



Awel y Môr Offshore Wind Farm

The Applicant's Closing Submission

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Contents

1	Introduction.....	11
2	Examining Authority's Principal Issues	12
	Policy	12
	Aviation	15
	Biodiversity, Ecology and Natural Environment	16
	Compulsory Acquisition (CA) and Temporary Possession (TP)	24
	Construction	33
	Draft Development Consent Order (dDCO)	39
	Flood Risk and Water Quality	45
	Good Design	48
	Historic Environment	50
	Land Use	55
	Seascape, Landscape and Visual (relating to the offshore array and the onshore cabling and sub-station)	57
	Marine and Coastal Physical Processes	75
	Marine - Commercial	77
	Marine – Natural	80
	Public Health and nuisance	81
	Other projects and proposals	86
	Project description and site selection	90
	Socio-Economics	95
	Tourism and Recreation	97
	Traffic and Transport	99
3	Conclusion	103

Abbreviations and Acronyms

TERM	DEFINITION
AEoI	Adverse Effects on Integrity
AILs	Abnormal Indivisible Loads
AI	Air Insulated Switchgear
ALC	Agricultural Land Classification
ALEP	Artificial Light Emissions Plan
AONB	Area of Outstanding Natural Beauty
AP	Affected Party
AQMP	Air Quality Management Plan
ATR	Active Travel Route
AyM	Awel y Môr Offshore Wind Farm
BMVAL	Best and Most Versatile Agricultural Land
BoR	Book of Reference
CA	Compulsory Acquisition
CAA	Civil Aviation Authority
CCBC	Conwy County Borough Council
cd	candela
CEA	Cumulative Effects Assessment
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CL:AIRE	Contaminated Land: Applications in Real Environments
CMS	Construction Method Statement
CO ₂	Carbon Dioxide

TERM	DEFINITION
CoCP	Code of Construction Practice
COP 26	26th Conference of the Parties to the United Nations Framework Convention on Climate Change
CPAT	Clwyd-Powys Archaeological Trust
CRDV	Clwydian Range and Dee Valley
CRP	Cable Route Protocol
CSIP	Cable Specification and Installation Plan
CTMP	Construction Traffic Management Plan
DC	Dŵr Cymru
DCC	Denbighshire County Council
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
dDCO	Draft Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
DESNeZ	Department for Energy Security and Net Zero
DMRB	Design Manual for Roads and Bridges
DoWCoP	Definition of Waste Code of Practice'
ECC	Export Cable Corridor
ECHR	European Convention on Human Rights
ECoW	Ecological Clerk of Works
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EM	Explanatory Memorandum

TERM	DEFINITION
ENP	Eryri National Park
EPSL	European Protected Species Licences
ERCoP	Emergency Response Co-operation Plan
ES	Environmental Statement
ETG	Expert Topic Group
ExA	Examining Authority
FCA	Flood Consequence Assessment
FCELP	Fisheries Co-Existence and Liaison Plan
FCS	Favourable Conservation Status
FLO	Fisheries Liaison Officer
FMfP	Flood Map for Planning
FRAP	Flood Risk Activity Permit
GEART	Guidelines for the Environmental Assessment of Road Traffic
GHG	Greenhouse gas emissions
GIS	Gas Insulated Switchgear
GLVIA3	Guidelines for Landscape and Visual Impact Assessment Version 3
GPG	Good Practice Guide
GVA	Gross Value Added
GW	Gigawatts
GyM	Gwynt y Môr
HDD	Horizontal Directional Drilling

TERM	DEFINITION
HM	His Majesty's
HRA	Habitats Regulations Assessment
IAQM	Institute of Air Quality Management
ICNIRP	International Commission on Non-Ionizing Radiation Protection
HEMA	Institute of Environmental Management and Assessment
INNS	Invasive Non-Native Species
INNSMP	Invasive Non-Native Species Management Plan
IoA	Isle of Anglesey
IoACC	Isle of Anglesey County Council
IoM	Isle of Man
IP	Interested Party
ISH	Issue Specific Hearing
JNCC	Joint Nature Conservation Committee
LEMP	Landscape and Ecology Mitigation Plan
LIR	Local Impact Report
LUC	Land Use Consultants
LVIA	Landscape and Visual Impact Assessment
MCA	Maritime and Coastguard Agency
MDS	Maximum Design Scenarios
MMP	Materials Management Plan
MPCP	Marine Pollution Contingency Plan
NATS	National Air Traffic Services

TERM	DEFINITION
NGET	National Grid Electricity Transmission
NHWF	North Hoyle Wind Farm
NPS	National Policy Statement
NR	Network Rail
NRW	Natural Resources Wales
NRW-MLT	Natural Resources Wales Marine Licensing Team
NSIPs	Nationally Significant Infrastructure Projects
NSR	Noise Sensitive Receptors
NtM	Notices to Mariner
NVMP	Noise and Vibration Management Plan
NW LPAs	North Wales Local Planning Authorities
NWWT	North Wales Wildlife Trust
O&M	Operations and Maintenance
OFH	Open Floor Hearing
oLEMP	outline Landscape and Ecology Management Plan
OnSS	Onshore Substation
oPPEIRP	outline Pollution Prevention and Emergency Response Incident Plan
oSMP	Outline Soil Management Plan
OWF	Offshore Wind Farms
oSWMP	Outline Site Waste Management Plan
PA2008	Planning Act 2008
PAMP	Public Access Management Plan

TERM	DEFINITION
PEA	Preliminary Ecological Appraisal
PEMP	Project Environmental Management Plan
PPs	Protective Provisions
PRoW	Public Rights of Way
PPEIRP	Pollution Prevention and Emergency Incident Response Plan
RCAHMW	Royal Commission for Ancient and Historic Monuments in Wales
RF	Rhyl Flats
RFWF	Rhyl Flats Offshore Wind Farm
RIAA	Report to Inform Appropriate Assessment
RIES	Report on Implications for European Sites
RR	Relevant Representation
RSPB	Royal Society for the Protection of Birds
SABP	St Asaph Business Park
SCA	Seascape Character Area
SES	Skills and Employment Strategy
SLVIA	Seascape, Landscape and Visual Impact Assessment
SMP	Soil Management Plan
SNCB	Statutory Nature Conservation Body
SoCG	Statements of Common Ground
SoS	Secretary of State
SPA	Special Protection Area

TERM	DEFINITION
SPMP	Scour Protection Management Plan
SU	Statutory Undertakers
SuDS	Sustainable Drainage Systems
SWMP	Site Waste Management Plan
TCC	Temporary Construction Compounds
TCE	The Crown Estate
TP	Temporary Possession
UKCP18	UK Climate Projections 2018
UKHO	UK Hydrographic Office
VP	Viewpoint(s)
WFD	Water Framework Directive
WM	Welsh Ministers
WNMP	Welsh National Marine Plan
WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator(s)
ZTV	Zone of Theoretical Visibility

1 Introduction

- 1 This document sets out the Applicant's (Awel y Môr Offshore Wind Farm Limited) final position statements on the principal issues identified by the Examining Authority (ExA) in its Rule 6 letter (PD-007) of 23 August 2022. It does not seek to introduce new material nor raise any new issues. It also does not duplicate the extensive submissions and material provided by the Applicant in response to the ExA's questions, and to the submissions and responses provided by other Interested Parties (IPs) to the Examination.
- 2 As evidenced below, all key issues raised by the ExA and IPs have been addressed by the Applicant and, where possible, resolved. Where it has not been possible to formally resolve matters before the close of the Examination, the Applicant will continue to seek agreement with the relevant parties and will update the Secretary of State (SoS) as soon as possible prior to the determination of the Awel y Môr Offshore Wind Farm (AyM) application.
- 3 The Applicant considers that having full regard to the relevant extant policies and matters set out below, the positive benefits of the AyM project outweigh any adverse impacts and consent should be granted in the form sought by the Applicant.

2 Examining Authority's Principal Issues

Policy

Need for the development and climate change effects

- 4 As set out in the Planning Statement (REP8-083) and National Policy Statements (NPS) tracker (REP8-032), the AyM scheme is supported by a cascade of international and national obligations that combine to place the UK on a path to reduce carbon dioxide (CO₂) emissions and create safe, affordable, reliable energy with a strong focus on UK generation and security of supply.
- 5 Through the Climate Change Act 2008, the UK Government is committed to reducing greenhouse gas emissions by 100% of 1990 levels by 2050. The Government has made it clear that offshore wind plays a key role in achieving net zero and its decarbonisation targets. The 30 gigawatts (GW) by 2030 target announced by the Government in March 2019 was increased to 50 GW in the Energy Security Strategy in April 2022. AyM will make an important contribution to the UK meeting those targets.
- 6 In the NPS tracker provided by the Applicant at Deadline 3 (REP3-003) and updated at Deadline 8 (REP8-032), the policy and need case for AyM was updated demonstrating that, in addition to the support for AyM set out in the NPS, there is increasing focus on, and urgency to, the decarbonisation of the energy system and the deployment of new renewables capacity to achieve net zero.
- 7 From the Intergovernmental Panel on Climate Change reports and statements, an urgent message has been issued regarding the harmful and permanent consequences of failing to limit the rise of global temperatures. Reducing emissions is a crucial necessity and, as progress since the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 26) has been woefully inadequate, there is a need to reduce greenhouse gas emissions (GHG) by unprecedented levels over the next eight years.

- 8 In response to this, the UK 6th Carbon Budget requires a reduction in UK GHG emissions of 78% by 2035 relative to 1990 levels – against a backdrop of electricity demand increasing and predicted to rise 50% by 2035 and doubling or trebling by 2050. This is against the background of, and in the context of, a slow-down in the deployment of renewable energy development in Wales as evidenced in Welsh Government's 2022 report 'Energy Generation in Wales 2020'.
- 9 The Applicant considers that the trajectory, in terms of the scale and pace of action to reduce emissions, is steeper than ever before, and it is essential that rapid progress is made through the 2020s. The rate of emission reductions must increase, otherwise the legally binding UK targets set out in the Carbon Budgets will not be met. It is clear from the UK Energy White Paper and the forecasts by the Climate Change Committee that electricity demand is expected to grow substantially as carbon intensive sources of energy are displaced by electrification of other industry sectors, particularly heat and transport.
- 10 As set out in paragraph 103 of the Planning Statement:

"Part 3 of NPS EN-1 establishes an indisputable and urgent policy need for all types of energy infrastructure in order to achieve energy security and dramatically reduce carbon emissions (paragraph 3.1.1). It is not therefore necessary, when determining applications for offshore wind, to demonstrate a specific need for the principle of offshore wind development. Part 3 also explains that, without significant amounts of new large-scale energy infrastructure, the Government's energy and climate change objectives cannot be fulfilled and this will not be possible without some significant residual adverse impacts (paragraph 3.2.3). Beyond the principle of offshore wind being needed, it is important to note that the targets within the extant NPS, and markedly the draft NPS, require a level of deployment such that all currently planned and proposed offshore wind projects are necessary. This is captured within draft para 3.2.6 which states that in relation to the weight to be given to that identified need, the [Secretary of State] has determined that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008. With regards the role of offshore wind, the draft NPS notes that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar. (EN-1 further notes the committed target of 40GW of offshore wind by 2030, which in practice means the installation of in the region of 2,666 of the larger turbines currently available (Haliade X - 15MW) at a rate of 333 turbines per year)."

- 11 The Applicant submits that this means decisions for projects such as AyM must be responsive to the changed position. Decision-makers can do this by affording substantial weight to the wider energy policy objectives as well as those set out in the current and revised draft NPS – where the need for new renewable energy generation capacity – including offshore wind, is stated to be urgent.
- 12 AyM can make a large, meaningful and timely contribution to decarbonisation and security of supply, whilst helping lower bills for consumers throughout its operational life, thereby addressing important aspects of the UK's legal obligations and Government policy. In addition, reducing Wales' and the wider UK's dependency on hydrocarbons has important security of supply, electricity cost and fuel poverty avoidance benefits. Those actions, already urgently required in the fight against climate change, are now even more urgent for global political stability and insulation against energy dependencies on rogue nation states. These imperatives have also recently been given greater priority by the Government in the establishment of the new Department for Energy Security and Net Zero (DESNZ).
- 13 The Applicant therefore submits that the need for AyM is both important and urgent. The project would deliver significant renewable energy generation and emissions reduction benefits as well as wider socio-economic and biodiversity benefits. The Applicant submits that this should be afforded significant weight in the determination of the AyM application.

Conformity or otherwise with relevant National Policy Statements, development plans and other policies

- 14 In accordance with s104 of the Planning Act 2008 (hereafter the PA2008) and the transitional approach set out in paragraphs 1.6.1 - 1.6.3 of revised draft EN-1, the Applicant has focussed its application and Examination submissions on the extant 2011 Energy NPS as this is the policy against which the AyM scheme must be determined. The Applicant also acknowledges that the extent to which any emerging draft NPS will be relevant is a matter for the Secretary of State with regard to the specific circumstances of each Development Consent Order (DCO) application.

- 15 The Applicant's Planning Statement (REP8-083), as supplemented by the NPS trackers (REP8-030 and REP8-032), considers in detail the conformity of the AyM proposal with the extant NPS and other relevant policy including the Well-being of Future Generations (Wales) Act 2015, Future Wales – The National Plan, Planning Policy Wales 11 and associated technical advice notes, Net Zero Wales, the Welsh Marine Plan and UK wide Marine Policy Statement, and the Denbighshire Local Plan 2006-2021.
- 16 Section 6 of the Planning Statement (REP8-083) refers to policies relevant to the AyM proposal and how the requirements of those policies have been addressed. Section 7 sets out the balance of considerations and overall conclusions and highlights that the fundamental test to be applied in the decision-making process is whether, on balance, the project is in accordance with the relevant NPS as set out in s104 of the PA2008. In accordance with Section 1.6 of revised NPS EN-1, the relevant NPS for the purposes of the AyM application are the extant NPS that were designated in 2011.

Aviation

Potential effects on Civil and Ministry of Defence radar and aviation operations

- 17 The Applicant identified the potential for a significant effect on the Great Dun Fell and St Annes radar in the absence of mitigation. An agreement is in place with National Air Traffic Services (NATS) to provide appropriate mitigation to ensure such effects do not occur.

Adequacy and security of proposed mitigation

- 18 The Applicant and NATS have agreed the provision of a Primary Radar Mitigation scheme, funded by the Applicant, to mitigate the impact of the authorised development on the primary radar at Great Dun Fell and St Annes and associated air traffic management operations. The agreed primary Radar Mitigation scheme must be implemented as approved under Requirement 25 of the draft Development Consent Order (dDCO) in advance of any Wind Turbine Generator (WTG) (excluding foundations) being erected.

- 19 NATS agreement and confirmation of the withdrawal of its objection was provided at Deadline 8.

Lighting proposals and adequacy

- 20 Offshore wind turbines are required to be lit for the purposes of aviation safety according to the Air Navigation Order 2016, which defines the specifications of lighting required in terms of colour and intensity. The Applicant has set out its lighting proposals in accordance with the Air Navigation Order, in Requirement 3 of the dDCO (Document CS.4 of the Applicant's Closing Submission). The Applicant also fully expects a Lighting and Marking Plan to be conditioned in the Marine Licence (REP8-014, Condition 46). This would be agreed with Natural Resources Wales (NRW) in consultation with relevant stakeholders, including the Civil Aviation Authority (CAA), to ensure lighting proposals are in accordance with relevant legislation and relevant industry guidelines.
- 21 Mitigation in relation to night-time effects on seascape, landscape and visual receptors (see paragraph 250 *et seq.*) has been secured which will limit the lighting intensity when visibility is good. The Air Navigation Order allows for aviation lighting intensity to be reduced from 2,000 candela (cd) to 200 cd when visibility in all directions is >5 km. Requirement 3(3) of the dDCO secures this mitigation, requiring that lighting will be operated at the lowest permissible intensity.

Biodiversity, Ecology and Natural Environment

Potential effects on species and habitats in the marine and terrestrial environment, including protected species.

Offshore

- 22 In terms of the marine environment, the Applicant has undertaken assessments of the potential effects on offshore ecological receptors, including protected species, habitats and designated sites. The Applicant has sought to minimise the potential effects of the scheme through siting and routing (notably the avoidance of Constable Bank as further described in paragraph 156 below).

- 23 Mitigation and management measures to address potentially significant effects, in addition to monitoring, has been agreed as appropriate and adequate with NRW as the Statutory Nature Conservation Body (SNCB), in addition to the Joint Nature Conservation Committee (JNCC) (REP8-048, REP4-029). The Marine Licence Principles (REP8-014) includes the proposed mitigation measures that will be agreed with NRW prior to construction. The Applicant fully expects these to be conditioned in any Marine Licence granted by NRW.
- 24 With these in mind, no significant residual effects in Environmental Impact Assessment (EIA) terms, nor any Adverse Effects on Integrity (AEol) in Habitats Regulations Assessment (HRA) terms (see paragraph 30 *et seq.* below) have been identified.
- 25 The Applicant has submitted fully-agreed Statements of Common Ground (SoCGs) with NRW and the JNCC in relation to offshore ecological matters (REP8-048, REP4-029), in addition to substantially-agreed SoCGs with the Royal Society for the Protection of Birds (RSPB), North Wales Wildlife Trust (NWWT) and the Isle of Man (IoM) Government (REP8-052, REP7-047, REP8-051).
- 26 The Applicant therefore considers matters raised with respect to offshore biodiversity, ecology and the natural environment to have been fully addressed in the Examination.

