located, in addition to quantity and the local accommodation offer.

271 Table 36 provides an overview of the assessment of significance of residual effect of the impact of construction activity on the displacement of visitor tourists locally. It shows that none of the construction port options currently being explored within North Wales are anticipated to have a significant residual effect on the displacement of visitor tourists.

Table 36: Assessment of significance of residual effect of the impact of construction on the displacement of visitor tourists locally

LOCATION OF PORT	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Mostyn	*Medium*	*Negligible*	***Minor adverse*** *(Not Significant)*
Rhyl	*Medium*	*Negligible*	***Minor adverse*** *(Not Significant)*
Conwy	*Medium*	*Negligible*	***Minor adverse*** *(Not Significant)*
Port Penrhyn	*Medium*	*Low*	***Minor adverse*** *(Not Significant)*
Holyhead	*Medium*	*Negligible*	***Minor adverse*** *(Not Significant)*

272 It is assumed that the effect of construction activity of AyM is direct and temporary in nature.

4.11 Environmental assessment: operational phase

4.11.1 Impact of operational activity on onshore recreation

Overview

273 Once constructed and fully commissioned, the only onshore surface infrastructure during AyM's operational phase will be the TJB manhole covers giving access to the joint pits and the onshore export cable within them, and the onshore substation. The onshore ECC will have been reinstated to its former use (predominantly agricultural land).

274 As set out within the MDS (see Section 4.8 and Table 21) and proposed embedded mitigation outlined above (see Section 4.9 and Table 22), the onshore export cables are designed to avoid maintenance throughout their operational life. Unplanned maintenance associated with the onshore ECC may involve the repair of onshore cable faults. This is extremely rare (indicatively one to two events per lifetime).

275 The onshore ECC will only require routine inspection every two to five years. Inspection of the onshore export cable can be undertaken at the link boxes and will not require excavation or other disruptive works.

Magnitude of impact

276 On the basis of the above, the magnitude of impact of routine inspection on onshore recreation receptors is therefore assessed as **negligible**.

277 If repairs are needed, these can usually be executed via the link boxes. In the unlikely event that excavation was required in the vicinity of the fault, this would entail no greater impact than during the construction phase and a limited disruption period. In this case, the magnitude of impact of any repairs work is predicted to be **low**.

Sensitivity of the receptor

278 The sensitivity of the onshore recreation receptors during the operational phase of AyM remains unchanged from that assessed during the construction phase, and ranges from **medium** to **high** (for receptors NCN5, Wales Coast Path, Bruton Park, Footpath 206/30 & 206/29, NCN84 and parts of the North Wales Path).

Significance of residual effect

279 Given that the onshore infrastructure is being designed to require no repairs, the assessment is based on operational activity having a **negligible** magnitude of impact. With the sensitivity of the receptors ranging from **medium** to **high**, the operational phase of AyM is therefore anticipated to have a residual effect of up to ***minor adverse*** significance which is Not Significant in EIA terms.

280 It is assumed that the effect of operational activities of AyM is direct and permanent in nature.

281 If repairs are required, the significance of the residual effect at the area impacted can rise to **moderate adverse** significance. In this case, the impact on the affected onshore receptors has potential to be of Significance in EIA terms (but only for receptors with a high sensitivity (i.e. NCN5, Wales Coast Path, Bruton Park, Footpath 206/30 & 206/29, NCN84 and parts of the North Wales Path). In such cases, the overall nature of the impact will be localised (to the area of repair) temporary and limited to no more than a few months until the necessary repairs are effected.

4.11.2 Impact of operational activity on offshore recreation

Overview

282 The operational lifetime of AyM is expected to be at least 25-years. The overall operational strategy will be finalised once an operational base for AyM is selected and the project's technical specifications confirmed. The socio-economics assessment (Volume 3, Chapter 3) is based on the assumption that the current O&M base in Mostyn is likely to be used, as this would allow efficiencies with current O&M of GyM. That being said, an alternative (or additional) site either along the North Wales coast and/or North West England may be chosen.

283 Overall, it is anticipated that maintenance activities will fall into two categories (i.e. preventative and corrective). Preventative maintenance will be carried out according to regular scheduled services, whereas corrective maintenance covers unexpected repairs, components replacement, retrofit campaigns and breakdowns.

284 The offshore project description suggests that there will be up to around 1,250 annual vessel round trips. The majority of these trips (around 1,100 trips) will be via crew transfer vessels which will allow for preventative maintenance (rather than the replacement/ repair of key components). In addition, the offshore project description indicates that up to ten cable repairs may be needed (for both array and export cables) throughout the project's lifetime, which may lead to reduced amenity and access to the offshore area.

Magnitude of impact

285 When replacement of larger components is required, jack up vessels and/ or special operation vessels may be needed, often requiring the implementation of a safety zone. In the majority of cases, preventative maintenance can be undertaken via normal service vessels, and will therefore not result in any impact to offshore receptors.

286 On the basis of the above, the magnitude of impact of AyM operational activity on offshore recreation activity is therefore assessed as **negligible** for the majority of offshore receptors identified. This would have potential to increase to **low** when repairs (i.e. either of large components and/or offshore cables) are required (due to a potential reduction in the area in which these activities can take place, especially when major repair works are needed).

Sensitivity of the receptor

287 The sensitivity of offshore recreation receptors during the operational phase of AyM remains unchanged from that assessed during the construction phase, and ranges from low (for bathing and recreational sailing), to medium (for water sports, and recreational angling).

Significance of residual effect

288 Table 37 below provides an overview of the assessment of significance of residual effect of operational activity on offshore recreation receptors.

Table 37: Assessment of significance of residual effect during AyM operations

RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Bathing	*Low*	*Negligible*	***Negligible** (Not Significant).*
Water sports	*Medium*	*Negligible*	***Negligible** (Not Significant).*

RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Scuba diving	*Medium*	*Negligible*	***Minor adverse** (Not Significant).*
Recreational sailing	*Low*	*Negligible*	***Negligible** (Not Significant).*

289 It is assumed that the effect of operational activities of AyM is direct and permanent in nature.

4.11.3 Impact of operational activity on visitor receptors

Overview

290 As outlined in Section 4.11.1, once onshore construction work on AyM is completed and the wind farm fully commissioned, the only visible infrastructure onshore will be the substation linking the project to the National Grid, and man hole covers on the TJBs.

Magnitude of impact

291 Under normal operations, routine maintenance work will have an overall limited impact on tourism receptors. On this basis, the magnitude of impact of routine maintenance on tourism receptors is therefore assessed as **negligible**.

292 However, should extensive repair works be needed, this may require the excavation of the impacted section (in addition to 40 m on either side) for cable replacement and the installation of two additional link boxes. In this case, the overall magnitude of impact would be **low** and no greater than that identified during the construction phase and over a limited period of time.

Sensitivity of receptor

293 The sensitivity of tourism receptors during the operational phase of AyM remains unchanged from that assessed during the construction phase (i.e. as outlined in Table 31).