Onshore

- 27 Onshore, the Applicant has undertaken an assessment of potential effects on biodiversity and nature conservation and considered the impacts to sensitive ecological receptors as a result of the construction, operation and decommissioning activities associated with AyM, including terrestrial ecology and ornithology. The assessment draws on existing data sources to identify nature conservation sites, as well as site-specific ecological surveys to identify the habitats and species present that could potentially be affected by AyM.

- 28 The Applicant has sought to minimise effects of the scheme through siting and routing, with mitigation and compensation measures proposed where impacts are predicted to occur. In addition, AyM will provide new benefits for biodiversity through proposed enhancement measures primarily focused at the Onshore Substation (OnSS), that will complement and be additive to the proposed mitigation and compensation measures,
- 29 Biodiversity enhancement proposals have been discussed with NRW and Denbighshire County Council (DCC) and are detailed within the outline Landscape and Ecology Management Plan (oLEMP) (REP7-026). NRW has confirmed (RR-0.15) that it agrees with the proposed principles for mitigation, compensation and enhancement in the oLEMP (REP7-026), and that the onshore elements of AyM will not be detrimental to the Favourable Conservation Status (FCS) of protected species (REP3-021). Agreement is set out with NRW and DCC in the respective SoCG (REP8-049 and REP7-049).

Implications for the integrity of designated sites.

- 30 The Applicant provided a Report to Inform Appropriate Assessment (RIAA) in relation to the implications of AyM for the integrity of designated sites. The Applicant is also in broad agreement with the ExA's Report on Implications for European Sites (RIES) (OD-021), with comments provided on this in REP8-008.
- 31 Offshore, the RIAA has concluded no AEoI for all sites, and agreement on these conclusions are noted with NRW as the SNCB in REP8-048, in addition to the JNCC in REP4-029. Despite agreement with the SNCB, disagreement remains with the RSPB, specifically in relation to the conclusion for the distribution of red-throated diver as a feature of the Liverpool Bay Special Protection Area (SPA), although there is agreement with RSPB on all other aspects of the assessment (REP8-052).
- 32 There are no international or national level designated areas within sufficient distance of the AyM onshore infrastructure for significant effects to occur. This approach has been agreed with stakeholders, including NRW, via EIA Scoping and Expert Topic Group (ETG) discussions.

- 33 Therefore, it can be stated with confidence that AyM will not result in AEoI for any identified designated sites, neither alone nor in-combination with other plans projects and activities.

Potential cumulative and in-combination effects.

- 34 No significant cumulative or in-combination effects are predicted to occur for the onshore or offshore elements of AyM.
- 35 The Mona and Morgan projects were included in the long-list of projects for consideration in the EIA Cumulative Effects Assessment (CEA) Methodology (APP-042) but screened out of further assessment on the basis there was not enough detailed design information, nor enough certainty on timescales, to enable a meaningful CEA to be undertaken. No additional information has been forthcoming since that changes this position.
- 36 As noted in REP8-039, should sufficient assessment material be published before a decision on AyM in respect of either Mona, Morgan or National Grid Electricity Transmission's (NGET) extension project it will be open to the SoS to seek submissions on cumulative assessment.

Adequacy of baseline data including robustness of surveys and data collection methodology.

Offshore

- 37 For the offshore assessments, apart from minor comments received from IoM Government, RSPB and NWWT in relation to the marine baseline data collection, it is considered that all data collected is robust and adequate for the purposes of EIA. NRW are also in agreement in all cases that the baseline has been appropriately characterised (REP8-048).

Onshore

- 38 For the onshore assessment, a comprehensive desk-based data search was undertaken and is described in the Preliminary Ecological Appraisal (PEA) Report (REP8-070). This included gathering details for statutory and non-statutory designated sites for nature conservation, as well as pre-existing ecological records for protected and notable species. A suite of field surveys was agreed with NRW, DCC and other stakeholders and undertaken with reports for each, including the scope and method, provided in Environmental Statement (ES) Volume 5, Annexes 5.2-5.10 (Application references APP-125 to APP-134).
- 39 Apart from minor updates at the request of the ExA to baseline information (arising from discrepancies in areas where the draft order limits had been changed prior to submission of the application), which do not alter the findings of ES Volume 3, Chapter 5: Biodiversity and Nature Conservation (REP8-061) there has been no challenge to the adequacy of the onshore baseline data.
- 40 For the offshore assessments, apart from minor comments received from IoM Government, RSPB and NWWT in relation to the marine baseline data collection, it is considered that all data collected is robust and adequate for the purposes of EIA. NRW are also in agreement in all cases that the baseline has been appropriately characterised (REP8-048).

Adequacy and security of mitigation measures.

Offshore

- 41 Mitigation measures in relation to marine ecology are described in the Schedule of Mitigation and Monitoring (REP8-016) and are proposed to be secured principally through Marine Licence conditions as described in the Marine Licence Principles (REP8-014). These include conditions for mitigation, and management plans that will be discussed and agreed with NRW in the post-consent phase. The adequacy of these measures have been discussed with NRW throughout the pre-application and Examination phases, and it is noted that NRW is in agreement that all mitigation measures proposed are adequate, as described in the offshore SoCG (REP8-048).

- 42 The Applicant considers that all measures required to mitigate potentially significant effects have been agreed with the relevant stakeholders, and are adequately captured either through DCO Requirements, or proposed Marine Licence conditions. Therefore, all issues relating to the adequacy and security of mitigation measures have been addressed in the Examination.

Onshore

- 43 Outline proposals for onshore biodiversity mitigation and compensation, along with proposals for biodiversity enhancement, are included in the oLEMP (REP7-026). Enhancement measures represent the provision of new benefits for biodiversity that are additional to those provided as mitigation or compensation measures. The oLEMP sets out the key elements that will be secured in the final Landscape and Ecology Mitigation Plan (LEMP) which will be agreed with DCC, in consultation with NRW, prior to any construction works commencing.
- 44 The Applicant has made revisions to the oLEMP to address issues raised by the ExA, (such as clarification on the role of the Ecological Clerk of Works (ECoW)) and representations made by NRW and DCC during the Examination, with the proposed final version detailed in REP7-026.
- 45 Additional mitigation proposed during construction is provided in the outline Code of Construction Practice (CoCP) and accompanying management plans (such as the control of non-native invasive species in the outline Invasive Non-Native Species Management Plan (INNSMP) (REP8-040), watercourse bank stabilisation considerations in the outline onshore Construction Method Statement (CMS) (REP7-020) and control of construction noise within the outline Noise and Vibration Management Plan (NVMP) (REP2-020). These measures are considered adequate and appropriate to ensure construction impacts are minimised.
- 46 The outline documentation referred to in the paragraphs above in this sub-section were accepted by both DCC (REP7-049) and NRW (REP8-049) as suitable mitigation for the onshore elements of the scheme, as evidenced in the respective SoCGs with the two bodies.

Adequacy and security of monitoring commitments including maintenance approach.

- 47 In order to ensure appropriate monitoring and maintenance is secured, Section 8 of the oLEMP (REP7-026) outlines proposed monitoring to assess and validate the success of the mitigation, compensation and enhancement measures during construction and operation. Monitoring of mitigation, compensation and enhancement habitats will be undertaken in years 1-3, for all areas (to coincide with the aftercare and implementation period), with further monitoring subject to approval via the LEMP. The oLEMP also states that the aftercare period would be extended (if required) if reinstatement or biodiversity enhancements are not deemed to have been successful. In that event, monitoring would also be extended until such time that it can be determined whether reinstatement or biodiversity enhancements has been successful.
- 48 Similarly to mitigation measures, proposed monitoring is described within the Schedule of Mitigation and Monitoring (REP8-016). Offshore, these are similarly expected to be captured through Marine Licence conditions as described in the Marine Licence Principles (REP8-014). These include conditions for monitoring plans that will be agreed with NRW prior to construction in the post-consent phase. The requirements for monitoring have been discussed and agreed with NRW (REP8-048, REP8-049) throughout the pre-application and Examination phases.
- 49 Therefore, the Applicant considers that matters relating to the adequacy and security of monitoring commitments have been appropriately addressed in the Examination and there are no outstanding issues.

Biodiversity net gain

- 50 The Applicant notes the recent Department for Environment, Food and Rural Affairs (Defra) Action Plan on Nationally Significant Infrastructure Projects (NSIPs), which was published in February 2023, and proposes to incorporate biodiversity net gain requirements for all (terrestrial) NSIP projects, from November 2025. Defra plans to consult on the detail for the biodiversity net gain proposals later in 2023. However, until this comes into force, the position for NSIPs in Wales remains unchanged with no current requirement to quantify biodiversity losses and gains through use of a metric.
- 51 This position has been confirmed by both NRW and Welsh Government. The Welsh approach puts the emphasis on proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context early in the design process. This is to be undertaken in close consultation with stakeholders.
- 52 In developing the proposed enhancement measures for AyM, as set out in the oLEMP, the Applicant has employed ecological specialists to undertake baseline ecology surveys, and ecological assessment, whilst engaging closely with NRW and DCC to develop and agree the enhancement proposals.
- 53 The Applicant considers that net benefits for biodiversity will be achieved through the provision of enhancement measures that provide new benefits for biodiversity in addition to sufficient mitigation (to reduce and/or eliminate the potential for significant effects) and compensation (to offset residual effects resulting in the loss of, or permanent damage to, ecological features despite mitigation).
- 54 Given lack of legislative or policy requirement for a quantitative style assessment, in addition to the agreement that has been reached to date with NRW and the approach taken by the Welsh Government, the Applicant does not consider a quantitative or metric-based approach is required to demonstrate that AyM would deliver net benefits to biodiversity.

- 55 The ExA asked questions about marine net gain and the opportunities for ecological enhancement in the marine environment. The Applicant provided a note on this at Deadline 8 (REP8-036), outlining that there is currently no established policy, requirement or guidance for the assessment or delivery of net benefits for biodiversity in the marine environment.
- 56 It is also set out in that note (REP8-036) that the Applicant acknowledges this is an evolving policy area and has set out the potential opportunities for the delivery of marine net benefits for biodiversity, should this requirement become stipulated in policy and guidance within the delivery timeframe of AyM. In agreement with NRW (REP8-048), the Applicant has committed in (REP8-014) to give specific consideration to ecologically sensitive cable and scour protection material to afford benefits through the Marine Licensing process into post-consent.

Compulsory Acquisition (CA) and Temporary Possession (TP)

The need for land and rights to be subject to CA / TP

- 57 The DCO seeks powers to compulsorily acquire land and rights (both temporary and permanent and new and existing) that are required to carry out or to facilitate or are incidental to the construction, operation and maintenance of the authorised development.
- 58 The Applicant has taken the cautious approach of seeking powers of CA (or rights of use) in respect of all plots of land required for the scheme. This approach is supported by the relevant policy (DCLG (Department for Communities and Local Government) Guidance related to the procedures for the CA of land 2103 paragraph 25) and needs to be maintained to ensure that it has the right to acquire the interests it needs in the whole of the Order land in the event that an unidentified owner later asserts an interest in land which the Applicant believes it owns or has rights.

- 59 The relevant tests in s122 of the PA2008 are met as all the order land is either required for the AyM project or is required to facilitate or is incidental to the AyM project. As discussed at the CA hearing and unchallenged by any IP, necessary does not mean that the land is indispensable, but that it is necessary in the circumstances of the case. In other words, it is needed to deliver the scheme proposed. All the order land is needed to deliver the AyM scheme as proposed.

Land, rights and powers sought

- 60 The Applicant has identified the works that would give rise to a permanent change of land use resulting from the installation of apparatus, those for which permanent rights would be required to repair, replace, inspect, maintain and remove works and finally any works related solely to the construction of the project. In areas with overlapping works, the acquisition type with the highest level of permanence is the overriding right sought.
- 61 The rights sought over land and associated restrictions have been separated into different categories, to reflect the nature of the works to be carried out and provide clarity and certainty about the rights that can be acquired. Separate rights are identified in relation to cables, transition joint bays, access, visibility splays and highway verges, mitigation work areas access and mitigation works (both temporary and permanent), drainage and National Grid substation works and access. Where needed to protect infrastructure or works, the Applicant is seeking the ability to impose restrictive covenants to protect authorised development and to maintain necessary visibility splays and both temporary and permanent mitigation works.

- 62 Questions have been raised during the Examination by Wilson Fearnall on behalf of the landowners of plots 132, 136, 137, 138, 140, 141, 142, 143, 144, 145, 146 regarding the need for the Applicant to secure permanent rights over his clients' land to protect and maintain the cables, and for ecological mitigation and access. As the Applicant has explained in its written Examination responses and at the CA hearing held on 28 February 2023, the TP powers under the dDCO are limited to the ability to access land for construction and to carry out the authorised development. Where land has been accessed under these powers, article 27(3) of the dDCO requires that it is returned to the landowner within one year of completion of the relevant works. This therefore does not allow sufficient duration for the relevant rights.
- 63 Outside of TP, the Applicant is not aware of any ability under CA law to secure permanent rights for a time limited period or any precedent for doing so. It is notable that Wilson Fearnall has not proposed an alternative approach or alternative wording in the dDCO to achieve this.
- 64 The powers sought within the dDCO are necessary to secure the land and rights needed to deliver the AyM project. They are set out in Part 5 of the dDCO and their operation explained in the Explanatory Memorandum (EM) (REP8-012). In response to ExA questions, the Applicant has amended the wording of Article 27 of the dDCO to provide further clarity that the Applicant does not intend to secure permanent rights over land which is identified within Schedule 6 of the dDCO as being land in which only TP may be taken.

Minimisation of the need for land and rights

- 65 The Applicant has had due regard to the relevant statutory tests and the DCLG Guidance.
- 66 The Applicant has minimised its interference with the interests of others by seeking TP over the majority of the Order Land to undertake the construction of the authorised development. Post-construction permanent rights/ restrictions would then be secured over the as built area of the cables. This has avoided the need to acquire land or rights over all the Order land which would have affected far greater areas than will be affected using the TP approach.

- 67 CA powers are only sought over two plots at the OnSS site where the nature of the development works and associated utilities infrastructure and permanent landscaping and ecological mitigation, compensation and enhancement works involve a permanent change of land use and require the Applicant to have control of the land.

Effects on those impacted by CA / TP

- 68 It is notable that only one CA hearing has been held by the ExA, on 28 February 2023, and that only three affected persons either attended themselves or were represented at that hearing; only one of whom sought to present their CA case at the hearing. The Applicant considers this demonstrative of the low levels of opposition from those from whom rights are proposed to be acquired.
- 69 The Applicant and its agents have worked extensively with the land interests to seek to reach voluntary agreements and, as confirmed at the CA hearing, will continue to do so, as it is the Applicant's preference and in the interest of all parties to reach agreement wherever possible.
- 70 The Applicant understands the position of the landowners at the OnSS site as presented by their agent and has noted their concerns in relation to a number of matters. The amount of land subject to freehold acquisition has been questioned with particular reference to the oLEMP and the need case for freehold acquisition of land within Work No. 30. Further concerns have been expressed in relation to the efficacy of proposed screening in respect of the Faenol Bropor farmhouse and the impact of the proposed development on the existing drainage network on the holding.
- 71 Extensive written and oral submissions on these matters have been submitted to the ExA throughout the course of the Examination demonstrating why plots 416 and 417 are needed for the OnSS and related works, including ecological mitigation, compensation and enhancement in accordance with Welsh and UK policy requirements. In addition, updates have been made to the oLEMP (REP7-026) and Design Principles (REP7-028) to provide an opportunity for the landowners (as well as other local residents) to consider and contribute to the detailed proposals for the OnSS works and landscaping.

- 72 The Applicant understands the position of the GBL and IM Kerfoot Discretionary Trust as presented by their agent and has noted their concerns in relation to the cable routing and extent and longevity of permanent rights sought for both the protection of the cables and establishment and maintenance of ecological mitigation areas. The Applicant understands that the principal driver for these objections, as well as those in relation to the operational access route, is the impact of the rights sought on the development potential of the land holding. However, to date, no evidence of an active planning consent or application, local plan allocation or application for candidate site status has been presented either directly to the Applicant or to the ExA.
- 73 The Applicant understands the position of the owners of Cwbyr Fawr and Fferm as presented by their agent and has noted their concerns in relation to the impacts of the cable routing and the location of the construction compounds on the enjoyment of the retained land, as well as the commercial enterprises, including touring caravans and livery which are operated at Cwbyr Fawr. The Applicant would note that substantive written responses have been provided in response to both representations made by the landowner's appointed agent and questions raised by the ExA with no further submissions being received beyond Deadline 1 of the Examination.
- 74 Representations have been made by several affected parties using the phrase 'blight'. The Applicant has reviewed these submissions and concluded that the situation in each case does not satisfy the tests for statutory blight.
- 75 Several representations have been received from Category 2 parties, or those being parties who enjoy rights over the order land. The Applicant has confirmed that there is no intention to interfere with these rights in respect of land subject to the acquisition of permanent rights, and that rights held over land subject to freehold acquisition (plots 416 and 417) are capable of subsisting alongside the proposed development.

The position of and effects on Statutory Undertakers, protected provisions and whether the tests of s127 and s138 of PA2008 would be satisfied

- 76 The Applicant is not intending to extinguish any rights or remove any apparatus belonging to any statutory undertakers (SUs). However, the Applicant needs to reserve the right to do so through the DCO in the event that there are interests that have not been identified so far thorough diligent inquiry. The exercise of such powers will be carried out in accordance with the protective provisions included in the DCO which set out constraints with a view to safeguarding the relevant statutory undertaker's interests. The Applicant therefore considers that the test set out in s138 of the PA2008 is satisfied.
- 77 In respect of s127 PA2008, and as confirmed at the CA hearing, there is no proposal to acquire SUs land, and only two SUs are potentially affected by the acquisition of rights: Network Rail (NR) and Dŵr Cymru (DC). In relation to DC, as protective provisions have been agreed and are included in the dDCO at the close of examination (Document CS.4 of the Applicant's Closing Submission), DC has withdrawn its holding objection to the scheme.
- 78 In respect of NR, protective provisions and the related side agreements are agreed such that NR has withdrawn its holding objection to the scheme.

The position in relation to Crown land

- 79 The Applicant is in active discussions with The Crown Estate (TCE) in relation to its consent under s135 of PA2008. The Applicant is confident that such consent will be forthcoming and will provide confirmation to the SoS as soon as this is in place.

The approach to special category land

- 80 Special category land is identified on the Applicant's Special Category land plans. The Applicant has taken a precautionary approach and included the plots within the Ffrith beach area as there are Public Rights of Way (PRoW).

- 81 The works on special category land are either temporary or involve the installation of buried cables. There is no permanent loss of special category land, and therefore no requirement to provide replacement land under s131 PA2008. In relation to s132 PA2008, where rights are being taken over special category land the Applicant considers (and no claim has been made to the contrary) that the SoS can be satisfied that the land will be no less advantageous that it was before to those in whom it is vested, other persons or the public.

The adequacy and security of funding for compensation

- 82 The Applicant's Funding Statement accords with Regulation 5(2)(h) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (the APFP Regulations) as it explains how the authorisation of CA is proposed to be funded. The Funding Statement has been updated at the ExA's request to take account of current inflation and additional evidence provided of the Applicant's ability to meet any compensation resulting from the exercise of CA powers (REP7-030).
- 83 Article 31 of the dDCO ensures that appropriate security, approved by the SoS, will be in place before any CA powers that could give rise to compensation are exercised.

Accuracy of the Book of Reference

- 84 The Book of Reference (BoR) has been revised at each Examination deadline (with the exception of Deadline 3 where ongoing due diligence indicated that there were no updates required to the document) as requested by the ExA, in addition to responses and amendments being made to specific questions raised.
- 85 The Applicant has undertaken a further His Majesty's (HM) Land Registry refresh of the BoR prior to the submission (most recently at Deadline 8 (REP8-025)) at each deadline, to ensure that it is up-to-date with all relevant interests at the close of the Examination and an updated utilities search was completed prior to Deadline 6.

- 86 Further to this ongoing desktop due diligence, the Applicant's appointed agents have continued to engage with Affected Parties' (APs) appointed agents with regard to the negotiation of voluntary agreements. During the course of this ongoing correspondence, details pertaining to any changes arising to interests in land were discussed and have been reflected in the BoR (REP8-025). As requested by the ExA, a final BoR has been provided by the Applicant at Deadline 8 (REP8-025).

Statement of Reasons and justification for powers sought

- 87 The Statement of Reasons has been reviewed and updated in response to the ExA's questions. In particular, further information has been provided regarding the works to be undertaken on plots 141, 143, 144, 145, 237, 242, 248, 416 and 417 in relation to the powers sought.
- 88 The Applicant considers that it has provided adequate justification regarding the powers it has identified as necessary to deliver the AyM project.

Whether reasonable alternatives have been explored sufficiently

- 89 The Applicant has demonstrated that there is no way to secure the rights and land needed for the AyM project without reliance on CA powers and there is not an alternative project that would have avoided the need for CA.
- 90 Whilst the Applicant and its agents continue to seek the necessary land and rights for the AyM project through voluntary agreement, in the absence of CA, all the land and rights required to allow the Project to be constructed and operated may not be secured and the Project will therefore not proceed. The Applicant needs to have the certainty that the required rights and land can be obtained within a reasonable timeframe and to be able to evidence this certainty to its funders to ensure the development can proceed.
- 91 Given the linear nature of the onshore elements of AyM, it is not considered that an alternative project would have avoided the need for CA, and it is notable that no such case has been made by any IP.

Human rights considerations

- 92 As set out in the CA guidance, the SoS must be ultimately persuaded that the purpose for which an order authorises the CA of land are legitimate and are sufficient to justify interfering with the human rights of those with an interest in the land affected. In this case, as no dwellings are being acquired, regard must only be given to the provisions of Article 1 of the First Protocol to the European Convention on Human Rights (ECHR), the peaceful protection of property.
- 93 The Applicant considers that the AyM Examination has ensured a fair and public hearing, and it considers that its approach to CA and minimising the impact on the Order Land has ensured that any interference from the implementation of AyM will be proportionate and strikes a fair balance between the rights of those affected and the public interest. The Applicant also notes that compensation will be available in respect of any quantifiable loss.

Whether a compelling case in the public interest has been established

- 94 The Applicant considers that there is clearly a compelling case in the public interest for the CA powers needed for the AyM project to be delivered to be granted. In accordance with paragraph 13 of the CA Guidance, the public benefits that would be delivered by AyM outweigh any private loss suffered by those whose land is to be acquired. It is also considered that there is clear evidence set out in the Planning Statement (REP8-083), the NPS tracker (REP8-032) and summarised below that the public benefits of AyM will outweigh the private loss.

Whether the proposals meet the requirements of PA2008 in all other respects

- 95 The Applicant considers that the AyM proposals meet all relevant CA requirements of the PA2008.

Construction

Construction phasing and timetable

- 96 As set out in Figure 2 of the Onshore Project Description (REP8-060), the onshore works are expected to take place over a period of up to 5 years. Onshore Export Cable Corridor (ECC) construction works are anticipated to take place over an 18-month period with OnSS construction works anticipated to take place over a 27-month period with additional periods for preliminary works and post-construction commissioning. For the onshore elements of the work, the Applicant has proposed a staged working approach to the construction of the ECC and OnSS. This is partly driven by the likely need for different contractors leading the design and installation of those two independent elements of the work, but also to potentially allow multiple teams to work on different parts of the ECC route at the same time.
- 97 Information regarding the likely sequencing of the onshore works has been provided in the Staging of Onshore Works document (REP3-017), with the final sequence of stages to be agreed with DCC under Requirement 5. Prior to each stage of works, the relevant requirements of the dDCO will need to be signed off by DCC.
- 98 From the Applicant's direct experience of constructing the onshore elements of other offshore wind farms (OWFs), it is expected that the detailed design for some of the later aspects of the works may still be occurring while some of the earlier works are underway. A staged approach provides for the necessary flexibility for the Applicant in discharging DCO Requirements. It also ensures that plans for subsequent stages can be adapted to ensure best practice measures are included and avoids the need to include unnecessary details which are not relevant for that stage of works.

- 99 Section 1.5 of the Offshore Project description chapter of the ES (APP-047) sets out that offshore works, beginning with pre-construction surveys and site clearance works, could commence in 2024 and 2025, with construction starting in 2026. Similarly to onshore, the detailed design for some elements of the offshore scheme may still be occurring whilst some of the earlier works are underway, and therefore a staged approach over a period of a few years is expected. The Marine Licensing approach offshore similarly allows for conditions pertaining to different elements of the scheme to be discharged in a staged approach, allowing the necessary flexibility to ensure the project can be delivered.

Temporary work sites and storage

- 100 A number of Temporary Construction Compounds (TCCs) associated with the landfall, cable corridor, OnSS and National Grid substation connection works are required. The TCCs will provide secure and potentially lit, storage locations for heavy duty plant, local site management offices, welfare and local first aid points, and will also provide space for storage of materials and equipment as well as staff parking.
- 101 The establishment of TCCs forms part of the construction works. Temporary hardstanding areas that are required for pre-commencement activities (such as undertaking clearance work or archaeological investigations), will be smaller in size, and *in situ* for a shorter duration than the TCCs. The acceptance in principle of these temporary work sites during pre-commencement activities, and their adherence to outline plans in the dDCO submissions, was a position accepted by DCC in the SoCG (REP7-049).

Waste (onshore) and management of contaminated land

- 102 The Outline Site Waste Management Plan (oSWMP) (REP2-035) outlines the Applicant's approach to managing construction waste on site and forms part of the outline CoCP. The oSWMP requires the Applicant to appropriately manage construction waste on site and references the waste hierarchy to ensure waste is minimised. The Applicant has provided a review of estimated available capacity of waste management sites in North Wales within the response to ExQ1 (REP1-007).

- 103 The Applicant has provided confirmation that, wherever possible, material excavated as part of the cut and fill works at the OnSS will be reused on site under the 'Definition of Waste Code of Practice' (DoWCoP) produced by Contaminated Land: Applications in Real Environments (CL:AIRE). As part of the DoWCoP, a Materials Management Plan (MMP) will be produced which will detail how the site construction materials would be managed by the appointed contractor demonstrating that the material meets the requirements of the DoWCoP.
- 104 As part of the contaminated land risk assessment presented in ES Volume 3, Chapter 6: Ground Conditions and Land Use (REP8-062), potential contaminated historical sites and land uses have been considered. The review concludes that, other than agricultural land which has only limited potential for contamination to occur, no significant contamination sources have been identified from historical plans or other sources of information. On a precautionary basis, the outline Pollution Prevention and Emergency Response Incident Plan (oPPEIRP) (REP2-037) sets out procedures to be followed should sources of contamination (for example buried asbestos) be discovered during construction.
- 105 If unexpected contamination is encountered or suspected, the works would cease in that area and assessment by a suitably qualified land contamination specialist would be undertaken to determine appropriate actions and a decision made on where such material should be handled, stored and eventually disposed of safely. Again, this approach has been accepted by DCC and NRW in their respective SoCGs (REP7-049 and REP8-049 respectively).

Cable laying and foundation installation

- 106 ES Volume 2, Chapter 1: Offshore Project Description (APP-047) describes the different foundation options that could be used for AyM, in addition to the requirements for offshore cable laying. In ExQ1, the ExA asked the Applicant a series of questions relating to these design aspects. The Applicant provided responses to these questions in REP1-007 and considers that these matters have been adequately addressed in the Examination, with no outstanding concerns.

- 107 As detailed in the Onshore Project Description (REP8-060), the primary method of installing the onshore cables will be through open-cut trenching. As explained in response to ExQ1, the decision on whether to open-cut or use a trenchless technique at points along the onshore ECC will reside with the Principal Contractor at detailed design stage of the project. For this reason, it is not possible to provide a detailed breakdown of the length of anticipated open-cut trenching until detailed design has been undertaken.
- 108 The ExA has also requested plans of surface water drainage measures relating to cable installation. The Applicant has confirmed that, again, such measures would be subject to detailed design and that a Final Construction Drainage Scheme will be developed prior to works commencing in agreement with DCC (in consultation with NRW) and provided within the final CMS secured by DCO Requirement. Other ExA issues relating to management of soils have been addressed through updates to the outline Soil Management Plan (oSMP) which has been agreed with Welsh Government (REP5-044).
- 109 The Applicant confirmed that detailed plan and section drawings will be developed at detailed design stage for the trenchless crossing of beneath Rhyl Sea-defence. The Applicant has also already undertaken preliminary intrusive ground investigation (onshore boreholes) in order to confirm the suitability of ground conditions and likely depth profile of the trenchless installation. Available ground investigation data from the nearby Burbo Bank Extension OWF project was also reviewed.

Working hours

- 110 The Applicant has proposed a set of working hours that prescribe when construction work can take place on site, based on precedents from other offshore development projects. Reduced working hours for noisy construction activities have been agreed with DCC (REP7-049) around the landfall near Ffrith Beach, due to potential interaction with the Council's flood defence work.

- 111 Extended working hours are also needed for certain activities in order to complete the work diligently and safely. The principal of these extended working hours has been assessed within the EIA and agreed with DCC and will be approved on a case-by-case basis.

Invasive Non-Native Species (offshore and onshore)

- 112 The Applicant has provided an onshore outline INNSMP (REP8-040) to provide details of mitigation measures and best practice handling techniques to minimise the potential for Invasive Non-Native Species (INNS) to be spread by construction and operation activities. The outline INNSMP has been updated in response to written questions from the ExA and feedback within NRW's written representation (REP1-080). NRW has confirmed within its SoCG that it is satisfied that the proposals for the management of INNS are appropriate (REP8-049).
- 113 In terms of the marine environment, the Applicant has proposed a Project Environmental Management Plan (PEMP) which will include a Biosecurity Plan to ensure relevant best practice guidelines are implemented and followed to minimise the spread and introduction of marine INNS. This will be agreed with NRW prior to construction as described under Condition 16 of the Marine Licence Principles (REP8-014). NRW has confirmed its agreement as set out at item SoCG 06-4.10 in REP8-048.

Adequacy of management arrangements and monitoring

Offshore

- 114 As described in paragraphs 41 *et seq.* and 48 *et seq.*, proposed management measures and monitoring for the marine aspects of the scheme are described within the Schedule of Mitigation and Monitoring (REP8-016). These are expected to be captured through Marine Licence conditions, including conditions for management and monitoring plans that will be agreed with NRW prior to construction in the post-consent phase. These requirements have been discussed and agreed with NRW (REP8-048) throughout the pre-application and Examination phases. These would typically be captured under a PEMP as described in the Marine Licence Principles (REP8-014).

Onshore

115 In accordance with standard practice management and monitoring, arrangements for construction will primarily be managed through the CoCP and corresponding management plans detailed in the Appendices of the CoCP, which are secured by DCO Requirement 10:

- ▲ CoCP;
- ▲ Onshore CMS;
- ▲ NVMP;
- ▲ Air Quality Management Plan (AQMP);
- ▲ SMP;
- ▲ Site Waste Management Plan (SWMP);
- ▲ Pollution Prevention and Emergency Incident Response Plan (PPEIRP);
- ▲ Construction Traffic Management Plan (CTMP);
- ▲ Public Access Management Plan (PAMP);
- ▲ Travel Plan;
- ▲ Artificial Light Emissions Plan (ALEP);
- ▲ INNSMP; and
- ▲ Communications Plan.

116 Outline plans were provided as part of the AyM application in order that these could be discussed during the Examination and, if necessary, updated. Final versions of the outline CoCP and related plans are listed in Article 40 of the dDCO and will be certified by the SoS. Additional management arrangements for construction are also secured through DCO Requirements 4 (offshore noise), 5 (stages of authorised development), 11 (highway accesses), 12 (onshore archaeology), 13 (landscape and ecology management plan), 14 (European protected species onshore), and 15 (construction hours).

Draft Development Consent Order (dDCO)

Adequacy of the Explanatory Memorandum

117 The Applicant's EM (REP8-012) is considered to meet the requirements of Regulation 5(2)(c) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 in that it explains *“the purpose and effect of provisions in the draft order, including in particular divergences from the model provisions”*. The EM was also considered to be adequate for the purposes of the Planning Inspectorate's acceptance of the AyM application and no s51 PA2008 advice was issued requesting changes to it.

118 The EM has been updated to provide additional wording where requested by the ExA, and an updated version submitted to the Examination at Deadline 8 (REP8-012) to accompany the Applicant's final dDCO (Document CS.4 of the Applicant's Closing Submission).

Relevant definitions and their clarity / consistency

119 The Applicant has responded to the ExA's questions regarding the dDCO and has made any necessary amendments to ensure that the wording of the dDCO is both clear and consistent.

The structure of the dDCO

120 The AyM dDCO follows the structure of other made offshore wind DCOs, including most recently Norfolk Vanguard and Norfolk Boreas and Hornsea Project Three. No changes to the structure of the dDCO have been suggested by the ExA or other IPs.