Significance of residual effect

294 Given that the onshore infrastructure is being designed to require no repairs, the assessment is based on operational activities having a **negligible** magnitude of impact. With the sensitivity of the receptors ranging from **low** to **medium**, the operational phase of AyM is therefore anticipated to have a residual effect of up to ***minor adverse*** significance, which is Not Significant in EIA terms.

4.11.4 Impact of operational activity on the volume and value of tourism economy

Overview

295 Once construction on AyM is finished, the majority of the cable-related infrastructure onshore will be buried (with the exception of infrastructure such as manholes, accesses, cable markers), and original conditions reinstated. The only infrastructure visible for AyM will be the offshore WTG, and the offshore and onshore substations. When maintenance and/ or repairs are required, any disturbance will be constrained to the area immediately around infrastructure, and alternative measures put in place to ensure any disruption to the visitor activity (and therefore the visitor economy) kept to a minimum.

Magnitude of impact

296 Overall, the analysis presented in Section 4.10.4 suggests that wind farm developments do not have a significant effect on the overall volume and value of tourism activity. Various studies (such as University of the West of England (2004); Ipsos MORI (2014) and Glasgow Caledonian University (2008)) suggest that the majority of visitors do not expect their behaviour to be influenced (either positively or negatively) by the presence of wind farm developments.

297 In addition, Volume 5, Annex 4.2 presents tourism employment evidence across seaside towns located close to operational offshore wind farms located in the UK. As noted earlier, this aggregate tourism employment in the seaside towns included in the analysis (based on the average annual levels before, during and after construction) either showed little change or was higher in the period post-construction in most areas. This provides strong evidence that the indirect impacts of offshore wind farms on tourism employment are likely to be neutral or very limited in most instances.

298 On the basis of the analysis above and presented in Section 4.10.4, the magnitude impact from the operational phase of AyM on the volume and value of tourism economy within the local study area is therefore assessed as **negligible.**

299 However, the baseline analysis (Section 4.7) has identified a number of specific locations where the visitor economy plays a major role, and has potential to experience a different order of magnitude than that outlined above. The assessment is as follows:

- Rhyl, Prestatyn, Kinmel Bay and Abergele – **negligible**;
- Abergele to Rhos-on-Sea (including Colwyn Bay) – **negligible**; and
- Great Orme and Llandudno – **low** in the short term (up to two years) and **negligible** in the longer term.

During operation, the AyM WTGs will be visible from both the Great Orme and along the Llandudno waterfront, adding WTGs to the area's current seascape rather than changing it. Whilst the majority of the body of evidence suggests that offshore wind farms do not impact recreational users and tourists, the scale and proximity of AyM to Llandudno, suggests there is the risk that some holiday and day visitors being discouraged from visiting. The popularity of Llandudno amongst older visitors is a consideration here, although the evidence of growing support for renewable energy and reduced opposition to offshore wind farms (in the context of a climate emergency) amongst this group will help to minimise the potential impact. There is also the potential for these discouraged visitors to be replaced by other visitors as the local tourism sector and market adapts (as well as these discouraged visitors deciding to visit other unaffected areas of North Wales). Llandudno also has specific facilities and an overall offer which are not available elsewhere and/ or are

unique to the area (including conferences, exhibitions and live music), from which the visitors are unlikely to be deterred by the operation of AyM.

300 Overall, it is not anticipated that the addition of AyM on the local horizon will impact on overall visitor numbers, but due to some potential for change in the mix of visitors in the short term (up to two years) the magnitude of impact is assessed as low. In the longer term, as the sector and market adapt, the impact is expected to be negligible.

301 There are opportunities for AyM to manage the risks of a negative short-term impact on tourism due to construction activity and to potentially deliver a positive benefit to the tourism sector within Llandudno and Great Orme area, which will be explored with local stakeholders. These could include the provision of information and interpretation (e.g. providing signage), and undertaking promotional activities which would explain the construction and operation of AyM and its role in the renewable energy transition and addressing climate change. The provision of a tourism liaison officer would aid in the delivery of benefits to the tourism sector. These actions could potentially benefit the sector during the operation phase of AyM.

Sensitivity of the receptor

302 The sensitivity of the tourism economy, once AyM is operational, will be the same as that identified during the construction phase. As such, the sensitivity of the receptor is therefore assessed as **high**.

Significance of residual effect

303 With the sensitivity of the receptor assessed as **high** and the magnitude of impact assessed as **negligible** for Rhyl, Prestatyn, Kinmel Bay and Abergele area and the Abergele to Rhos-on-Sea (including Colwyn Bay) area, the effect of AyM operational activity, through the presence of WTGs, on the receptor is of **minor adverse significance**, which is not significant in EIA terms.

304 It is assumed that the operational effect of AyM is long term, direct and reversible in nature.

305 With the sensitivity of the receptor assessed as **high** and the magnitude of impact assessed as **low in the short term (up to two years)** for the Llandudno and Great Orme area, the effect of the operational phase of AyM on the receptor is of **moderate adverse**, which is significant in EIA terms. In the longer term, the magnitude of impact is expected to change to negligible as the sector and market adapts and hence the effect is **Minor adverse** which is not significant in EIA terms.

306 It is assumed that the operational effect of AyM is short term, indirect and reversible in nature.

4.12 Environmental assessment: decommissioning phase

307 The assessment of the decommissioning phase of AyM is in line with the methodology outlined above (see Section 4.4) and the offshore and onshore project descriptions (set out in Volume 2, Chapter 1 and Volume 3, Chapter 1 respectively).

308 At this stage, it is worth noting that there is uncertainty associated with the potential effects of the decommissioning process. This includes uncertainty with regards to the approach, the technology to be used, and likely associated costs.

309 It is assumed that at the end of its operational lifetime, all structures (including export cables) will be completely removed, although it may be decided that the removal of infrastructure (such as the export cable) would lead to a greater environmental impact than leaving some components *in situ*.

310 In principle, it is assumed that the residual effect during the decommissioning phase for all tourism and recreation receptors considered will mirror (but are likely to be lower in magnitude to) the project's construction phase. On this basis, the assessment, and residual effect of the decommissioning phase, is assessed as set out in Table 38 below.