Design flexibility and justification

- 121 The Applicant has adopted a Rochdale Envelope approach to the design of the AyM project, in accordance with the Planning Inspectorate's Advice Note 9 (2018) and NPS EN-3 (paras 2.6.41 and 2.6.42) which recognises that *“due to the complex nature of offshore wind development many details of the scheme will not be known at the time of submission”* and that the precise details of turbines to be used are unlikely to be known prior to consent being granted. For the purposes of the offshore array, two Maximum Design Scenarios (MDS) were identified with the Seascape, Landscape and Visual Impact Assessment (SLVIA) ETG for assessment to understand the effects of the smallest number of largest turbines (MDS A), and the largest number of smaller turbines (MDS B).
- 122 Whilst the design of the offshore array will not be determined until after consent, the key offshore parameters have been identified and are secured in the DCO and, in response to questions from the ExA during Examination, further drafting has been included to ensure that there is no material difference in the wind turbine generators installed under any consent.
- 123 For the onshore elements, it has been necessary to retain the same flexibility in relation to the AyM OnSS, where the Applicant has retained the ability to use either Gas Insulated Switchgear (GIS) or Air Insulated Switchgear (AIS), with the MDS parameters for either switchgear option being set out in Requirement 7 of the dDCO. This flexibility is considered appropriate at the OnSS site as there are no technical or environmental reasons for only one option being suitable, and to ensure that the Applicant can engage with a wide range of suppliers at the design/procurement stage to encourage competition and cost savings along with delivery of an economic and efficient system (in accordance with its obligations under the Electricity Act 1989).
- 124 The Applicant has also developed a design principles document (REP7-029) through the Examination to ensure appropriate design input and engagement are built into the final OnSS design details and mitigation measures around it are to be approved by DCC under Requirements 6, 8 & 9 of the dDCO.

The appropriateness and adequacy of proposed requirements and whether they would effectively secure mitigation, together with any monitoring provisions

- 125 The AyM dDCO contains requirements that meet the relevant legal tests in that they are precise, enforceable, necessary, relevant to the development, relevant to planning and reasonable in all other respects. Where additional requirements have been requested by IPs, these have been included in the dDCO where they are considered to meet the relevant legal tests. This includes additional requirements securing a Skills and Employment Strategy (SES) (Requirement 20 of the dDCO (Document CS.4 of the Applicant's Closing Submission) and a Landscape Enhancement Scheme (Requirement 26 of the dDCO) to compensate for the impacts of AyM on the Isle of Anglesey (IoA) Area of Outstanding Natural Beauty (AONB), Great Orme Heritage Coast and Eryri National Park (ENP).
- 126 The Requirements of the AyM dDCO have been the subject of detailed discussion and negotiation and have been revised to ensure any necessary mitigation and monitoring is secured.
- 127 To assist the ExA and IPs to understand where necessary mitigation is secured, the Applicant has produced a Schedule of Mitigation and Monitoring (REP8-016). This identifies all mitigation and monitoring commitments within the ES and other documents and where the relevant measures are secured (for example as a requirement of the dDCO or as a standard Marine Licence condition).
- 128 The Applicant is not aware of any outstanding concerns from IPs regarding mitigation or monitoring proposals and where these are secured.

Whether any additional requirements are necessary

129 The Applicant considers that all appropriate requests for additional requirements have been addressed through the Examination and are included in the final dDCO at the close of examination (Document CS.4 of the Applicant's Closing Submission). This is confirmed through the SoCG with DCC, Conwy County Borough Council (CCBC), NRW and the Isle of Anglesey County Council (IoACC) (REP7-049, REP8-045, REP8-047, REP8-048, REP8-049 and REP8-046).

The relationship with the Marine Licence and other consents / permits / licences (including regulatory approvals and environmental permits)

130 The other consents and licences required for the AyM project are set out in the Applicant's Consents and Licences Required Under Other Legislation (REP8-028).

131 As the AyM project is located in Welsh inshore waters it is not possible under the PA2008 for a deemed Marine Licence to be included in the DCO. In consideration of this, and to ensure that the ExA and other IPs have visibility of the parallel Marine Licence process, the Applicant has produced a Marine Licence Principles document (REP8-014) that sets out the expected scope and content of the Marine Licences needed for the AyM project.

132 The necessary Marine Licence application was made to NRW on 30 May 2022, and has been progressing in parallel with the AyM DCO Examination. Where considered helpful, or requested by the ExA or NRW, material from one process has been submitted to the other. The Applicant has also updated the Examination at each relevant deadline on the progress of the Marine Licence application.

133 The final update (REP8-018) confirms that there are no outstanding requests for information from NRW Marine Licencing Team (NRW-MLT), relevant information from Deadline 8 and prior to the close of the Examination will be provided to NRW-MLT, and that the Applicant will continue to liaise with NRW-MLT on the determination of the Marine Licences.

134 All other relevant consents or permits will be sought after the decision on the AyM project. This includes any European protected species licences (EPSL), environmental permits and any Flood Risk Activity Permit (FRAP) required from NRW. NRW has confirmed that an EPSL could be granted to achieve FCS for great crested newts. To date, NRW has not raised any concerns with the Applicant regarding EPSL or suggested that there were issues that would preclude an EPSL being granted. On the basis that FCS could be achieved through the proposed approach to mitigation/ compensation/ enhancement, as confirmed by NRW, the Applicant considers that EPSLs would be achievable for the project.

Application and modification of legislative provisions

135 The Applicant has sought in the dDCO to disapply the requirement for certain other consents as well as certain legislative provisions that would be inconsistent with the terms of the dDCO. This is set out in Article 7 of the dDCO. Save in relation to the disapplication of the FRAP, where NRW is required to but has not agreed to the disapplication, the disapplications sought have been agreed with the relevant authority (DCC as lead local flood authority in relation to the Water Resources Act and Land Drainage Act).

136 The Applicant has also sought to disapply s61 of the new Road and Street Works Act 1991, in so far as the installation of cables using Horizontal Directional Drilling (HDD) beneath the A55 is considered to require the consent of Welsh Minsters (WM) (as the street authority). The Applicant has included protective provisions in relation to these works in the dDCO submitted at Document CS.4 of the Applicant's closing submission. On this basis, WM have confirmed they do not object to the disapplication of s61.

Discharge arrangements for matters for which detailed approval needs to be obtained, including consultation and arbitration

137 Provisions are included in Schedules 11 (approval of matters specified in requirements) and 12 (arbitration rules) of the dDCO (Document CS.4 of the Applicant's Closing Submission) to address these matters and ensure that appropriate procedures are in place to ensure that any further approvals are dealt with in an appropriate and timely matter. At the request of the ExA, the wording of Schedule 11 has been amended to make clear the provisions apply to the discharge of requirements in part. DCC as the discharging authority for the DCO requirement has not raised any concerns with the drafting of Schedule 11.

The identification of all relevant statutory undertakers for which protective provisions are required and the adequacy and agreement of those provisions

138 The Applicant considers that all relevant statutory undertakers have been identified and, where necessary, protective provisions (PPs) have been negotiated. Agreed PPs are included in the dDCO at the close of examination for Scottish Power Energy Networks, DC, NR, and Wales and West (Document CS.4 of the Applicant's Closing Submission).

139 Additional protective provisions have been included in the dDCO for Rhyl Flats OWF (RWF) in relation to AyM's cable works within the RF array buffer zone, for WM in relation to s61 consent for the A55 crossing and for CCBC to secure an offshore piling noise monitoring plan to address CCBC's concerns regarding the impacts of offshore piling noise on receptors within Conwy. The plan has been secured through PPs rather than a requirement, as CCBC does not have enforcement powers under the PA2008.

Other provisions in the dDCO, including for removal of consent requirements, CA and documents to be certified

140 Removal of consents are addressed above in paragraph 135 *et seq.*

141 At the request of the ExA, the list of documents has been reviewed and updated through the Examination. The list of documents to be certified in Schedule 13 of the dDCO includes those documents that are necessary for the interpretation of the Order or are secured by the articles or schedules (in particular the requirements in Schedule 2). Documents that were submitted as part of the AyM application, or to NRW for the marine licence application, but are not secured by the dDCO, are not listed in Schedule 13. The dDCO submitted at the close of examination (Document CS.4 of the Applicant's Closing Submission) includes a full list of the final versions of documents to be certified.

Flood Risk and Water Quality

Flood risk including site drainage and surface water flooding and hydrogeology

142 The Applicant provided a revised version of the Flood Consequence Assessment (FCA) for the Onshore ECC (REP1-043) and OnSS (REP-044) in response to issues raised by NRW and the ExA relating to proposed infrastructure in Flood Zone C2, inclusion of Flood Map for Planning (FMfP), and other minor updates. NRW has confirmed that it is satisfied that flood risk can be appropriately managed (REP8-049).

Any other potential flood risk effects

143 NRW initially raised a number of questions regarding watercourse crossings and crossings of flood defence infrastructure either side of the River Clwyd that the Applicant has addressed to the satisfaction of NRW through additions to the outline onshore CMS (REP7-020). This is reflected within the SoCG (REP8-049).

144 As noted in paragraph 135 *et seq.*, the Applicant initially sought to disapply the requirement for a FRAP in the dDCO, however, as NRW has not agreed to this disapplication, it has been removed from the DCO.

Adequacy of baseline data including robustness of surveys and data collection methodology

145 NRW initially raised a number of concerns in its Relevant Representation (RR) (RR-015) regarding the marine water and sediment quality assessment, specifically in relation to the reporting of contaminants analysis data against the Centre for Environment, Fisheries and Aquaculture Science (Cefas) Action Levels. This information was subsequently provided to NRW through the provision of a clarification note (REP1-015), and NRW is now satisfied that the requested information was provided and has no outstanding concerns on this matter. This is confirmed in the SoCG (REP8-048).

Extent of catchment area, accuracy of modelling, climate change allowances and any assumptions made

146 In response to a request from the ExA, the Applicant provided a revised version of the FCA for the onshore cables (REP1-043) and OnSS (REP1-044) at Deadline 1. These were revised using the most recent climate change allowances as set out in UK Climate Projections 2018 (UKCP18) and NRW guidance from 2021 (Adapting to Climate Change: Guidance for Flood and Coastal Erosion Risk Management Authorities in Wales). No change to the proposed sustainable drainage systems (SuDS) for the OnSS is needed as a result of this update.

Effects on potable and non-potable water supply during construction and operation

147 NRW provided a number of suggested amendments to the oPPEIRP (REP2-037) and outline onshore CMS (REP7-020), that the Applicant has incorporated fully within these documents. With the inclusion of these measures, NRW has confirmed that impacts on water quality (both surface and groundwater) can be appropriately managed (REP8-049).

Compliance with the Water Framework Directive

- 148 The Applicant undertook a Water Framework Directive (WFD) Compliance Assessment (REP8-067), which concluded that AyM is compliant with the objectives of the WFD and would not result in a deterioration in status of any relevant WFD waterbodies either alone, or cumulatively with other identified plans, projects and activities.
- 149 Concerns regarding water clarity raised by NRW in response to ExQ1.7.6 (REP1-080) have been addressed through further information provided in a clarification note (which was submitted to the Examination at REP1-015). In response to this, NRW has confirmed in the offshore SoCG (REP8-048), that it agreed with the conclusions of the WFD Compliance Assessment.
- 150 Therefore, all issues pertaining to compliance with the WFD have been addressed prior to the close of the Examination. The ExA can therefore have confidence that AyM is compliant with the objectives of the WFD and will not result in the deterioration in status of any relevant WFD waterbodies, wither alone or in-combination.

Adequacy of mitigation measures and monitoring

- 151 Offshore, it is agreed with NRW (REP8-048) that mitigation proposed relating to marine water and sediment quality is appropriate. Specifically, the Applicant expects that a PEMP will incorporate a Marine Pollution Contingency Plan (MPCP) and will be conditioned in any Marine Licence granted, to be agreed with NRW prior to construction.
- 152 From an onshore perspective, mitigation and monitoring measures are included within the outline management plans and will be agreed with DCC, in consultation with NRW, through DCO Requirements, primarily DCO Requirement 10 for the CoCP. The final mitigation measures will be informed by detailed scheme design which will include confirmation of trenchless or open cut watercourse crossing techniques.

153 Surface water drainage schemes for the onshore cable works and OnSS will be provided as part of the final onshore CMSs to manage surface water during construction. A surface water and foul water drainage scheme for the operational phase of the OnSS will be approved by DCC, in consultation with NRW in order to discharge DCO Requirement 16. This approach to mitigation has been agreed with NRW and DCC as evidenced within respective SoCG (REP8-049, REP7-049).

Good Design

Whether the proposal, both as a whole and in part, demonstrates good design

- 154 The Applicant has sought, through consultation and iterative design, to minimise all environmental impacts as far as is practicable, whilst retaining an economically viable project.
- 155 With regards to the offshore array and export cables, AyM has been designed, so far as reasonably practicable to apply good design, siting turbines in an area that seeks to reduce visual effects, avoiding placement of turbines within the Liverpool Bay SPA, whilst also complying with the necessary safety requirements with respect to safe navigation and operation of Search and Rescue procedures.
- 156 Offshore array cables avoid Constable Bank following feedback from SNCBs received through the Evidence Plan process. Further design refinements, such as reducing turbine height, are not considered feasible due to the flexibility needed to account for uncertainty in technological advances (as recognised in NPS EN-3) or due to other considerations such as operational safety which requires the turbines to be appropriately marked to comply with navigational safety requirements.
- 157 The onshore design has also sought to minimise its impacts wherever possible, primarily with the Applicant's commitment to underground the cables from the landfall to the final connection at the National Grid substation, allowing the land where the cables are installed to be returned to its original condition after the construction of the project.

- 158 Whilst the Applicant has not applied for a specific design for the OnSS for the reasons set out in paragraph 123 above, it has sought to secure key design measures through requirement 6 of the dDCO and the Design Principles Document (REP7-028) which describes layouts, landscape proposals and appearance of the proposed onshore infrastructure including the onshore ECC and OnSS.
- 159 Additional detail of the potential reinstatement of the onshore ECC and screening proposals for the OnSS is set out the oLEMP (REP7-026). The respective outline plans and the detail within them, have principally been accepted by DCC and NRW, as evidenced in the respective SoCGs (REP7-049 and REP8-049).

Design principles

- 160 Primarily the Applicant has sought to maximise the potential output of the proposed wind farm scheme, whilst minimising its impacts on the wider environment, to help achieve climate change goals set by the Welsh and UK Governments and in line with international commitments. This has been done by setting design parameters that include the most efficient turbines available in the world market, whilst also minimising the onshore infrastructure needed to connect the project to the National Grid.
- 161 Despite the location of the AyM array site having been dictated by the requirements of TCE's 2017 offshore wind extension criteria, which required projects to share a boundary with the existing wind farm (Gwynt y Môr), the Applicant has sought to minimise the impacts of the scheme by removing turbines from the most sensitive western area of the site awarded by TCE to reduce the effects of the scheme on the designated North Wales landscapes of the ENP and IoA AONB.
- 162 The 2017 Crown Estate 'Cable Route Protocol' (CRP) comprises a set of principles and requirements for offshore wind developers in the planning of export cable routes, which are explicitly linked to HRA aspects. AyM's compliance with the CRP is set out in the site Selection and Alternatives Chapter (APP-044)

- 163 The onshore elements were refined following non-statutory consultations on landfall locations and OnSS sites with the responses received informing the Applicant's final choice of buried cables from Ffrith Beach to the National Grid infrastructure at Bodelwyddan substation. The onshore infrastructure has been kept outside of national designations and, wherever possible, existing environmental features have been incorporated into the design.
- 164 At the OnSS site, the Applicant has sought to use the natural landform and environment to help screen the infrastructure and enhance landscaping. It has also proposed a number of locations for tree planting, to further screen the proposal from local residents at Faenol Brodor and from Glascoed Road. The final design of the OnSS and landscaping will be influenced through the design guide process set out in the Design Principles Document (REP7-028), including consultation with key stakeholders and local residents to help ensure the mitigation measures deliver the most impact in and around the OnSS.

Historic Environment

Effects on the onshore historic environment, including archaeology and setting of designated assets (including but not limited to listed buildings and world heritage sites)

- 165 Through the EIA process (as described in ES Volume 3, Chapter 8: Onshore Archaeology and Cultural Heritage (REP8-064)), the potential for permanent, direct effects to onshore archaeology were identified during the construction phase. Following the implementation of mitigation measures, through preservation by record; the resulting residual effects are not significant in EIA terms. No further effects to buried onshore archaeology are anticipated during the operation or decommissioning phases.
- 166 The potential for indirect effects to occur to the significance of onshore historic assets through change within their setting has also been considered. No significant effects are predicted to occur as a result of the onshore infrastructure.