Table 38: Assessment of significance of residual effect during AyM's decommissioning phase

RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
IMPACT OF DECOMMISSIONING ON ONSHORE RECREATION			
Ffrith Beach	*Low*	*Medium*	***Minor adverse** (Not Significant)*
Ffrith Park paths	*Low*	*Medium*	***Minor adverse** (Not Significant)*
NCN5	*High*	*Negligible*	***Minor adverse** (Not significant)*
Wales Coast Path	*High*	*Negligible*	***Minor adverse** (Not significant)*
Link Path	*Medium*	*Low*	***Minor adverse** (Not Significant)*
A548 cycleway	*Medium*	*Low*	***Minor adverse** (Not Significant)*
Bruton Park	*High*	*Negligible*	***Minor adverse** (Not Significant)*
BOAT 206/20	*Medium*	*Low*	***Minor adverse** (Not Significant)*
Pentre Lane	*Medium*	*Low*	***Minor adverse** (Not Significant)*
Bridleway 206/12 (part of North Wales Path)	*Medium*	*Low*	***Minor adverse** (Not Significant)*

RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Footpath 206/30 & 206/29 *NCN84* *North Wales Path*	*High*	*Negligible*	***Minor adverse** (Not Significant)*
River Clwyd	*Medium*	*Negligible*	***Minor adverse** (Not Significant)*
Footpath 201/12	*Medium*	*Negligible*	***Minor adverse** (Not Significant)*
Bridleway 201/10	*Medium*	*Low*	***Minor adverse** (Not Significant)*
Bridleway 201/9	*Medium*	*Low*	***Minor adverse** (Not Significant)*
IMPACT OF DECOMMISSIONING ON OFFSHORE RECREATION			
Bathing	*Low*	*Medium*	***Minor adverse** (Not Significant)*
Water sports	*Low*	*Medium*	***Minor adverse** (Not Significant)*
Scuba diving	*Low*	*Medium*	***Minor adverse** (Not Significant)*
Recreational sailing	*Low*	*Medium*	***Minor adverse** (Not Significant)*
IMPACT OF DECOMISSIONING ON TOURISM RECEPTORS			

RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Rhyl Golf Club	*Low*	*Negligible*	***Negligible** (Not Significant)*
Ffrith Park/Ffrith Beach Arena Park	*Low*	*Negligible*	***Negligible** (Not Significant)*
Pen-Y-Ffrith Caravan Park	*Negligible*	*Low*	***Negligible** (Not Significant)*
Ffrith Beach Touring Caravan Park	*Negligible*	*Low*	***Negligible** (Not Significant)*
Astrobowl	*Negligible*	*Medium*	***Minor adverse** (Not Significant)*
North Wales Bowls Centre	*Low*	*Low*	***Minor adverse** (Not Significant)*
Pirate Island Golf at Lyons Robin Hood Park	*Low*	*Medium*	***Minor adverse** (Not Significant)*
Lyons Robin Hood Holiday Park	*Low*	*Low*	***Minor adverse** (Not Significant)*
New Pines Holiday Home Park	*Low*	*Low*	***Minor adverse** (Not Significant)*
Rhuddlan Castle	*Medium*	*Low*	***Minor adverse** (Not Significant)*

RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Rhuddlan Local Natural Reserve	*Low*	*Negligible*	***Negligible** (Not Significant)*
Rhuddlan Golf Club	*Low*	*Low*	***Minor adverse** (Not Significant)*
IMPACT OF DECOMMISSIONING ON THE VOLUME AND VALUE OF THE TOURISM ECONOMY			
Volume and value of tourism economy (local study area level)	*High*	*Negligible*	***Minor adverse** (not significant)*
Rhyl, Prestatyn, Kinmel Bay and Abergele	*High*	*Negligible*	***Minor adverse** (Not Significant)*
Abergele to Rhos-on-Sea	*High*	*Negligible*	***Minor adverse** (Not Significant)*
Great Orme and Llandudno	*High*	*Negligible*	***Minor adverse** (Not Significant)*
IMPACT OF DECOMMISSIONING ON THE DISPLACEMENT OF TOURISM VISITORS			
Displacement of tourism visitors			
Mostyn	*Medium*	*Negligible*	***Minor adverse** (Not Significant)*

RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF IMPACT	SIGNIFICANCE OF EFFECT
Rhyl	*Medium*	*Negligible*	***Minor adverse*** *(Not Significant)*
Conwy	*Medium*	*Negligible*	***Minor adverse*** *(Not Significant)*
Port Penrhyn	*Medium*	*Negligible*	***Minor adverse*** *(Not Significant)*
Holyhead	*Medium*	*Negligible*	***Minor adverse*** *(Not Significant)*

4.13 Environmental assessment: cumulative effects

311 The approach to the cumulative assessment for AyM takes into account the Cumulative Impact Assessment Guidelines issued by RenewableUK in June 2013, together with comments made in response to other renewable energy developments, and PINS's 'Advice Note 9: Rochdale Approach'.

312 The approach to the tourism and recreation cumulative effect assessment is in line with that outlined in Volume 1, Chapter 3: Cumulative Effects Assessment. The projects and plans selected as relevant to the assessment of impacts to tourism and recreation are based upon an initial screening exercise on a long-list of potential projects. Each project, plan or activity has been considered and scoped in or out on the basis of effect-receptor pathway, data confidence and the temporal and spatial scales involved.

313 For the purposes of assessing the impact of AyM on tourism and recreation, the cumulative effect assessment technical note submitted through the EIA Evidence Plan and forming Technical Annex 1.3.1 of this ES, screened in a number of projects and plans as presented in Table 39.

314 The specific projects scoped into this cumulative effect assessment, and the tiers into which they have been allocated, are presented in Table 39 below. The operational project included within the table is included due to its completion subsequent to the data collection process for AyM and, as such, is not included within the baseline characterisation.

Table 39: Projects considered within the tourism and recreation cumulative effect assessment.

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
(Hydro) Energy Storage	*Glyn Rhonwy Pumped Storage*	*Consented, currently working on fulfilling the various tasks required to start construction of the project*	*High – DCO granted in 2017*	*Tier 1*
Offshore Wind Farm	*North Hoyle Decommissioning*	*Currently in operation, but due to be decommissioned by 2029*	*High*	*Tier 1*
Tidal Energy	*Port of Mostyn Tidal Lagoon*	*In planning*	*High*	*Tier 1*
Tidal Energy	*West Anglesey Demonstration Zone*	*Consented*	*High*	*Tier 1*
Tidal Energy	*Holyhead Deep*	*Consented*	*High*	*Tier 1*
Other energy generation	*5 MW flexible gas-fired power plant at St Asaph Business Park*	*Consented*	*High*	*Tier 1*

DEVELOPMENT TYPE	PROJECT	STATUS	DATA CONFIDENCE ASSESSMENT/ PHASE	TIER
Other energy generation	*Elwy Solar Farm*	*Examination by Planning Environmental Decisions Wales (PEDW)*	*Medium*	*Tier 1*
Building/ housing developments	*Five self-contained residential units*		*High*	*Tier 1*
Other energy generation	*Installation of 14 solar panels*		*High*	*Tier 1*

315 The cumulative MDS outlined in Table 40 identifies the relevant tourism and recreation impacts along with the scenarios and justifications considered.

Table 40: Cumulative MDS.

IMPACT	SCENARIO	JUSTIFICATION
CONSTRUCTION		
Cumulative impact of construction on onshore recreation	*The MDS sees all onshore projects being built (or, in the case of the North Hoyle offshore wind farm: being decommissioned) at around the same time as AyM (i.e. between 2026 and 2030).*	*Concurrent construction has potential to generate the largest impact on onshore recreation receptors.* *Please note that the assessment of cumulative construction on onshore recreation and tourism receptors considers the impacts at the LAI level (which is defined as a 500 m buffer either side of the OL (including the onshore substation)). Any projects located over 1 km from the OL (such as the Glyn Rhonwy Pumped Storage) have been excluded.*
Cumulative impact on tourism receptors		
Cumulative impact on offshore recreation receptors	*The MDS is based on the concurrent construction (or decommissioning in the case of the North Hoyle offshore wind farm) of all offshore projects at around the same time as AyM (i.e. between 2026 and 2030).*	*Concurrent construction (or decommissioning in the case of North Hoyle) represents the MDS. Any onshore projects and/or other projects with non-overlapping catchments (such as the Port of Mostyn Tidal Lagoon, West Anglesey Demonstration Zone and Holyhead Deep) have been excluded from the cumulative assessment.*

IMPACT	SCENARIO	JUSTIFICATION
Cumulative impact on the volume and value of tourism economy	*As per the MDS outlined above, it is assumed that all projects listed in Table 39 are in construction concurrently.*	*Concurrent construction (or, in the case of the North Hoyle offshore wind farm: decommissioning) represent the MDS in terms of potential impact on the tourism economy.* *Given the projects' location within the North Wales study area, it is assumed that all projects would have similar impact areas.*
Cumulative impact on the displacement of tourism visitors	*The MDS sees all projects being built concurrently. This would have the largest potential in terms of non-North Wales based workers placing increased demand for accommodation.*	*Concurrent construction would have the largest impact in terms of the potential for displacement of tourism visitors.*
OPERATION AND MAINTENANCE		
Cumulative impact of operational activity on onshore recreation	*It is assumed that all projects will be operational at the same time as AyM.*	*The MDS outlined here has the largest potential for impact on the different (i.e. both onshore and offshore) receptors identified as part of the tourism and recreation assessment.*

IMPACT	SCENARIO	JUSTIFICATION
Cumulative impact of operational activity on offshore recreation	*The only exception to the above is the North Hoyle offshore wind farm which, once fully decommissioned, will no longer have any potential impact on the volume and value of the tourism economy in North Wales.*	
Cumulative impact of operational phase on tourism receptors		
Cumulative impact of operational phase on volume and value of tourism economy		
DECOMMISSIONING		
At this stage there is considerable uncertainty with regards to the cumulative impacts arising from the decommissioning phases of the projects identified in Table 39. This relates to not only uncertainty with regards to the specific approaches to the decommissioning process, technology available and costs, but also with regards to the different projects' lifecycles. Should it be the case that all projects identified in Table 38 (with the exception of the North Hoyle offshore wind farm and the new dwellings built) reach their decommissioning phase at the same time as AyM (which, for the purposes of the assessment, is estimated to be 2055), then the overall magnitude of impact,		

IMPACT	SCENARIO	JUSTIFICATION
and scale of effect is anticipated to be similar, albeit lower, than that identified in the assessment of the projects' construction phases.		

4.13.1 Cumulative impact of construction on onshore recreation receptors

Overview

316 Of the projects identified in Table 39, only six are located within c. 1 km of the OL of AyM, and therefore have potential to generate a cumulative impact on onshore recreation receptors. These include:

- North Hoyle offshore wind farm decommissioning;(5 MW) flexible gas power plant;
- Elwy solar farm; and
- Construction of five self-contained residential units.

317 Information about the level of impact of construction (or decommissioning) activity on onshore recreation receptors is limited and varies on a project –by-project basis. The following section provides an overview of each project's potential impact on onshore recreation receptors based on a review of each project's assessment where available.

- At present, little to no information is available about the anticipated decommissioning of the North Hoyle offshore wind farm (due to commence in 2029). For the purposes of the assessment, it is assumed that the decommissioning of North Hoyle offshore wind farm will see all onshore (and offshore) infrastructure removed (unless leaving the infrastructure in situ would represent a lower, overall impact). This would be anticipated to result in some disruption to onshore recreation receptors, some of which may be located within the LAI considered in the assessment of AyM. That being said, it is assumed that any disruption, closures and/or diversion to onshore recreation receptors will be temporary and any adverse impacts mitigated against.

- The Construction Transport Management Plan (Caelus Limited, 2018) submitted to support the construction of the (5 MW) flexible gas power plant (anticipated to be located within close proximity of the AyM onshore substation) states that in order to avoid constraints on any PRoW a number of measures will be implemented. These include allowing only on-site parking (i.e. no overspill onto the public highway), the use of mini-van/mini-bus to shuttle long-term and contract workers to/from the site, as well as the engagement of a full-time site access person to ensure their implementation. In addition, the Construction Transport Management Plan indicates that the site compound will be laid out to allow delivery vehicles to enter and leave the site safely, and that priority will always be given to other road or PRoW users.
- The Elwy solar farm (Solarcentury) is currently being examined. The application documents suggest that, apart from two PRoW which intersect the site, the site is not subject to any statutory designations. The applicant committed that an application will be made to re-route two sections of PRoW, linking one footpath which currently terminates at the side of the dual carriageway with another footpath, allowing safer passage.
- The construction of five self-contained residential units off Kinmel Avenue (in Abergele) will represent a small local development. The scale of AyM suggests that any impacts on onshore recreation receptors will be localised and limited.

Magnitude of impact

318 Whilst the construction of the projects identified in Table 39 and described above have potential to impact upon onshore recreation receptors, this is anticipated to be short-term, temporary and reversible. Where construction activity would lead to a permanent diversion/closure of any PRoW (or other onshore recreation receptors), such as at Elwy Solar Farm, it is assumed that alternatives will be put in place in order to mitigate any adverse impacts.

319 On the basis of the above, the magnitude of impact of cumulative construction on onshore recreation receptors within the LAI is therefore assessed as **negligible** (and definitely not higher than the assessment presented in Section 4.10 when individual receptors are considered).

Sensitivity of the receptor

320 The evidence underpinning the sensitivity of the receptor remains unchanged from that identified in the assessment presented in Section 4.10 which ranges from **low** to **high**.

Significance of the residual effect

321 Based on the matrix presented in Table 13, the highest possible residual effect which can be generated is ***minor adverse***, which is Not Significant in EIA terms.

4.13.2 Cumulative impact of construction on offshore recreation receptors

Overview

322 Of the projects identified in Table 39, only the decommissioning of North Hoyle offshore wind farm has potential to spatially overlap with, and therefore have a cumulative impact on, offshore recreation receptors.

323 As outlined above, there is very little information available about the decommissioning approach of the North Hoyle offshore wind farm. That being said, it is assumed that the decommissioning phase will see all offshore infrastructure removed, unless removal will have a greater environmental impact than leaving the infrastructure *in situ*.

Magnitude of impact

324 Based on the above, and the approach adopted in this assessment (see Section 4.12), it is assumed that the decommissioning of North Hoyle will be similar to that of AyM. However, given the size of the North Hoyle offshore wind farm (60 MW), the overall magnitude of impact is expected to be substantially less than that identified for the construction of AyM.

325 On this basis, the magnitude of impact of cumulative construction and decommissioning activity on offshore recreation is therefore assessed as **negligible** (and definitely not higher than the assessment presented in Section 4.10 when individual receptors are considered).

Sensitivity of the receptor

326 The evidence underpinning the sensitivity of the offshore receptors remains as outlined in the assessment of AyM's construction and operational phases.