- 167 Potential indirect effects to designated historic assets arising from the presence of the wind turbines during the operational phase were assessed and included impacts to highly designated assets such as World Heritage Sites, Scheduled Monuments, Grades I, II* and II listed buildings and Historic Landscapes of Wales. Only one significant effect has been identified upon the Grade II* Listed Llandudno Pier, where a moderate adverse effect was identified.
- 168 The remaining areas of disagreement with consultees are in relation to the predicted level of effect upon the setting of Penrhyn Castle (and Registered Historic Park and Garden), Llandudno Conservation area, and the Tower and Remains of Church and Monastic Settlement on Puffin Island. The Applicant has set out its case for why the effects upon these assets are not significant within its response to Written Representations (REP2-002) and during Issue Specific Hearing (ISH) 2 where the Applicant considers that the disagreement is based on professional judgement (A written summary of the Applicant's representations at that hearing are at REP3a-004).

Effects on the intertidal and offshore historic environment

- 169 A foreshore walkover survey undertaken in December 2021 identified a number of assets predominantly comprising peat deposits, tree stumps and logs upon the foreshore as well as some large concrete sheets and pillars where there is potential for assets to be affected by landfall works (HDD exit pits, anchor points and vehicle access). Mitigation, in the form of the implementation of an appropriate programme of archaeological work, leading to 'preservation by record' the detail of which will be agreed via a written scheme of investigation (WSI) (APP-147) means potential effects would not be significant. This approach to mitigation has been agreed with DCC (REP7-049) and by Cadw (REP4-028).
- 170 Offshore, no significant effects have been identified, and this is agreed with Cadw (REP4-028). Via the Marine Licensing process, the Royal Commission for Ancient and Historic Monuments in Wales (RCAHMW) was also consulted by NRW and was content with the assessment and mitigation measures proposed to be secured in an offshore WSI (as specified in the Marine Licence Principles (REP8-014)).

Future archaeological investigation, monitoring and supervision

- 171 An onshore WSI has been provided by the Applicant (APP-147) which outlines the approach to further assessment, mitigation and monitoring to be undertaken under Requirement 12 of the DCO (Document CS.4 of the Applicant's Closing Submission). This sets out the aims and methodology that will be followed for archaeological trial trench evaluation and geoarchaeological borehole survey to be undertaken post-consent and pre-construction, including monitoring and supervision of works.
- 172 The results of these surveys will inform scheme design as well as the need for further assessment and/or mitigation measures. The Onshore WSI outlines the approach to achieving preservation by record where harm is unavoidable and the protocols to be followed with regard to further assessment, mitigation and monitoring during detailed design and construction. The Outline WSI was agreed with the archaeological advisor to DCC, prior to the submission as part of the DCO application.
- 173 The detail and specific requirements of mitigation measures will be informed by the results of the initial archaeological investigations and will be agreed with DCC as the relevant planning through stage-specific WSI(s).

Adequacy of archaeological surveys undertaken (including interpretation of survey results)

- 174 The archaeological baseline was formed of desk-based studies, site walkovers, monitoring of geotechnical works and non-intrusive geophysical surveys, both offshore and onshore.
- 175 The desk-based work has given the Applicant a good understanding of the archaeological background of the area, and the geophysical survey has a high level of coverage that allowed a good appreciation of the densities of archaeological features within the onshore cable corridor. This follows a staged programme, as is standard archaeological practice, for the assessment of development proposals, with the completion of the earlier stages informing the scope of subsequent stages.

- 176 Onshore, a focussed pre-consent trial trenching campaign had been planned for Q4 2021/ Q1 2022 but, due to bad weather and inadequate ground conditions, this was not achievable. Clwyd-Powys Archaeological Trust (CPAT), which advises DCC, confirmed that in the event of access or ground conditions being inadequate the campaign could be deferred to the post-consent phase.
- 177 Based on the consideration of the results presented in the desk-based assessment and the detailed geophysical survey, the Applicant considered that the risk that currently unknown significant archaeological sites (i.e., remains of schedulable or near-schedulable quality which significantly add to our understanding of the past lives and environment of people within the area at all periods) might be encountered was low, and whilst it was clear from the geophysical survey that archaeological features do survive along the onshore ECC, it was agreed with CPAT that these would be most appropriately dealt with through the implementation of a programme of archaeological work, to be secured through approval of a WSI secured by DCO Requirement 12, and that further trial trenching is not required pre-determination.
- 178 The Applicant considers that there are no outstanding issues in relation to the adequacy of archaeological surveys undertaken and notes there is full agreement with Cadw (REP4-028) that the baseline environment has been appropriately characterised from an offshore and onshore perspective.

Adequacy of mitigation measures and monitoring

- 179 Mitigation and monitoring measures are included within the Outline WSI, which sets out the in-principle measures which will be implemented for proposed archaeological investigations.
- 180 The detail and specific requirements will be agreed with DCC via stage-specific WSI(s), through DCO requirements prior to commencement of works. The final mitigation measures will be informed by detailed scheme design. This approach to mitigation has been agreed with the archaeological advisor at CPAT which advises DCC.

- 181 The ExA has asked whether pre-consent trial trenching provides an opportunity to achieve preservation *in situ* which may not be possible post-consent. The Applicant confirmed that preservation *in situ* is preferable where harm can be reasonably avoided, and in particular where historic assets of high significance are identified.
- 182 Pre-consent evaluation does provide a better opportunity to understand the significance of any potential assets, however, this ignores the staged and proportionate approach of the assessment of historic assets which policy and guidance (such as that within Technical Advice Note 24: The Historic Environment, May 2017) advocates, and which has been carried out for AyM.
- 183 The staged approach (set out in paragraph 174 *et seq.*) allows for a good understanding of historic assets through desk-based assessment and geophysical survey, to inform the need for and scope of trial trenching. The trial trenching can then be tailored to the density and predicted significance of the assets based upon the results of the survey. This allows for a considered approach, with the trial trenching focused on answering specific research questions, rather than a blanket percentage sample which could miss archaeological features through randomized placing of the trenches. Pre-consent trenching would not normally be considered as providing mitigation (partial or otherwise) and is normally understood to be an investigative technique to provide data to inform a baseline.
- 184 A similar approach is taken in the offshore environment, with commitments to undertake detailed pre-construction surveys and agree a final offshore WSI prior to construction, as outlined in the Marine Licence Principles (REP8-014) and is agreed as appropriate with Cadw (REP4-028).

Land Use

Effects on agricultural land and farming operations

- 185 The onshore elements of AyM will interact with areas predicted to be Best and Most Versatile Agricultural Land (BMVAL), as acknowledged within ES Volume 3, Chapter 6: Ground Conditions and Land Use (REP8-062). The assessment considers the total worst-case footprint of the onshore development area and ascertained the total loss (ha) of agricultural land for each Agricultural Land Classification (ALC) grade. This assessment concludes that the effects from temporary and permanent works will not be significant.
- 186 The Applicant considered BMVAL though consideration of ALC grades within the appraisal of 'Land use' when undertaking its analysis of long-list and short-list options for the onshore cables and OnSS. The analysis undertaken in considering siting and routing options included consideration of a number of other environmental and engineering constraints. As much of the land to the southeast of Rhyl and to the north and west of St Asaph Business Park (SABP) is classed as BMVAL, the ability to avoid impacting this land is very limited. As the predictive ALC map (provided at Deadlines 1 (Appendix L of REP1-007) and Deadline 7 (Appendix B of REP7-004)) demonstrates, it is not feasible or practical that the onshore ECC could be diverted to avoid BMVAL land in this area.
- 187 Whilst there is predicted to be a temporary impact upon agricultural land during the construction phase of the onshore cable works, the reinstatement of land above the buried cable will allow agricultural cultivation to re-commence once the cable has been installed. Field drainage will be reinstated and the indicative minimum burial depth (from ground surface to the top of the cable ducting), will allow cultivation of land. Reinstatement in accordance with details approved by DCC is secured under DCO Requirement 17. The Applicant has undertaken an ALC survey of the OnSS site which has confirmed only a small proportion of the site (approximately 1.5 ha), is BMVAL. The ALC survey has been reviewed and verified by Welsh Government and a copy of the survey provided at Deadline 7 (REP7-036).

188 With regards to individual agricultural holdings, the Applicant has confirmed that it has not undertaken an assessment of the impacts of the proposed development on individual land holdings within the EIA. Given the measures proposed to reinstate land temporarily affected by AyM, measures to reduce the impact of construction works upon agricultural operations and the financial compensation that will be paid to holdings that are impacted as a result of the temporary works, the Applicant considers there will not be any significant effects upon holdings along the cable corridor and landfall.

189 Although there will be a large proportion of the Faenol Bropor land holding removed from agricultural operation by the OnSS and the associated access, mitigation, compensation and enhancement areas compensation will be payable to the landowner to mitigate this impact.

Effects on soil quality

190 An oSMP (REP7-022) has been provided as Appendix 4 of the outline CoCP secured under DCO Requirement 10. The oSMP provides details of mitigation measures and best practice handling techniques to safeguard soil resources by ensuring their protection, conservation and appropriate reinstatement during the construction of the onshore works.

191 The oSMP has been updated in response to feedback provided by the ExA and Welsh Government to confirm details on soil surveys, soil stripping, soil storage, soil handling, soil reinstatement, monitoring and aftercare will be included in the final plan submitted to DCC for approval in consultation with Welsh Government.

Adequacy of mitigation measures and monitoring

192 The key mitigation measure with regards to land use, is the oSMP (REP7-022) described above. Other mitigation is provided through the following management plans appended to the CoCP and secured under DCO Requirement 10:

- ▲ Onshore CMS;
- ▲ SWMP;
- ▲ PPERIP; and
- ▲ INNSMP.

193 These documents are agreed with DCC and Welsh Government as set out in the DCC SoGC (REP7-049) and Welsh Government submission (REP5-044).

Seascape, Landscape and Visual (relating to the offshore array and the onshore cabling and sub-station)

The adequacy of assessment methodology and approach including the extent of study areas

194 The study areas for the SLVIA (REP8-082) and Landscape and Visual Impact Assessment (LVIA) (REP8-087) were agreed through the EIA Scoping process. The North Wales Local Planning Authorities (NW LPAs) commissioned Land Use Consultants (LUC) to undertake a review of the SLVIA and LVIA chapters on their behalf at both Section 42 consultation and DCO application stage (the LUC report was appended to DCC's Local Impact Report (LIR) (REP1-056)). These reviews established broad agreement with the approach and methodology used in the SLVIA and LVIA. LUC noted at paragraph 2.1 that *'Our review of the PEIR judged that the methodology employed by the SLVIA authors was grounded in good practice guidance and was fit for purpose. The basis of the SLVIA has not changed substantively since PEIR.'*

195 This broad agreement is with the exception of a small number of matters as set out in the Applicant's Deadline 2 submission – 2.6 Comments on Land Use Consultants Review of LVIA and SLVIA (REP2-006) and within the NRW SoCG (REP8-047).

The approach to seascape, landscape and visual impact assessments

196 The approach to the SLVIA and LVIA follows the Landscape Institute and Institute of Environmental Management and Assessment IEMA (2013) Guidelines for Landscape and Visual Impact Assessment Version 3 (GLVIA3) and other relevant guidance as set out in the SLVIA and LVIA.

Baseline information

- 197 The baseline was assessed through desk and field-based study within the relevant study areas. The existing environment within the SLVIA study area is described in Sections 10.7, 10.10 and 10.11 of the SLVIA (REP8-082) and the existing environment within the LVIA study area is described in Sections 2.7, 2.10-2.12 and 2.14 of the LVIA (REP8-087).

Adequacy of viewpoint locations

- 198 The viewpoint locations were agreed through ETG meetings in advance of the consultation under s42 of the PA2008. Further viewpoints (VPs) were added and submitted in the ES in response to the consultation. This process is set out in the Evidence Plan and its Appendices (APP-301, 302, 303).
- 199 For the LVIA, eight viewpoints were agreed as part of the EIA Evidence Plan and its Appendices (APP-301, APP-302, APP-303). However, an additional viewpoint, within the Clwydian Range and Dee Valley (CRDW) AONB was added in response to feedback from NRW at Section 42 consultation resulting in nine viewpoints assessed in ES Chapter 2: LVIA (REP8-087). No additional VP locations were requested by DCC directly, however, LUC suggested that alternative viewpoint locations be included from St Asaph and Bodelwyddan Park as part of the s42 feedback and these were included within the ES.
- 200 In response to questions from the ExA, a further VP was considered at Faenol-Bropor at Deadline 4 (REP4-027).

Accuracy of photomontages

Offshore

- 201 The ExA asked the Applicant to explain why existing turbines associated with other wind farms are not visible in some of the baseline visualisations but appear in the photomontages (e.g. VP 17 (Penrhyn Castle Terrace) (APP-246).

- 202 As noted in ES Annex 10.1: Methodology (APP-027) at paragraph 132, a small number of photographs were taken in less than favourable weather conditions, including VP17. As noted in paragraph 150, *“In some cases, the visibility of the operational offshore wind farms has been enhanced using photomontage techniques. This is in accordance with NatureScot Guidance and is noted on the visualisations”*.
- 203 LUC set out in its review of the SLVIA on behalf of the NW LPAs of the ES at section 2.13 that *“the SLVIA includes the same photography and approach to visualisation as in the PEIR. The Applicant’s earlier review found these to be of ‘good quality, produced and presented in line with the relevant good practice guidance.’”*

Onshore

- 204 The ExA noted that the operational Year 15 photomontages within the LVIA showed proposed planting in leaf. The Applicant acknowledged that the proposed planting is different in appearance to the existing planting in the photography. However, the mitigation potential of the woodland planting would be very similar in winter months and therefore the visualisations are representative of the worst-case scenario. The Applicant confirmed that, in accordance with GLVIA 3 (paragraph 6.28), seasonal variation has been taken into account within the assessment of landscape and visual effects set out in Chapter 2: LVIA (REP8-087).

The effects on seascape character

- 205 In response to a question from the ExA on the effect of the offshore array on Seascape Character Area (SCA) 28 as a whole, the Applicant confirmed that the SLVIA methodology (APP-112) does not provide for such an assessment. In accordance with GLVIA3, the SLVIA (REP8-082) sets out the geographic extents of the likely significant effect on SCA 28.
- 206 The seascape character areas where significant effects are likely to arise has been agreed by the parties through the statements of common ground of NRW (REP8-047) and the NW LPAs (REP8-044). As set out, some limited disagreements remain regarding the geographical extents of the significant effects on seascape character.

The effects on landscape character and landscape designations

Offshore

- 207 The landscape character areas/ types where significant adverse effects on landscape character are considered likely to arise as a result of the offshore array have been broadly agreed between the Applicant and relevant stakeholders as set out in the NRW and NW LPA SoCG (REP8-044). There are some differences of opinion remaining regarding the geographical extent of the significant effects on landscape character within the Isle of Anglesey AONB and (ENP) as set out in the SLVIA and the Applicant's Deadline 5 Submission - 5.7 Designated Landscapes and Relevant Tests (REP5-007) - as well as being discussed in Issue Specific Hearing (ISH) 2.
- 208 As set out in GLVIA3, the assessment of landscape effects and the assessment of visual effects are distinct components of LVIA, or in this case SLVIA. GLVIA3 notes on page 21 that:
- "Landscape result from the interplay of the physical, natural and cultural components of our surroundings. Different combinations of these elements and their spatial distribution create the distinctive character of landscapes in different places, allowing different landscapes to be mapped, analysed and described. Character is not just about the physical elements and features that make up a landscape, but also embraces the aesthetic, perceptual and experiential aspects of the landscape that make different places distinctive."*
- 209 In this instance, both visual and landscape character effects could arise where there is visibility of the AyM Windfarm.
- 210 NRW suggests in its Written Representation (REP1-080-1.10) that on the Isle of Anglesey, *"significant adverse landscape character effects are likely to extend further across these LCAs, as indicated by the Zone of Theoretical Visibility (ZTV), notwithstanding that some parts would be screened by topography, vegetation, and buildings"*.

- 211 The Applicant does not agree with this view. Whilst there may be some degree of visibility of AyM within the areas of Zone of Theoretical Visibility (ZTV) this does not translate to a significant effect on landscape character across these areas. Instead, significant effects are more confined to the coast, and the areas within approximately 1 km of the coast, where the sea is a more definitive component of the contextual influence on the landscape character of these areas.
- 212 In terms of the effects on landscape character within ENP, NRW and the NW LPAs, agree with the findings in relation to LCA-02: Carneddau Range but do not agree with the findings in relation to LCA-01: Northern Uplands where they consider there would be significant effects across parts of the northerly extents.
- 213 It is the Applicant's position that the further impact on the characteristics of these areas through the introduction of AyM as part of their setting would not result in a marked change to their character or a significant effect. The northerly areas of the LCA are those that are at closest proximity to the AyM array area and the higher levels of magnitude of change in views as a result. VPs 12, 36, 39, 40 and 60 (APP-241, APP-265, APP-268, APP-269 and APP-285, respectively) demonstrate this. These areas generally coincide with areas where there is the strongest existing human influence on character through visibility of existing development, including OWFs, which is detrimental to the qualities of tranquillity, remoteness and wildness.
- 214 Whilst it is agreed that existing coastal development is of a different scale and form to the proposed development, it does indicate a human influence over the wider landscape of the intervening coastline. In addition, the existing OWF are visible from much of the LCA that would also gain visibility of AyM so that changes in the character in this part of the contextual views are incremental.