Significance of the residual effect

327 Based on the matrix presented in Table 12, the significance of residual effect of cumulative projects on offshore receptors is therefore assessed as ***negligible adverse*** (**not significant**).

4.13.3 Cumulative impact of construction on the volume and value of the tourism economy

Overview

328 Of the projects considered alongside AyM as part of the cumulative assessment, only the assessment of the Glyn Rhonwy Pumped Storage scheme has considered the project's effect on the tourism industry. Overall, the assessment found that construction activity may have the following effects:

- Temporary reduction of visitor numbers to tourism facilities due to increased construction traffic;
- Temporary closure/diversions of PRoW, permissive routes, cycle routes and CROW land within the development site; and
- Effect on the tourism industry from accommodation requirement.

329 The largest effect identified for the Glyn Rhonwy Pumped Storage scheme was minor adverse (Not Significant) on visitor numbers and closure/diversions of PRoW and other access and cycling routes. Please note that the ZOI of these receptors is local to the proposed development, and does not cover the same area as that considered in the assessment of AyM (i.e. North Wales).

330 None of the other projects considered in this cumulative assessment that are not yet operational have assessed their effect, either individually and/or alongside other projects, on the volume and value of tourism economy. The smaller/local projects considered (such as the construction of five self-contained residential units and the installation of 14 solar panels) are not anticipated to have an impact on the overall volume and value of the tourism economy.

331 For the larger infrastructure projects (such as North Hoyle decommissioning, Port of Mostyn Tidal Lagoon, West Anglesey Demonstration Zone and Holyhead Deep) there may be a local impact. That being said, evidence presented in 4.7.4 indicates that wind farm developments will not have a significant effect on the overall volume and value of tourism activity in most instances. Various studies (such as University of the West of England (2004); Ipsos MORI (2014); Glasgow Caledonian University (2008); Ladenburg (2010) and Regeneris Consulting and The Tourism Company (2014)) suggest that the majority of visitors do not expect their behaviour to be influenced (either positively or negatively) by the presence of wind farm developments.

332 Whilst the list of projects in Table 38 includes non-offshore wind projects, it is assumed that the same principles outlined above apply. This is especially the case as none of the projects identified are of the same scale as, and/or will have the same level of visibility as AyM.

Magnitude of impact

333 On the basis of the above, the magnitude of construction (and decommissioning) activity on the volume and value of the visitor economy in North Wales as a result of the cumulative projects considered is therefore assessed as **negligible**.

Sensitivity of the receptor

334 The sensitivity of the receptor remains unchanged from that identified in the assessment of the construction, operation and decommissioning phases of AyM (in Sections 4.10, 4.11 and 4.12 respectively). As such, the sensitivity of the receptor is therefore assessed as **high**.

Significance of the residual effect

335 With the sensitivity of the receptor assessed as **high** and the magnitude of impact assessed as **negligible**, the effect of the cumulative projects considered on the volume and value of the tourism economy in North Wales is therefore assessed as ***minor adverse***, which is not significant in EIA terms.

4.13.4 Cumulative impact of construction on the displacement of tourism visitors

Overview

336 The concurrent construction of all projects identified in Table 38 has potential to generate demand for non-North Wales workers to (at least) temporarily re-locate to North Wales. This is especially relevant for the larger projects (such as the construction of the Glyn Rhonwy Pumped Storage, North Hoyle decommissioning, Port of Mostyn Tidal Lagoon, West Anglesey Demonstration Zone, Holyhead Deep and the (5 MW) flexible gas fired power plant at St Asaph) which may require specialised labour. It is assumed that the smaller projects can be delivered by local labour and less specialised skills.

337 The socio-economics assessment (see Volume 3, Chapter 3) considered the cumulative impact of the larger projects identified in Table 39 on both overall employment, and the increased demand on local health services. The projects' impact on the displacement of tourism visitors is expected to have an overall similar level of magnitude, as these all depend on non-local workers requiring access to local services. In terms of total employment impact, the socio-economics (Volume 3, Chapter 3) assessment found the following:

- Construction of the Glyn Rhonwy Pumped Storage can expect construction employment to reach 250 FTE jobs at peak construction.
- Given the size of the North Hoyle offshore wind farm (i.e. 60 MW), the temporary employment associated with its decommissioning will be limited.
- Press reports about the construction of the Port of Mostyn Tidal Lagoon suggest that it has potential to support around 300 jobs during construction.

- The West Anglesey Demonstration Zone will consist of an initial construction phase (which sees grid connection infrastructure built), followed by a development period which can see up to 240 MW of generation capacity installed.
- The Holyhead Deep project will follow a similar development pattern to that outlined for the West Anglesey Demonstration Zone, with on-site generation capacity building slowly to 10 MW, eventually reaching up to 80 WM (should additional consent(s) be sought and provided).
- Whilst there is little to no information about the level of employment required to deliver the construction of the consented (5 MW) flexible gas fired power plant and the planned Elwy Solar Farm, it is assumed that the level of investment required and subsequent employment supported can be expected to be limited.

338 Of the projects listed above, only the assessment of the Glyn Rhonwy Pumped Storage has considered the potential impact additional workers may have on the tourism industry from accommodation requirements, for which the assessment found a negligible adverse residual effect.

Magnitude of impact

339 Given that the Glyn Rhonwy Pumped Storage is one of the largest projects identified within the cumulative assessment, it is assumed that together the other projects will have an overall negligible magnitude of impact. Once the magnitude of impact of AyM is included within the assessment, it is assumed that all projects considered will generate an overall **low** magnitude of impact.

Sensitivity of the receptor

340 The evidence underpinning the assessment of sensitivity of the receptor remains unchanged from that identified in the assessment of the construction, operation and decommissioning of AyM (see Sections 4.10, 4.11 and 4.12 respectively). On this basis, the sensitivity of the receptor is therefore assessed as **medium**.

Significance of the residual effect

341 With the sensitivity of the receptor assessed as medium, and the magnitude of impact assessed as low, the significance of the residual effect on the receptor (i.e. displacement of tourism visitors within the local study area) is therefore assessed as ***minor adverse***, which is not significant in EIA terms.

4.13.5 Cumulative impact of operational activity on onshore recreation

Overview

342 In general, for the majority of projects included in Table 39, it is anticipated that any restrictions, closures and/or temporary diversions will be reinstated during the projects' operations phase. Where this is not possible, it is assumed that equivalent alternatives will be provided.

Magnitude of impact

343 On the basis of the above, the magnitude of impact of operational activity on the onshore receptor is therefore assessed as **negligible**.

Sensitivity of the receptor

344 The evidence underpinning the assessment of sensitivity of the receptor remains unchanged from that included in the assessment of AyM and the construction phase of the cumulative projects outlined above, which ranges from **medium** to **high**.

Significance of the residual effect

345 With the highest-level sensitivity assessed as **high**, and the magnitude of impact assessed as **negligible**, the significance of the residual effect of the cumulative impact of operational activity on onshore recreation is therefore assessed as ***minor adverse***, which is not significant in EIA terms.