- 215 It is the Applicant's position that it is the inherent pattern of elements in the landscape in question that constitute its key characteristics and where these are strongly defined, as is the case in the northerly parts of LCA 01, external (visual) influences are less likely to result in a significant effect on landscape character. Within these areas, views out to sea towards AyM OWF would also be part of contextual views that in many instances include the more dramatic, mountainous skyline to the north as part of the wider influential context.
- 216 Views across the remotest parts of ENP would not be affected by the proposed development as they are found to the north of LCA 01.
- 217 In relation to the effects on the nationally designated landscapes, the Applicant has set out its position in Deadline 5 Submission - 5.7 Designated Landscapes and Relevant Tests (REP5-007).
- 218 In relation to the effects on the IoA AONB, there would be significant effects on landscape/ seascape and visual receptors within different parts of the AONB, which are predominantly located close to the coast. In addition, significant effects on three Special Qualities have been identified. None of these effects are direct but occur through visibility of AyM from parts of the AONB, as the development is located outside its boundary. This indicates that a degree of 'harm' is likely to arise in relation to the perceived impacts of the development on the wider setting of the AONB.
- 219 It is accepted by the Applicant that there would be some significant adverse impact on the views towards the seascape from the IoA AONB and that development of AyM would therefore not be consistent with objectives that seek to enhance the AONB. However, it is considered that almost no large-scale development would be able to comply with the principle of enhancement and therefore it must be anticipated that any major development would give rise to some degree of friction with such an aim.

- 220 There are 15 factors listed in the SLVIA (REP8-082) which need to be taken into account in determining the degree of harm that may arise as a result of AyM, how this has been minimised through design, and how this should be considered in the planning balance. As detailed in the Applicant's Written Summary of Oral Submissions to ISH2 (REP3a-004), it would be difficult for any large-scale development of this nature, visible from these designated landscapes, to be considered to directly conserve or enhance their natural beauty. This is acknowledged in EN-1 at paragraph 4.5.1 where it is stated that, *"the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area."*
- 221 Whilst not a defined term applied in Wales in relation to AONBs or National Parks, the effect on 'overall integrity' is nonetheless a very clear way of expressing how the special qualities of a designated landscape area come together to represent the whole or overall value. It is a useful approach to adopt when considering the degree of harm overall, especially where there is a management plan identifying Special Qualities as well as other features and activities *"that combine to make each AONB distinctive and nationally important"* (the Isle of Anglesey Areas of Outstanding Natural Beauty Management Plan Review 2015-2020).
- 222 While some special qualities might be adversely affected, the overall AONB designation would not be compromised, meaning its integrity would remain conserved.
- 223 Notably, in relation to the purpose 'to conserve', the purpose of the AyM development is to provide mitigation of climate change impacts, which are predicted to give rise to widespread changes in our landscapes, habitats and species, including those in the AONBs and ENP. AyM would therefore also play a part in conserving aspects of the designated area.

- 224 It is accepted that there would be some perceived diminishment of (harmful effects on) three of the 14 special qualities and the natural beauty of the AONB associated with these, however, such effects would only occur within a limited geographical area. Therefore, substantial areas of the AONB, as well as 11 of its 14 special qualities, would be unaffected. Taking into account these factors, the effects are not considered to occur to such a degree that it would affect the integrity of the AONB or its inherent natural beauty and it would occur within a context and understanding of the need for change including accommodating new energy development as set out in the Anglesey AONB Management Plan Review.
- 225 The question is therefore whether, as noted above, taking account of the sensitivity of the receptor, the harmful effects are considered to outweigh the benefits of the proposed scheme. For the reasons set out in this response and in the Applicant's wider submissions to the Examination, it is considered that the landscape harm that would result, would not outweigh the benefits of the proposed scheme.
- 226 In relation to the effects on ENP, the Applicant's assessment has found there to be significant visual effects on receptors within different parts of the ENP. However, no significant effects on landscape/ seascape character or Special Qualities (as agreed with NRW and the NW LPAs in their SoCG) have been identified, although it is acknowledged that there would be non-significant effects that are adverse. This indicates that some degree of 'harm' may arise in relation to the impacts of the development on the wider setting of the ENP through its visibility from the northerly areas.

- 227 It is accepted by the Applicant that there would be some significant adverse impact on the views towards the seascape from the ENP and that development of AyM would therefore not be consistent with objectives that seek to enhance the natural beauty or quality of ENP. However, the Applicant considers that almost no large-scale development would be able to comply with the principle of enhancement and therefore it must be anticipated that any major development would give rise to some degree of friction with such an aim. This is also acknowledged in NPS EN-1 at paragraph 4.5.1 whereby it is stated that, *“the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.”*
- 228 The Applicant considers that there may be some perceived diminishment of (harmful effects on) the Special Qualities of Diverse Views and Tranquillity, but such effects are not considered to be significant and are therefore limited. There would also be some localised areas where significant adverse visual effects would arise. However, it is not considered that the seascape, landscape and visual receptors within the ENP would be diminished to such a degree that the overall integrity of the ENP or its inherent natural beauty would be affected. In addition, such impacts would occur within a context and understanding of the need for change including accommodating alternative energy.
- 229 AyM is not located within this designated area and, whilst there are some significant effects identified within it, these effects are agreed as not relating to the relevant Special Qualities identified and do not undermine the reasons for designation. Seven of its nine special qualities and the majority of its geographical extent would remain entirely unaffected by AyM.

- 230 Whilst not a defined term applied in Wales in relation to National Parks, the Applicant suggests that considering the effect on 'overall integrity' is nonetheless a very clear way of expressing how the special qualities of a designated landscape area come together to represent the whole or overall value. It is a helpful approach to adopt when considering the degree of harm overall, especially where there is a Management Plan that identifies Special Qualities. As acknowledged by the Cynllun Eryri Snowdonia National Park Partnership Plan 2020, *"The Combination of these Special Qualities are the core of designation as a National Park."*
- 231 While two Special Qualities may be adversely (but not significantly) affected, the overall ENP designation would not be compromised, meaning its integrity would remain conserved.
- 232 Notably in relation to the purpose 'to conserve' the purpose of the AyM development is to provide mitigation of climate change impacts, which if they remain unchecked, are predicted to give rise to widespread adverse changes in our landscapes, habitats and species, including those in the AONBs and ENP. AyM would therefore also play a part in conserving aspects of the designated area.
- 233 In the absence of an ability to further mitigate the impacts of AyM, a landscape enhancement scheme, secured by Requirement 26 of the dDCO has been agreed with the NW LPAs and NRW. This provides a significant fund to be used to enhance landscapes within the IoA AONB, Great Orme Heritage Coast and ENP. The Joint Statement (Document CS.5 of the Applicant's closing submission) confirms:
- "The landscape enhancement fund will enable significant benefits to Eryri National Park and the Isle of Anglesey Area of Outstanding Natural Beauty (including Anglesey Heritage Coast) and Great Orme Heritage Coast to be accrued over the long-term."*
- 234 On the basis of this commitment by the Applicant, IoACC and ENP agree that the net balance of the AyM proposal in relation to its effects on these designated landscapes is acceptable. The landscape fund will adequately compensate for any adverse impacts and provide benefits in line with paragraphs 4.1.3 and 4.1.4 of NPS EN-1.

- 235 On the basis of this commitment by the Applicant, CCBC agrees that the net balance of the AyM proposal in relation to its effects on these designated landscapes is less harmful. The landscape fund will compensate for any adverse impacts and provide benefits in line with paragraphs 4.1.3 and 4.1.4 of NPS EN-1'.
- 236 For the reasons set out in this response and in the Applicant's wider submissions to the Examination, it is considered that the harm that would result from AyM would not outweigh the significant benefits of the proposed scheme.
- 237 In relation to the effects on the CRDV AONB, it has been agreed with NRW and the North Wales LPAs (REP8-047 and REP8-044) that the effects would be not significant.

Onshore

- 238 There would be no significant effects from AyM on the CRDV AONB. This has been agreed in the NRW and DCC SoCG (REP8-047 and REP7-049). It was noted by the ExA that the Welsh Government is considering a new National Park in north-east Wales, as set out in the recently approved CRDV AONB Management Plan Review 2020-2025. At this point, there remains no further information regarding the boundary of, or timescale for, a National Park to be established however, it is considered that a similar conclusion would be reached in relation to no potential for significant effects from a National Park as was concluded in the LVIA for the AONB. See also Figure 2.26, VP 9: Y Foel (APP-189).
- 239 The effects of the onshore infrastructure of AyM were assessed by the Applicant in the LVIA (REP8-087). Significant landscape character effects during construction and in year 1, are found for LCA – A1 Eastern Lowlands (Cefn Meiriadog Vale Slopes) as a result of the proposed OnSS, which is located within it. The significant landscape character effects are localised to the areas immediately surrounding the OnSS site and OnSS construction compounds. All other landscape character effects are found to be not significant.

- 240 Significant effects are found as a result of construction activities related to the OnSS within the following LANDMAP aspect areas: Cultural Services - DNBGHCLS015 Area North and East of Bodelwyddan, DNBGHCLS033 Wooded Parkland and Parkland Remnants; Visual and Sensory - DNBGHVS035 Wooded Parkland and Parkland Remnants; Historic Landscape - DNBGHHL005 Bodelwyddan Park. No significant effects on landscape character are found as a result of the construction of the onshore ECC or at landfall or as a result of operational effects associated with any of the onshore infrastructure of AyM at year 15.
- 241 The effects on landscape character have been agreed with DCC and NRW as set out in their respective SoCG (REP8-049 and REP7-049). The ExA asked if landscape bunding had been assessed in terms of effects on landscape character. This was not assessed in the LVIA (REP8-087) and as such the assessment presented in the ES is worst-case. The use of surplus soil and excavation material, if available, would be dependent on the final design of the OnSS, need to give due consideration to other factors (ecology, hydrology) and agreed via approval of the LEMP, secured by DCO Requirement 13.

Effect on landscape features including trees and hedgerows

- 242 The effects of the landfall and onshore cabling are too small in scale and temporary in nature to give rise to significant landscape character effects. Whilst some permanent tree removal would occur as a result of the onshore ECC, the effect is limited when considered within the overall characteristics of the area. With regard to the OnSS, loss of landscape features was considered within the context of effects upon A1. Eastern Lowlands (Cefn Meiriadog Vale Slopes) landscape area which concluded that whilst there would be a significant short-term effect it would not be significant after 15 years (and once planting has established).

Visual effects

Offshore

- 243 As set out in the NRW and NW LPA SoCG (REP8-044), there is broad agreement as to where significant visual effects are likely to arise at the identified viewpoints.

- 244 The Applicant's position in relation to VPs 1, 2 and 3 on the northern coast of the IoA, where NRW considers significant effects would arise, is set out in the Applicant's Deadline 2 response to Written Representations (REP2-002) and Deadline 3a Written summary of oral submissions at ISH2 (REP3a-004). Notably, the NW LPAs (and specifically the IoACC) agrees with the Applicant that the effects on these viewpoints would be not significant.
- 245 The Applicant's position in relation the effects on VPs 44 and 23 is set out in the SLVIA (REP8-082) and in its response to the Written Representations submitted at Deadline 2 (REP2-002). At ISH2, LUC agreed, on behalf of the NW LPAs, that the effect on VP 23: Rhyl Aquarium would in fact be not significant.
- 246 In ENP, there is one VP where there is disagreement by NRW and the NW LPAs as set out in the SoCG. The Applicant's position in relation to the effect on VP 36: Tal y Fan is set out in its response to the Written Representations submitted at Deadline 2 (REP2-002). Notably, the NW LPA response at REP1-093-9.1.1.a acknowledges the assessment as being close to borderline but significant and at REP1-093-1.4 it is noted that this disagreement is not substantive.

Onshore

- 247 Agreement of the effects on viewpoints and receptors included in the LVIA (REP8-087) is set out in the NRW and DCC SoCG (REP8-047 and REP7-049).
- 248 Whilst significant visual effects are identified as a result of the construction activities associated with the onshore ECC and landfall on localised sections of the B5381, Glascoed Road, the Wales Coast Path, the bridlepath immediately north of the OnSS (PRoW 201/9) and the PRoW south of Rhyl (PRoW 206/18, 206/44 and 206/20). Significant visual effects are also found for properties at Cwybr Bach, Plas Lorna, Cwybr Fawr and Faenol Bropor and these are temporary in nature. VPs 1 (Bridlepath near Faenol-Bropor), 3 (Glascoed Road) and 5 (Minor Road near Groesfford) are also found to have similar temporary significant visual effects during construction, as well as from the Denbighshire Memorial Park and Crematorium, as a result of the OnSS construction activities.

249 Significant visual effects are also found during operation in year 1 once construction activity is completed, for VPs 1, 3, 5 and from the Denbighshire Memorial Park and Crematorium (visual effects would be significant for both road user and residential receptors at VP 3) but by year 15 once mitigation planting has matured, residual significant effects are limited to the recreational receptors at VP 1. This is largely due to the close proximity of these receptors, and the limited opportunities for planting mitigation in areas occupied by the Onshore ECC itself.

Effects of artificial lighting

Offshore

250 Lighting mitigation measures have been included in response to feedback following consultation under s42 of the PA2008. Night-time effects are assessed in Section 10.12 of the SLVIA (REP8-082).

251 NRW has agreed with the ES (REP1-080-6.1.33) that the proposals are likely to have adverse, though non-significant, night-time visual effects on the Isle of Anglesey AONB, including from VPs at Moelfre (4), Point Lynas (2), Red Wharf Bay (5), Benllech Bay (16), Penmon Point (7), Trwyn y Penrhyn (28) and Beaumaris (8), and from beaches at Traeth Lligwy, Traeth Bychan, Penrhyn.

252 Dark skies are noted in the SLVIA as being a feature of the Peace & Tranquillity Special Quality within the AONB. Whilst adverse visual night-time effects have been assessed for the Isle of Anglesey these are agreed not to be significant.

253 NRW has also agreed with the ES (REP1-080-6.1.34) that the proposals are likely to have adverse, though non-significant night-time visual effects on some views within the ENP and that there would be no adverse effect on the core areas of the Dark Sky Reserve.

Onshore

- 254 With regard to onshore lighting, the OnSS will not be manned, and lighting will only be required during operations and maintenance (O&M) activities that will be approximately one visit per week, rising to a daily visit for a two-week period during planned annual maintenance. Directional lighting for safety and security, and task-specific external lighting, may be required on a very infrequent basis. On this basis, operational lighting was scoped out of assessment within the LVIA.

Design of the Proposed Development

Offshore

- 255 The Applicant set out in its response to ExQ3.17.5 how it has, within siting, operational, technical and other environmental constraints designed the AyM OWF as sensitively as possible and the measures that were taken to take account of the sensitivity of the AONB and National Park.
- 256 The array area is, by requirement, an extension to the Gwynt y Môr OWF and has been located to the west of it for the reasons set out in ES Volume 1, Chapter 4: Site Selection and Alternatives (APP-044). As an extension to an existing wind farm, changes to the views from the CRDV AONB, ENP and the closer parts of the IoA AONB are incremental rather than the OWF being a new type of feature within the seascape. Where OWFs are proposed to be located in areas of seascape where no offshore development exist, and are visible from nationally designated landscapes, impacts are likely to be greater as acknowledged by "Seascape & visual sensitivity to offshore wind farms in Wales: Strategic assessment and Guidance" (White Consultants for NRW, March 2019) which notes areas further west around the Isle of Anglesey are of high sensitivity as shown in ES Volume 6, Annex 10.4: Figure 2c of the SLVIA (APP-193). This suggests that, as an addition to a number of existing OWFs, the impacts of AyM OWF on the ENP and AONBs have been reduced from the outset.
- 257 Taking into account the sensitivity of the AONB and National Park, the array area has been reduced to the minimum extents that the Applicant considers would allow for an economically viable project to be established at this site, as an extension to Gwynt y Môr OWF.

- 258 This minimum array area has been designed to be located beyond the boundary of the zone identified in "Seascape & visual sensitivity to offshore wind farms in Wales: Strategic assessment and Guidance (White Consultants for NRW, March 2019)" as high sensitivity and instead it is located within areas of Medium and Medium/low sensitivity.
- 259 The boundaries of the minimum array area have been designed sensitively so that the horizontal field of view affected by the AyM OWF has been kept to the minimum possible in views from the ENP, CRDV AONB and Isle of Anglesey AONB.
- 260 The distance between the minimum array area and the IoA has also been maximised as far as possible.
- 261 The Applicant has proposed within the design a relatively dense layout of WTGs within the minimum array area as set out in its response to the ExQ1s (REP1-007). Whilst this results in some compromise to the renewable energy yield it has been a key design consideration in identifying the minimum array area whilst also maintaining high levels of low carbon energy. The density of the WTGs does not contribute materially to the effects on the AONBs and National Park.
- 262 The Applicant has set out the rationale for the size of individual turbines in the WTG Size Technical Note (APP-299) and that the decision to not propose taller WTGs at AyM has been driven by considerations of sensitive design given the visibility from the AONBs and National Park.
- 263 The colour of the upper parts of the WTGs is likely to be a light grey, similar to those of the existing OWFs, and will be agreed through the discharge of DCO conditions. Light grey is considered to be the colour that is mostly likely to recede in views from the AONB and National Park where seen against a background of grey or lighter sky colour of the most distant parts of the sky, which are seen nearest the horizon and a grey/blue sea.
- 264 In view of the sensitivity of the dark skies that are characteristic within parts of the AONB and National Park, the Applicant has also committed to reduce the intensity of aviation lighting when visibility conditions allow as set out in Requirement 3(3) of the dDCO (Document CS.4 of the Applicant's Closing Submission).