4.13.6 Cumulative impact of operational activity on offshore recreation

346 Given that the only project in Table 39 that has potential to spatially overlap offshore with AyM (i.e. the North Hoyle offshore wind farm) will no longer be operational by the time AyM reaches its operational phase, the assessment of the cumulative impacts on operational activity on offshore recreation is therefore not considered any further.

4.13.7 Cumulative impact of operational phase on volume and value of the tourism economy

Magnitude of impact

347 The analysis of the magnitude of impact of the projects in Table 39 on the volume and value of the tourism economy in North Wales during their construction phase (as outlined in paragraphs 328 to 333) indicates that their overall magnitude of impact on the volume and value of the tourism economy in North Wales is anticipated to be **negligible**. This is also expected to be the case during the projects' operational phases.

Sensitivity of the receptor

348 As outlined above, the sensitivity of the volume and value of the tourism economy at the North Wales level is identified as **high**.

Significance of the residual effect

349 With the sensitivity of the receptor assessed as **high** and the magnitude of impact assessed as **negligible**, the effect of the operational phase of AyM alongside the projects considered in Table 39 on the volume and value of the tourism economy in North Wales is of ***minor adverse*** which is not significant in EIA terms.

4.14 Inter-relationships

350 The potential for inter-related impacts has already been undertaken throughout this chapter, through the consideration of the following ES chapters:

- Volume 2, Chapter 3: Marine Water and Sediment Quality (application ref: 6.2.3);
- Volume 2, Chapter 8: Commercial Fisheries (application ref: 6.2.8);
- Volume 2, Chapter 9: Shipping and Navigation (application ref: 6.2.9);
- Volume 2, Chapter 10: Seascape, Landscape and Visual Impact Assessment (application ref: 6.2.10);
- Volume 2, Chapter 12: Other Marine Users and Activities (application ref: 6.2.12);
- Volume 3, Chapter 2: Landscape and Visual Impact Assessment (application ref: 6.3.2);
- Volume 3, Chapter 3: Socio-Economics (application ref: 6.3.3);
- Volume 3, Chapter 8: Onshore Archaeology and Cultural Heritage (application ref: 6.3.8);
- Volume 3, Chapter 9: Traffic and Transport (application ref: 6.3.9);
- Volume 3, Chapter 10: Noise and Vibration (application ref: 6.3.10);
- Volume 3, Chapter 11: Air Quality (application ref: 6.3.11); and
- Volume 3, Chapter 12: Public Health (application ref: 6.3.12).

4.15 Transboundary effects

351 Transboundary effects arise when impacts from a proposed development within one European Economic Area (EEA) state affects the environment of another EEA state(s).

352 For the assessment of tourism and recreation receptors, the only potential for transboundary effects is the potential for the displacement of tourism visitors by construction workers in the vicinity of the construction port (should this be located outside of the UK). In practice, the number of workers seeking local accommodation in the vicinity of the (non-UK) construction port can be expected to be lower than the figure identified for North Wales (see Section 4.10), as this would exclude any workers involved in onshore construction activity (estimated to be 30 FTE jobs) who would still need to be based in North Wales. On this basis, the overall effect can be expected to be of a similar magnitude to that identified in the assessment above (see Section 4.10) which is not significant, however it would be for the Port to assess this.

353 The AyM project will not be visible from any EEA states (including the Republic of Ireland), and all of its onshore infrastructure will be located entirely within the UK. On this basis, the construction, operation and decommissioning of AyM is not anticipated to impact on any other tourism and recreation receptors in any other EEA state(s) and, as such, the transboundary impacts associated with tourism and recreation are therefore not considered further.

4.16 Summary of effects

354 Table 41 presents a summary of this assessment of significant impacts, any relevant embedded environmental measures and residual effects on tourism and recreation receptors

Table 41: Summary of effects.

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTOR	MITIGATION MEASURES	RESIDUAL EFFECT
CONSTRUCTION				
Impact of construction on onshore recreation	*Landfall construction* ***negligible to medium*** *depending on receptor; Cable installation –* ***no change*** *(River Clwyd), negligible (Bruton Park, NCN84 and North Wales Path),* ***low*** *(cycleways and PRoW).*	***High*** *- NCN5, Wales Coast Path, Bruton Park/ Maes Bruton and Footpaths 206/30 & 206/29. NCN84 and North Wales Path;* ***Low or Medium*** *– Ffrith Beach, Ffrith Park, Link Path, A548 Cycleway, BOAT 206/44, Footpaths 206/20 and 201/12, Pentre Lane, Bridleways 206/12, 201/10 and 201/9.*		***Minor adverse*** *(Not Significant) effect on all onshore recreation receptors identified.*

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTOR	MITIGATION MEASURES	RESIDUAL EFFECT
Impact of construction on offshore recreation	*Landfall construction – **negligible**;* *Turbine foundation and seabed preparation – **low**;* *Installation of turbine and (offshore) substation foundations – **medium**;* *Installation of export and array cables – **medium**; and* *Installation of WTG and offshore substation(s) – **medium**.*	***Low** – bathing, water sports, scuba diving and recreational sailing.*		***Minor adverse** (Not Significant) for all offshore receptors.*
Impact of construction activity on tourism receptors	***Negligible** – Ffrith Park/ Ffrith Beach Arena Park, Rhuddlan Local Natural Reserve, Pen-Y-Ffrith Caravan Park, Astrobowl and Rhyl Golf Club;*	***Low** – North Wales Bowls Centre, Rhyl Golf Club, Ffrith Park/ Ffrith Beach Arena Park, Pirate Island Golf,*		***Minor adverse** (Not Significant) for Pirate Island Golf, Astrobowl, Lyons Robin Hood Holiday Park, New Pines Holiday Home*

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTOR	MITIGATION MEASURES	RESIDUAL EFFECT
	***Low** – North Wales Bowls Centre, Rhuddlan Castle and Rhuddlan Golf Course;* ***Medium** – Pirate Island Golf*	*Rhuddlan Local Natural Reserve, Lyons Robin Hood Holiday Park, New Pines Holiday Home Park and Rhuddlan Golf Club; and* ***Medium** – Rhuddlan Castle and Astrobowl*		*Park, North Wales Bowls Centre, Rhuddlan Castle, and Rhuddlan Golf Club;* ***Negligible** (Not Significant) for Rhyl Golf Club, Pen-Y-Ffrith Caravan Park, Ffrith Beach Touring Caravan Park, Ffrith Park/ Ffrith Beach Arena Park, ad Rhuddlan Local Natural Reserve.*
Impact of construction activity on volume and value of the tourism economy	***Negligible** on local impact area as a whole* *Rhyl, Prestatyn, Kinmel Bay and Abergele – negligible*	*High*		***Minor adverse** on local impact area as a whole (Not Significant)* ***Moderate adverse** (Significant) for Great*