265 In addition, the Applicant will seek to further reduce the effects on the dark skies of the AONB and National Park designations through agreement with the CAA through a reduction in the number of aviation lights subject to overall safety requirements being met.

Onshore

266 The sensitivity of the landscape and visual receptors in the LVIA study area has been a key consideration in the siting and design of the onshore infrastructure. A detailed consideration and assessment of the capacity of the landscape to accommodate the onshore infrastructure in relation to the screening afforded by the existing landforms, trees and hedgerows between sensitive receptors and the project infrastructure has been undertaken in the LVIA chapter of the ES (REP8-087). The same careful siting has been applied to the project consideration of planting and mitigation, with which it is anticipated to ameliorate visual, and noise, impacts over the medium term for the OnSS.

267 Decisions on exact locations of infrastructure and the precise technologies and construction methods that will be employed have not been made. This includes the exact layout, equipment and technology of the OnSS. These details will be determined during detailed design that would take place between a decision on the application for development consent and the start of construction. Such details would be provided to DCC for approval prior to the commencement of construction works. A design principles document (REP7-028) has been provided by the Applicant which sets out the design and landscaping parameters that the Applicant proposes to apply to the OnSS when undertaking detailed design.

268 The design principles document is focused on the OnSS, as the only permanent onshore above ground infrastructure, and sets out the principles of design that the Applicant proposes to apply to the OnSS when undertaking detailed design. This includes principles to be applied to the OnSS layout, ground levels, buildings and equipment, access and construction areas, drainage, security and lighting, as well as the maximum parameters as defined in the ES. The design principles document also sets out the principles of landscape and ecological mitigation, to be secured through the LEMP (REP7-026), as well as relevant dDCO requirements securing relevant mitigation. DCC has agreed to the principle of approving design detail under DCO Requirements within the SoCG (REP7-049).

Adequacy of mitigation measures and monitoring

269 With regards to onshore infrastructure, mitigation and monitoring, proposals are set out within the oLEMP (REP7-026) (that is discussed below). DCC has agreed within the SoCG that the proposals within the oLEMP are suitable with regard to landscape and visual effects and the amount and location of landscape mitigation land around the proposed OnSS.

270 An outline ALEP has been provided for construction phase lighting, (REP2-045). The outline ALEP sets out techniques aimed at minimising the emission of artificial light which will be implemented by the Applicant and its contractors during the construction of the onshore works. This will ensure impacts are minimised as far as possible.

Landscape management and maintenance and consideration of the outline Landscape and Ecology Management Plan

271 The oLEMP (REP7-026) sets out the mitigation principles and outline planting principles relating to mitigation of landscape and visual effects, primarily around the OnSS.

- 272 Outline planting mitigation principles have been developed for the OnSS site to complement this existing landscape structure. These mitigation principles include areas of proposed woodland, proposed hedgerows with trees, proposed lowland grassland and areas identified for ecological mitigation in the form of habitat enhancement (grassland enhancement to structurally diverse, species rich neutral grassland). Figure 2 of the oLEMP is an illustrative arrangement that shows where landscape proposals could be located to achieve the mitigation set out and assessed in the LVIA (REP8-087).
- 273 The Applicant will consult with local people, who would be affected by changes to close range views from their homes, regarding the proposals, as set out in the Design Principles Document (REP7-028). The Applicant has amended the oLEMP to confirm that the final LEMP will include proposals for the long-term maintenance of the OnSS site that will include details on the type and timescales of maintenance of landscape mitigation that would be undertaken during the operational lifetime of AyM.

Marine and Coastal Physical Processes

Scouring and scour protection

- 274 NRW initially raised concerns over the potential effects for secondary scour (scouring of the seabed around scour protection materials) and advised that post-construction monitoring of secondary scour should be considered in any post-construction monitoring undertaken by the Applicant. Clarification was provided to NRW that this would be conducted as part of the asset-protection surveys in post-construction monitoring, as specified in the Marine Licence Principles (REP8-014). This now forms an agreement between NRW and the Applicant in the offshore SoCG (REP8-048).

Marine water and sediment quality

- 275 The Applicant has provided a marine water and sediment quality assessment (APP-049), in addition to a WFD Compliance assessment, to assess the potential effects on water quality, sediment quality and protected waterbodies. The assessments have not identified any significant residual effects, nor have they concluded that there will be any deterioration in status of WFD waterbodies as a result of AyM.
- 276 As described above under the WFD section (paragraph 148 *et seq.*), NRW initially raised concerns in its RR which were subsequently addressed by the Applicant through the provision of a clarification note (REP1-015). Furthermore, the measure of a PEMP incorporating a MPCP is agreed with NRW as providing adequate mitigation, and this is expected to be secured as a condition in any Marine Licence granted (REP8-014). NRW now has no outstanding concerns on this topic as evidenced in the SoCG (REP8-048).

Effects of landfall location and effects on the coast

- 277 The Applicant has undertaken an assessment of the potential effects on marine geology, oceanography and physical processes (REP8-084) and has not identified any potentially significant effects on the landfall or coast. This is a matter of agreement between the Applicant and NRW (REP8-048).

Adequacy of mitigation measures and monitoring

- 278 The Applicant will undertake pre-construction and post-construction bathymetric monitoring of the seabed as specified in the Marine Licence Principles (REP8-014). This will be agreed with NRW prior to construction and this principle is agreed with NRW as described in the SoCG (REP8-048).

Marine - Commercial

Effects on shipping and navigation.

- 279 The Applicant has provided a shipping and navigation assessment that assesses the impacts to shipping and navigation users that may arise from the construction, operation and decommissioning of AyM, the assessment is primarily informed by a Navigational Risk Assessment (NRA, APP-11) which was produced in line with Maritime and Coastguard Agency (MCA) requirements under relevant guidance.
- 280 All assessed impacts were broadly acceptable or tolerable, and not significant in EIA terms. Agreed mitigation measures include: a Scour Protection Management Plan (SPMP); a Cable Specification and Installation Plan (CSIP); a Decommissioning Programme; blade clearance of at least 22 m above mean high water springs; safety zones; marking and lighting in accordance with industry guidance; an Emergency Response Co-operation Plan (ERCoP); provision of information to the UK Hydrographic Office (UKHO); promulgation of information via Notices to Mariners (NtM); provision of vessel routes as part of offshore Construction Method Statements; use of guard vessels during construction and operation where necessary; the provision of layout parameters to ensure suitable Search and Rescue and surface navigation access; and the provision and agreement of an Aids to Navigation Plan.
- 281 SoCGs have been agreed with the MCA, Trinity House and NRW, with no matters outstanding (REP7-048, REP4-030 and REP8-048).

Effects on fisheries and fishing.

- 282 The Applicant has provided a commercial fisheries assessment (REP8-086) considering the potential impacts of AyM on commercial fisheries (fishing activity legally undertaken where the catch is sold for taxable profit) seaward of mean high water springs during construction, operation and decommissioning of AyM.

- 283 All assessed impacts were minor adverse or negligible, and not significant in EIA terms. Agreed mitigation measures include: a Fisheries Co-Existence and Liaison Plan (FCELP) (REP1-033); a Dropped Objects Protocol; a Lighting and Marking Plan; and safety zones; to be conditioned within the marine licence.
- 284 Carl Davies, a local fisherman, has made written representations as well as oral representations at the Open Floor Hearing (OFH) regarding the potential impacts on fish ecology and associated effects to commercial fishing businesses. As outlined above, the Applicant has not identified any significant residual effects in relation to commercial fisheries, considering the mitigation measures that will be in place.
- 285 In addition, Mr Davies also requested that consideration be given to the opportunities to enhance habitat for the ecological benefit of marine fish and shellfish species. As previously described in paragraph 50 *et seq.*, the Applicant has included commitment in the Marine Licence Principles (REP8-014) to give specific consideration to cable and scour protection solutions that seek to deliver ecological enhancement whilst meeting technical need. This will ensure that these options, whilst not a current policy requirement, are thoroughly appraised in the post-consent phase, as the approach to such emerging solutions becomes more clearly defined in policy and guidance.
- 286 The Applicant therefore considers all matters relating to commercial fisheries to have been adequately addressed in the Examination.

Transboundary effects.

- 287 The Applicant has considered the potential for effects on commercial fisheries and shipping to occur beyond the extent of the UK Exclusive Economic Zone (EEZ) and has not identified any significant effects. The IoM Government initially raised concerns in their RR (RR-027) regarding the consideration of Manx commercial fishing interests.

- 288 The Applicant subsequently met with the IoM Government and clarified how and where Manx fishing interests were considered in the commercial fisheries chapter of the ES (REP8-086) and acknowledged that more explicit reference could have been made in the application. Following that clarification, the IoM Government accepted that the potential for impacts from AyM on Manx fishing interests was relatively low, as noted in the SoCG (REP8-051).
- 289 The Applicant considers that a robust assessment of transboundary assessment has been undertaken and re-iterates that no significant effects have been found on receptors outside the UK EEZ. Therefore, all matters relating to transboundary effects have been addressed in the Examination.

Adequacy of mitigation measures and monitoring.

- 290 Mitigation and monitoring measures relating to the marine environment are principally secured via Marine Licence conditions as outlined in the Marine Licence Principles (REP8-014), in agreement with NRW as the licensing authority.
- 291 The Applicant has undertaken an assessment of impacts to commercial fishing activity, and in doing so identified the potential for significant effects on the potting fleet that would require mitigation, as identified in the Commercial Fisheries chapter of the ES (REP8-086).
- 292 The Applicant has an appointed Fisheries Liaison Officer (FLO) and has established a good working relationship with the local fishing community since the development of Gwynt y Môr (GyM). The principles of this mitigation are outlined in the FCELP (an agreed draft of which is provided at REP1-033). The plan itself will be secured as a Marine Licence condition to be agreed with NRW prior to construction.
- 293 The MCA is the statutory authority for ensuring the safety of navigation at sea, and initially raised questions in their RR regarding how Marine Licence conditions would adequately secure necessary mitigation and management measures. The Applicant has since provided further clarity in the Marine Licence Principles (REP8-014) which has been agreed with MCA, as specified in the SoCG (REP7-048).

- 294 Trinity House raised questions over the drafting of the dDCO specifically in relation to Article 44 (arbitration). The Applicant has addressed those concerns by amending the dDCO to reference the saving of provisions for Trinity House in Article 36. Trinity House is now in agreement with the wording of Article 44 and has no outstanding concerns (REP4-030).
- 295 The Applicant considers that all matters relating to marine – commercial have been appropriately addressed in the Examination, with agreement from all key stakeholders, and there are no outstanding concerns.

Marine – Natural

Effects on benthic species and habitats, fish and shellfish

- 296 The Applicant has undertaken assessments of the potential effects on benthic species and habitats, fish and shellfish in the ES (APP-051 and REP8-057) and has included mitigation and monitoring commitments as relevant. No significant residual effects have been identified.
- 297 In their RR (RR-015), NRW considered that the impact assessment should have identified as low, rather than negligible, however agreed that the significance of the impact would still be minor in EIA terms, and considered the mitigation proposed to be appropriate.
- 298 NRW also initially had reservations regarding the swim speeds applied to underwater noise modelling with respect to fish. The Applicant subsequently produced a clarification note (REP1-003) to NRW confirming that all assessments had been based upon impact ranges for the static receptor modelling. Following review of this information, NRW agreed with the conclusions of the assessment as specified in the SoCG (REP8-048).
- 299 All matters relating to benthic species and habitats, and fish and shellfish, are agreed with NRW as confirmed in the SocG (REP8-048) and therefore the Applicant considers that all associated matters have been addressed in the Examination, with no outstanding issues remaining.

Adequacy of mitigation measures and monitoring.

- 300 The mitigation and monitoring measures relevant to benthic species and habitats, fish and shellfish are principally proposed to be captured in a PEMP, which is to be secured as a Marine Licence condition (as described in the Marine Licence Principles (REP8-014). The final content of the PEMP (and other relevant mitigation, monitoring or management measures) will be agreed with NRW prior to construction post-consent.
- 301 The measures proposed are agreed as being adequate with NRW (REP8-048). Therefore, the Applicant considers all matters relating to the adequacy of mitigation and monitoring measures associated with benthic species and habitats, fish and shellfish, to be adequate to have been addressed in the Examination.

Public Health and nuisance

Air quality effects during construction

- 302 The Applicant has provided an air quality assessment (AS-030) that has assessed the potential effects on air quality as a result of the onshore construction, O&M and decommissioning activities of AyM, including the landfall, onshore ECC, and OnSS.
- 303 With regards to potential dust impacts, a qualitative assessment of the potential dust effects associated with worst-case construction activities has been undertaken following the Institute of Air Quality Management (IAQM) guidance (IAQM, 2016). This concludes that, with the implementation of measures outlined in the outline AQMP (REP2-031) there would not be any significant effects due to dust.
- 304 Air emissions arising from construction vehicles are also considered within the ES and were not found to be significant. Additional consideration was given to the effect of Non-Road Mobile Machinery on ecological receptors at Deadlines 1 (Appendix J of REP1-007) and Deadline 7 (Response to ExQ3.2.2 in REP7-004), which also concluded effects would not be significant.

305 A further technical note on emissions from vessels has been provided at Deadline 1 (REP1-020) in response to comments from NRW. The note concludes that emissions from vessels are not considered to be significant.

Noise pollution and vibration effects

306 The Applicant has undertaken an assessment, as presented in ES Volume 3, Chapter 10: Noise and Vibration (REP8-065), of potential noise effects as a result of impacts due to temporary construction noise, construction traffic, offshore piling, and the operation of the OnSS. Mitigation measures include the production of a final NVMP within the final CoCP, which would set out requirements for construction such as the use of additional acoustic screens. An outline NVMP has been written in conjunction with relevant policy and guidance to comply with the requirements of the dDCO and describes suitable measures and management procedures to control and limit noise and vibration levels, and to minimise disturbance to residents and sensitive receptors as far as reasonably practicable.

307 Operational noise from the OnSS will be controlled through the imposition of noise limits at nearby residential receptors as set out in dDCO Requirement 18. This requirement has been revised during the the Examination in response to feedback from DCC, which has included the addition of procedures to follow in response to any noise complaint made to the council in relation to the operation of the OnSS.

308 The assessment in ES Volume 3, Chapter 10: Noise and Vibration (REP8-065) includes an assessment of noise arising from offshore piling upon onshore receptors. This assessment considers the noise from worst-case, simultaneous pin-piling operations when they are being undertaken at their closest approach to the nearest Noise Sensitive Receptors (NSR's) to the seafront and inland.

- 309 The assessment compares predicted noise levels from the piling operations against the construction noise threshold limits. The results of the assessment showed that there was a moderate level of effect at the NSRs located inland when pin-piling operations were being undertaken at night during periods of neutral weather. The Applicant has provided a number of mitigation measures and recommendations, which include reference to a suitable DCO requirement (DCO Requirement 4), which specifies noise limits of 50 dB(A) Leq 1hr at the nearest NSRs during neutral weather conditions.
- 310 Disagreement remains with CCBC regarding the noise limit proposed in dDCO Requirement 4. The threshold of 50 dB(A) included in Requirement 4 has been calculated in accordance with the relevant British Standard (BS5228: Code of practice for noise and vibration control on construction and open sites), with which compliance is a minimum standard when assessing construction noise. BS5228 is the correct standard that should be followed for piling noise, and the noise thresholds, calculated using the ABC method in BS5228, are the appropriate thresholds to use within dDCO Requirement 4.
- 311 Although there is disagreement on the noise level to use in dDCO Requirement 4, CCBC has agreed a noise monitoring plan which establishes the outline principles for continuous monitoring of offshore construction noise. This was submitted at Deadline 6 and is REP6-041 and includes proposals for communication with local residents in the Llandudno area.
- 312 With regards to operational noise arising from operation of the WTGs, the Applicant has undertaken an assessment in conjunction with the Danish regulations, as the noise predictions for operational offshore wind turbines falls outside the scope of the Institute of Acoustics Good Practice Guide (GPG) due to the large separation distances across reflective surfaces resulting in cylindrical spreading.
- 313 The results of the assessment have shown that the predicted noise emission levels from both the smaller and larger turbines would be below the absolute lower fixed limits set by ETSU-R-97 of 35 dB LA90 at the closest receptor to the development.