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTOR	MITIGATION MEASURES	RESIDUAL EFFECT
	Abergele to Rhos-on-Sea (including Colwyn Bay) – negligible; and *Great Orme and Llandudno – **low** in short term only*			*Orme and Llandudno in short term only.* ***Minor adverse** (Not Significant) for Rhyl, Prestatyn, Kinmel Bay and Abergele; and Abergele to Rhos-on-Sea.*
Impact of construction activity on displacement of tourism visitors	***Low** (overall)* ▲ Mostyn – negligible; ▲ Rhyl – negligible; ▲ Conwy – negligible; ▲ Port Penrhyn – low; and ▲ Holyhead – negligible.	*Medium*		*(Overall) **Minor adverse** (Not Significant)* ***Minor adverse** (Not Significant) for Mostyn, Rhyl, Conwy, Port Penrhyn and Holyhead*
OPERATION				

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTOR	MITIGATION MEASURES	RESIDUAL EFFECT
Impact of operational activity on onshore recreation	*Generally **negligible** increasing to **low** when repairs are required*	*Same as per construction phase*		*Generally **negligible/ minor adverse** (Not Significant), increasing to **moderate adverse** (temporarily Significant) on local (i.e. affected) receptors if repairs are needed.*
Impact of operational activity on offshore recreation	*Generally **negligible**, with potential to increase to **low** when repairs are required*	*Same as per construction phase*		***Minor adverse** (Not Significant) for scuba diving.* ***Negligible** (Not Significant) for bathing, water sports and recreational sailing.*
Impact of operational phase on visitor receptors	*Generally **negligible**, with potential to*	*Same as per construction phase*		***Minor adverse** (Not Significant) for all receptors.*

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTOR	MITIGATION MEASURES	RESIDUAL EFFECT
	*increase to **low** when repairs are required*			
Impact of operational phase on the volume and value of tourism economy	***Negligible** for the Rhyl, Prestatyn, Kinmel Bay and Abergele area and the Abergele to Rhos-on-Sea (including Colwyn Bay) area* • **Low** for the Llandudno and Great Orme area in short-term and **negligible** in longer term.	*High*		. *Minor (Not Significant) for the Rhyl, Prestatyn, Kinmel Bay and Abergele area and the Abergele to Rhos-on-Sea (including Colwyn Bay) area* *Moderate adverse (Significant) for the Llandudno and Great Orme area in the short term, whilst minor in the longer term (Not significant).*
DECOMMISSIONING				

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTOR	MITIGATION MEASURES	RESIDUAL EFFECT
It is assumed that the residual effect for all tourism and recreation receptors will mirror (but are likely to be lower in magnitude) to the project's construction phase. Based on the assessment, it is anticipated that the decommissioning of AyM will have the following significant residual effects: • A moderate residual effect on NCN5 and the Wales Coast Path (onshore recreation); •				
CUMULATIVE EFFECTS				
Cumulative impact of construction on onshore recreation receptors	*Negligible*	***Low to high** (for equivalent receptors in the assessment of AyM).*		***Minor adverse** (Not Significant)*
Cumulative impact of construction on offshore recreation receptors	*Negligible*	***Low to high** (for equivalent receptors in the assessment of AyM).*		***Minor adverse** (Not Significant)*
Cumulative impact of construction on the volume and value of tourism economy	*Negligible*	*High*		***Minor adverse** (Not Significant)*

IMPACT	MAGNITUDE	SENSITIVITY OF RECEPTOR	MITIGATION MEASURES	RESIDUAL EFFECT
Cumulative impact of construction on the displacement of tourism visitors	*Low*	*Medium*		***Minor adverse** (Not Significant)*
Cumulative impact of operational activity on onshore recreation	*Negligible*	***Low to high** (for equivalent receptors in the assessment of AyM).*		***Minor adverse** (Not Significant)*
Cumulative impact of operational phase on volume and value of the tourism economy	*Negligible*	*High*		***Minor adverse** (Not Significant)*

4.17 References

Aitchison, C. (2012) *Tourism Impact of Wind Farms Submitted to Renewable Inquiry Scottish Government*. [online]. Available from: [redacted]

Alem, M. Herberz, T. Sankar Kranayil, V and Fardin, A. (2020) Literature Review - Qualitative meta-analysis of the socioeconomic impacts of offshore wind farms.

Anglesey County Council & Gwynedd Council (2017) *Anglesey and Gwynedd Joint Local Development Plan 2011-2026*.

Anon (2008) *North Wales Dive Site Directory*. [online]. Available from: [redacted]

Arup Economics and Planning (2002) *Socio-economic impact assessment of North Hoyle offshore wind farm*.

BiGGar Economics (2008) *Wind farms and tourism trends in Scotland*.

Caelus Limited (2018) *Construction Transport Management Plan. Application for development of gas-powered standby fast response electricity gas-generation plant at St Asaph Business Park off Ffordd William Morgan, St Asaph, LL17 0JE.*

Cardiff City and County Council (2012) *Cardiff Visitor Survey*.

[online]. Available from: https://www.conwy.gov.uk/en/Resident/Planning-Building-Control-and-Conservation/Strategic-Planning-Policy/Adopted-Local-Development-Plan-LDP/Adopted-Local-Development-Plan-LDP.aspx.

Conwy Borough Council (2013) *Conwy Local Development Plan, 2007-2022*. [online]. Available from: https://www.conwy.gov.uk/en/Resident/Planning-Building-Control-and-Conservation/Strategic-Planning-Policy/Adopted-Local-Development-Plan-LDP/Adopted-Local-Development-Plan-LDP.aspx.

Conwy Borough Council (2019) *Destination Conwy Management Plan 2019-2029*. [online]. Available from: https://www.conwy.gov.uk/en/Council/Strategies-Plans-and-Policies/Destination-Conwy/documents/Destination-Conwy-Management-Plan-2019-2029.pdf.

Conwy County Borough Council (2020) Conwy Visitor Survey May 2020. [online]. Available from: www.visitconwy.org.uk/dbimgs/Visitor%20survey%20results%20May%202020(4).pdf

DECC (2011) *Overarching National Policy Statement for Energy (EN-1)*.

Denbighshire County Council (n.d.) *Denbighshire Community Strategy*.

Denbighshire County Council (2013) *Denbighshire County Council, Adopted Local Development Plan 2006-2021*.

Denbighshire County Council (n.d.) *Denbighshire Leisure Strategy: Opportunities for all improving lives*.

Denbighshire County Council (2019) *Denbighshire Local Development Plan 2018-2033, Draft Preferred Strategy*. [online]. Available from: https://www.denbighshire.gov.uk/en/documents/planning-and-building-regulations/ldp/replacement-ldp/preferred-strategy-and-pre-deposit-stage/draft-preferred-strategy.pdf.

Denbighshire County Council (n.d.) *My Denbighshire*. [online]. Available from: https://maps.denbighshire.gov.uk/MyDenbighshire.aspx.

Denbighshire County Council (2017) *Supplementary Planning Guidance Note, Recreational Public Open Space*. [online]. Available from: https://www.denbighshire.gov.uk/en/documents/planning-and-building-regulations/ldp/supplementary-planning-guidance/adopted-spg-documents/recreational-public-open-space.pdf.

Denbighshire County Council (1998) *Caring for Our Countryside: A countryside strategy for Denbighshire*.

Devine-Wright (2007) *Reconsidering public attitudes and public acceptance of renewable energy technologies: A critical review.*

ERM (2014) *A Study into the Effect of National Grid Major infrastructure Projects on Socio-economic Factors: Business and Recreational User Surveys Report*.

Failte Ireland (2012) *Visitor Attitudes on the Environment - Wind Farms*.

Failte Ireland, 2021, Report on Visitors Awareness and Perceptions of the Irish Landscape.

Glasgow Caledonian University (2008) *The Economic Impact of Wind Farms on Scottish Tourism: A report for the Scottish Government*.

Gossop (2007) *Fullabrook Down Wind Farm: Inspector's Evidence*.

HM Government (2017a) *Industrial Strategy, Building a Britain fit for the future*.

HM Government (2017b) *The Clean Growth Strategy, Leading the way to a low carbon future*.

HM Government (2019) *Tourism Sector Deal*.

HM Government (2020a) *Energy White Paper: Powering our Net Zero Future*. [online]. Available from: https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future.

HM Government (2020b). The Ten Point Plan for a Green Industrial Revolution. [online]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN_BOOKLET.pdf.

HM Treasury (2021) *Build Back Better: Our Plan for Growth*. [online]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/969275/PfG_Final_print_Plan_for_Growth_Print.pdf.

HM Treasury (2020a) *Net Zero Review: Interim report*. [online]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945827/Net_Zero_Review_interim_report.pdf.

HM Treasury (2020b) *The Green Book*. [online]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf.

HM Treasury (2021) *Net Zero Review Final Report*. [online]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026725/NZR_-_Final_Report_-_Published_version.pdf.

innogy Renewables UK (2020) *Environmental Impact Assessment, Scoping Report*.

IPROW (2020) *Environmental Impact Assessment: Appraising Access*. [online]. Available from: [redacted]

Ipsos MORI (2014) *Public Attitudes to Science Report by Ipsos MORI for the Department for Business, Innovation and Skills and the Economic Social Research Council*.

Ladenburg, J. (2010) Attitudes towards offshore wind farms - The role of beach visits on attitude and demographic and attitude relations. *Energy Policy*. 381297–1304.

McGowan, F. & Sauter, R. (2005) *Public opinion on energy research: A desk study for the research councils*.

Natural Resources Wales (2019) *Seascape and visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance. Stage 2 - Guidance on siting offshore wind farms.* [online]. Available from: [redacted].

North Carolina State University (2016) *Near-shore wind farms would have big impact on coastal tourism*. [online]. Available from: [redacted]

North Wales Tourism (2019) *STEAM Unitary Authority Summary 2017-18*. [online]. Available from: [redacted].

ONS (2021) *Business Register and Employment Survey*.

Paths for All (2019) *Countryside for All Good Practice Guide*. [online]. Available from: [redacted]

Pegasus Group (2020) *Screening Direction Request, Elwy Solar Energy Farm, St Asaph, Denbighshire*. [online]. Available from: https://planning.denbighshire.gov.uk/civica/Resource/Civica/Handler.ashx/Doc/pagestream?cd=inline&pdf=true&docno=2657537.

RCUK (2009) *Public attitudes to Environmental Change: A Selective Review of Theory and Practice*.

Regeneris Consulting & The Tourism Company (2014) *Study into the Potential Economic Impact of Wind Farms and Associated Grid Infrastructure on the Welsh Tourism Sector.*

RWE N Power Renewables (2005) *Socio-economic impact assessment of the Gwynt y Môr offshore wind farm*.

Scottish Power Renewables (2020) *East Anglia ONE North and East Anglia TWO Offshore Windfarms, Appendix 13 Tourism Impact Review*.

Sensory Trust (2017) *By All Reasonable Means, Least restrictive access to the outdoors*. [online]. Available from: [redacted]

Smythe, T., Bidwell, D., Moore, A., Smith, H., McCann, J. (2020) Beyond the beach: Tradeoffs in tourism and recreation at the first offshore wind farm in the United States.

Soini, K. et al. (2011) Local Residents' Perceptions of Energy Landscape: The Case for Transmission Lines. *Land Use Policy*. [Online] 28294–305.

The Pittercroft Trust & Bindoff, T. (2018) *Understanding the British Standard for Gaps Gates and Stiles (BS5709:2018 explained)*.

The Planning Inspectorate (2020) *Scoping Opinion: Proposed Awel y Mor Offshore Wind Farm*.

The Tourism Company (2012) *The impact of wind turbines on tourism - A literature review*.

University of the West of England (2004) *Fullabrook Wind Farm Proposal Evidence of the impact of wind farms on tourism numbers and tourist experience for North Devon Wind Power*.

UNWTO (2019) *UNWTO Tourism Definitions*. [online]. Available from: [redacted].

Visit Conwy (2019) *Destination Conwy Action Plan 2019-2029*. [online]. Available from: [redacted]

Voltaire et al (2017) The impact of offshore wind farms on beach recreation demand: Policy intake from an economic study on the Catalan coast. Marine Policy.

Welsh Assembly Government (2009) *Planning Policy Wales, Technical Advice Note 16: Sport, Recreation and Open Space*. [online]. Available from:

https://gov.wales/sites/default/files/publications/2018-09/tan16-sport-recreation-open-space.pdf.

Welsh Assembly Government (2003) *Walking and Cycling Strategy for Wales*.

Welsh Government (2021f) *Active Travel Act Guidance*. [online]. Available from: https://gov.wales/sites/default/files/publications/2022-01/active-travel-act-guidance.pdf.

Welsh Government (2021a) *Future Wales, The National Plan 2040*. [online]. Available from: https://gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf.

Welsh Government (2021b) *Planning Policy Wales, Edition 11*. [online]. Available from: https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf.

Welsh Government (2021c) *Tourism Profile - Wales Local Authorities 2011-19*. [online]. Available from: https://gov.wales/sites/default/files/statistics-and-research/2021-03/tourism-profile-wales-local-authorities-2011-19.pdf.

Welsh Government (2021e) *Wales tourism accommodation occupancy surveys: 2020*. [online]. Available from: https://gov.wales/sites/default/files/statistics-and-research/2021-09/wales-accommodation-occupancy-survey-2020.pdf.

Welsh Government (2021d) *Wales Visitor Survey: 2019*. [online]. Available from: https://gov.wales/wales-visitor-survey-2019.

Welsh Government (2020) *Welcome to Wales: priorities for the visitor economy 2020 to 2025*. [online]. Available from: https://gov.wales/welcome-wales-priorities-visitor-economy-2020-2025.

Fferm Wynt Alltraeth

AWEL Y MÔR

Offshore Wind Farm

RWE Renewables UK
Swindon Limited

Windmill Hill Business Park
Whitehill Way
Swindon
Wiltshire SN5 6PB
T +44 (0)8456 720 090
www.rwe.com

Registered office:
RWE Renewables UK
Swindon Limited
Windmill Hill Business Park
Whitehill Way
Swindon