Light pollution

314 The Applicant has provided an outline ALEP for construction phase lighting, (REP2-045) which is included as Appendix 10 to the outline CoCP. The outline ALEP sets out techniques aimed at minimising the emission of artificial light which will be implemented by the Applicant and its contractors during the construction of the onshore works. The final ALEP would be approved by DCC under DCO Requirement 10. With regards to operational lighting for the OnSS, Requirement 19 secures approval of operational lighting at the OnSS by DCC.

315 Offshore lighting is considered in paragraph 250 *et seq.*

Electric and Magnetic Fields

316 As the onshore ECCs will be buried, potential impacts from electric fields have been scoped out from detailed assessment as burial is recognised as mitigating the potential effects. Further to this, all infrastructure built will comply with the government guidelines on electromagnetic radiation emission (the International Commission on Non-Ionizing Radiation Protection (ICNIRP, 1998)) and so the effect of Electric and Magnetic Fields will not be significant.

Effects on human health

317 ES Volume 3, Chapter 12: Public Health (APP-073) draws primarily on other assessments such as air quality, traffic, noise, hydrology, and tourism to understand the implications of AyM on public health. In addition to these topics, the public health chapter considers the potential effects associated with electromagnetic fields that may be emitted by AyM.

318 The Appraisal of Sustainability undertaken for NPS EN-1 acknowledges that projects, such as AyM, will contribute positively towards health and well-being in the medium to longer term through helping to secure affordable supplies of energy and minimising fuel poverty (paragraph 3.4.2). In addition, the production of renewable energy, in contrast to use of fossil fuel generation, will improve health by reducing concentrations of harmful air pollutants, including fine particulate matter and nitrogen oxides. AyM will make a significant contribution to carbon reduction objectives within Wales by providing clean energy for 500,000 homes, and so reduce the effects of climate change, which in turn will help to mitigate the adverse effects of climate change (such as heatwaves, flooding and effects of extreme weather).

Residential amenity

319 The Applicant has considered residential amenity within relevant chapters of the ES. Residential receptors including properties and settlements are considered in the visual assessment provided in ES Volume 3, Chapter 2: LVIA (REP8-087). This assessment also includes consideration of construction lighting (operational lighting from the OnSS was scoped out of assessment). DCC has agreed with the findings of this assessment within the SoCG (REP7-049). In response to questions from the ExA, a further viewpoint was assessed for Faenol Bropor at Deadline 4 (REP4-027).

320 The Applicant has considered the impacts of noise upon residential properties, and other receptors, during construction and operation within ES Volume 3, Chapter 10: Noise and Vibration (REP8-065), and proposed measures to minimise noise impacts through mitigation summarised in the chapter and also the outline NVMP (REP2-02) that will be finalised and form part of the final CoCP secured by DCO Requirement 10.

Adequacy of mitigation and monitoring.

321 The key mitigation measure with regards managing potential public health and nuisance effects are the Air Quality Management Plan (AQMP), NVMP and ALEP described above. Other mitigation is provided through the following management plans appended to the CoCP and secured under DCO Requirement 10:

▲ CoCP;

- ▲ Onshore CMS;
- ▲ NVMP;
- ▲ AQMP;
- ▲ PPEIRP;
- ▲ CTMP;
- ▲ ALEP; and
- ▲ Communications Plan.

322 The need for these plans to be reviewed and approved by DCC in advance of construction is controlled by DCO Requirement 10.

323 In addition, DCO Requirements 4 (offshore noise), 15 (construction hours), 18 (control of noise during operational stage) and 19 (control of operational artificial light emissions) afford control for potential operational impacts or for construction impacts outside Denbighshire.

Other projects and proposals

The effects of the Proposed Development on other constructed and proposed major projects nearby including offshore wind farms

324 Detailed representations have been made to the AyM Examination by the operators of the North Hoyle Wind Farm (NHWF) and RFWF. Initially, both sought to claim that there would be wake loss effects from AyM, but when NHWF was made aware of the distance from AyM, this claim was withdrawn. The Applicant has maintained its position throughout the Examination that wake loss is not a policy consideration and therefore is not relevant to the determination of the AyM project.

- 325 An agreement is, however, needed for AyM's cables to cross those of the NHWF. These agreements are standard and are usually negotiated post-consent, however, in light of NHWF's objection, the Applicant has negotiated the agreement during the Examination in order that NHWF's objection can be removed. Despite the Applicant following the template document provided by NHWF, it has not been possible to conclude the agreement prior to the close of the Examination, but negotiations will continue with a view to resolving matters or providing an agreed set of protective provisions prior to the SoS's decision. In the event that a crossing agreement is not signed by the time the ExA issues its report, the Applicant will provide a set of PPs to the SoS which the SoS may decide to include in the final DCO, should they determine that this is necessary.
- 326 In relation to RFWF, detailed submissions have been made by the Applicant which demonstrate that it was neither the intention, nor the effect, of paragraphs 2.6.176 - 2.6.188 of NPS EN3 that other OWFs should be included within the category of 'other offshore infrastructure'. Had this been the intention of the policy, it would have been clearly stated.
- 327 In fact, it is the case that there is nothing in the NPS or other relevant policy to prevent an OWF from being developed in the vicinity of another OWF. In addition, there is nothing in policy that says that the performance of an existing wind farm (either onshore or offshore) is something that should be protected.
- 328 Representations from TCE at Deadline 7 (REP7-060) underline the effect of paragraphs 2.6.46 - 2.6.47 of NPS EN-3 which state:
- "TCE may offer new leases in areas adjacent to existing consented wind farms. This could be to either the owner/operator of the existing site or to a different company from that operating the existing wind farm. These leases will form extensions to existing wind farms.*
- Leases may be awarded subject to the company obtaining the necessary consents and may be subject to various constraining conditions, including the presence of an existing operational wind farm."*

- 329 These provisions expressly contemplate the extension of existing wind farms in the vicinity of operational projects. This is in the context of leases being awarded by TCE demonstrating that the NPS considers that the relationship between a new OWF and existing OWFs should be regulated through the leasing regime.
- 330 Even if paragraphs 2.6.176 - 2.6.188 of NPS EN-3 were to apply to OWFs (which the Applicant maintains is incorrect), the provisions do not require the Applicant to avoid any impacts altogether in all circumstances. Paragraph 2.6.184 refers to Applicants making efforts to avoid or minimise disruption and economic impact. The Applicant has done this by ensuring the WTGs are in accordance with TCE's siting criteria which requires a 5 km separation between OWFs. Paragraph 2.6.185 also refers to proposed development which may affect the future viability of another offshore activity. The Applicant has demonstrated that the levels of any potential wake loss effects on RFWF as claimed by the operators of RFWF will not affect the future viability of RFWF (REP8-004).
- 331 The only way to reduce any impact further would be to increase this separation, which would have a disproportionate impact on the capacity of renewable energy generation that would be delivered by AyM. The Applicant has explained in response to ExQ1.17.25 relating to SLVIA effects (REP1-007) that it is not possible to reduce the extent of the array area without a significant reduction in the output – and viability – of AyM. If the Applicant had elected to leave a larger buffer between AyM and RFWF, then the AyM array area would have been smaller and hence the output of AyM would have been significantly reduced.
- 332 On the basis that it is not required by policy and that TCE OWF siting criteria dictates the location of the AyM WTGs, the Applicant is not required to undertake or submit a wake loss assessment as suggested by RFWFL. The Applicant is also not aware of any other DCO applications where an assessment of wake loss effects on another OWF has been necessary or where a right to compensation for such impacts has been established. To require such an assessment through the imposition of the protective provisions proposed by RFWF would be to set a precedent that is not supported by legislation or policy and therefore could not be justified.

- 333 In order to justify its claims, RFWF submitted a short note to the Examination alleging that AyM would have a 2% wake loss impact, which was similar to the figure of 1.2% that the Applicant had previously shared with RFWF. However, no information or detail was provided to justify this figure or the assumptions on which it was made. In any event, even if 2% wake loss was correct, the Applicant does not consider this is sufficient to demonstrate that AyM has not sought to avoid or minimise disruption or economic loss on RFWF or that such an impact would affect the future viability of RFWF.
- 334 RFWFL's status as a SU has no relevance with regards to its claims regarding wake loss. There is nothing in legislation or policy which guarantees income or revenue stream to SUs and the protections afforded to SUs primarily relate to protecting land, rights and infrastructure. s127 and s138 of the PA2008 do not apply as these only relate to CA of onshore SU land or to the extinguishment of rights or removal of apparatus – there is no CA of any land or interest relating to RFWF. Appropriate protection for works in proximity to RFWF's infrastructure will be provided through the protective provisions.
- 335 Outside the PPs to regulate the Applicant's cable works, the absence of policy tests and protections offered to SUs in relation to wake loss and the Applicant's compliance with the TCE siting criteria means that this is not a relevant consideration for the ExA or SoS.
- 336 Save in relation to wake loss matters, the Applicant and RFWF have agreed protective provisions that were included in the dDCO submitted at the close of examination (Document CS.4 of the Applicant's Closing Submission).

Cumulative and in-combination effects with other major projects and proposals.

- 337 The ExA questioned whether a cumulative assessment with the proposed Round 4 Morgan and Mona OWFs should be undertaken. The Applicant clarified with reference to recent case law that, although Morgan and Mona OWFs issued scoping reports in the summer of 2022 and are Tier 2 projects, it was not appropriate for the Applicant to undertake a cumulative assessment on the basis of a lack of publicly available information regarding these projects (REP8-039).

- 338 The available information on the Morgan and Mona projects is very limited, and includes the geographical extent of the array areas, the area of the Mona offshore and onshore transmission infrastructure scoping search area, and plans that show indicative locations only of landfalls, substations and onshore cable routes. In all other respects, every element of offshore and onshore construction is indicative by reference to very broad parameters that allow for no meaningful assessment to be made of the actual development for which development consent is going to be sought. There is also no certainty over the consenting or construction programmes for these projects.
- 339 The Applicant has, within the AyM ES, identified which potential impacts from Morgan and Mona could theoretically act cumulatively with those of AyM. However, a meaningful quantified assessment of those impacts is not possible without significant speculation on Morgan and Mona project specifics and assessment approaches.
- 340 The Applicant considers that, should this situation change, and significant and substantial assessment material be published in respect of either Morgan or Mona projects, it will be open to the SoS to seek submissions on cumulative assessment and to consult upon them before reaching a final decision, if that is justified in the circumstances at the time.

Project description and site selection

Nature of the Proposed Development in terms of the 'Rochdale envelope'

- 341 The design envelope approach adopted by the Applicant for AyM is recognised in the Overarching NPS for Energy (EN-1) (DECC, 2011a), the NPS for Renewable Energy Infrastructure (EN-3) (DECC, 2011b) and the NPS for Electricity Networks Infrastructure (EN-5) (DECC, 2011c). This approach has been used in the majority of offshore wind applications.

- 342 NPS EN-3, and Section 4.2 of NPS EN-1, acknowledge that wind farm operators are unlikely to know the precise details of turbines to be used on site prior to consent being granted. Where details are not known, it should be explained which elements of the scheme are not finalised and this may lead to a degree of flexibility in the consent. Under these circumstances, it needs to be ensured that the proposal has been properly assessed to identify any potential impacts (the 'Rochdale Envelope'). This will allow the maximum adverse case scenario to be assessed and this uncertainty should be allowed in the consideration of the application and consent (paragraph 2.6.41).
- 343 The AyM project is also in accordance with EN-3 2.23.7. The 'Rochdale [Design] Envelope' is a series of maximum extents of a project for which the significant effects are established. The detailed design of the project can then vary within this 'envelope' without rendering the ES inadequate.

Assessment of alternatives

- 344 ES Volume 1, Chapter 4: Site Selection and Alternatives (APP-044) provides a detailed account of the site selection process, and alternatives considered. The Planning Statement (REP8-083) presents further consideration of the alternatives considered, within the planning policy context.
- 345 From a national (UK) policy perspective, the extant National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) does not contain a general requirement to consider alternatives or to establish whether the proposed project represents the best option. The extant EN-3 only states at paragraph 2.6.81 that the applicant should include an assessment of the effects of installing cable across the intertidal zone which should include information, where relevant, about:

"any alternative landfall sites that have been considered by the applicant during the design phase and an explanation for the final choice"; and

"any alternative cable installation methods that have been considered by the applicant during the design phase and an explanation for the final choice."

- 346 ES Volume 1, Chapter 4: Site Selection and Alternatives (APP-044) provides a detailed account of the alternative landfall sites considered during the iterative design process, including the extensive consultation exercises which informed the eventual landfall location.
- 347 As concluded in the Planning Statement (REP8-083), applications seeking development consent for energy NSIPs should be assessed by the SoS on the basis there is a demonstrated need for those types of infrastructure and that the scale and urgency of that need is as described in NPS EN-1 (paragraph 3.1.3). The Planning Statement concludes substantial weight should be given to the contribution which projects would make towards satisfying that need (paragraph 3.1.4). In this policy context, AyM would make a substantial contribution towards the delivery of renewable energy in line with the need to significantly decarbonise the power sector by 2030 and should therefore be ascribed substantial weight in the balance of considerations and the presumption in favour of such developments (paragraph 4.1.2).
- 348 The demonstrable need for the AyM project, and the lack of policy alternatives, is also provided within the draft NPS documents, against which the Applicant has provided a clear and robust account of how the project is in accordance with the NPS provisions at Deadline 6 (REP6-004). Whilst much of the provision for alternatives remains the same across both the draft and extant NPS document(s), the draft NPS tracker document notes accordance with the draft NPS provisions, notably in accordance with the EN-1 3.2.1 and 3.2.2 requiring a range of projects and technologies to secure renewable energy. Further to this, the draft NPS provisions at 3.3.3 *et seq.* make reference to the Prime Minister's ten-point plan which notes a fourfold increase in low carbon energy to be required.

- 349 Similarly from a national (Welsh) policy perspective, the project has had regard to the Welsh National Marine Plan (WNMP), and the Welsh Government's conclusion that, whilst alternatives to the need for large scale deployment of marine technologies will make a contribution to climate change mitigation, there is a strategic need to support the development of marine renewable energy generation capacity (Sector Policy – Energy – Low Carbon, (WNMP paragraph 335)). Furthermore, the site selection process has, as far as applicable, been cognisant of, and placed weight on, the aspirations presented in Future Wales: The National Plan 2040.
- 350 ES Volume 1, Chapter 4: Site Selection and Alternatives (APP-044) provides a description of the reasonable spatial and geographical alternatives that were considered in the current AyM project. Alternatives in design were inherent in the process, with alternative options such as layouts and spatial extents forming part of the proposal at various stages for the purposes of consultation.

Need for the development and climate change effects

- 351 The need for the development is set out in the Statement of Reasons (REP8-019) and the Planning Statement (REP8-083). AyM will make a substantial contribution to the need for renewable energy in line with the need to significantly decarbonise the energy sector by 2030 and meeting the UK Government's target of 40 GW of offshore wind by this date, a figure which was revised upward to 50 GW in April 2022 in the UK Government Energy Security Statement. A review of the relevant energy and climate change policy has been provided in Appendix A of the NPS Tracker (REP8-032) and draft NPS Tracker (REP8-030).
- 352 As a renewable energy development, the Applicant has made a clear case that AyM is necessary to address the challenge of climate change and can be delivered in a timely manner to meet UK Government targets for renewable energy generation.

Conformity or otherwise with relevant National Policy Statements, development plans and other policies

353 In determining the application for development consent for AyM, the relevant NPS to which the SoS must have regard are:

- ▲ The Overarching NPS for Energy (EN-1);
- ▲ The NPS for Renewable Energy Infrastructure (EN-3); and
- ▲ The NPS for Electricity Networks Infrastructure (EN-5).

354 The Applicant has set out how AyM conforms with the relevant NPS, development plans and other policies throughout its application and Examination documents, principally the Planning Statement (REP8-083), Statement of Reasons (REP8-019), the NPS Tracker (REP8-032) and draft NPS Tracker (REP8-030).

355 For the reasons set out in those documents identified above, the Applicant considers that the ExA (and the SoS) can conclude that AyM will bring significant benefits under a range of national and local policy considerations, would be compliant with relevant legislation, and be in accordance with the relevant NPS. The SoS should give substantial weight to the contributions AyM will make in making their determination.

Socio-Economics

Baseline assessment methodology and the socio-economic evaluation

356 The assessment in ES Volume 3, Chapter 3: Socio-Economics (REP8-088) describes baseline socio-economic conditions in North Wales, Wales and the UK (the study areas). This draws upon a wide range of secondary economic, business and labour market datasets. The socio-economic effects which have been assessed include effects on Gross Value Added (GVA) (a measure of economic output), employment, disruption to community facilities, increased pressure on social infrastructure and increased pressure on community infrastructure. The methods used to assess these effects include economic modelling (for effects on the economy and employment), analysis of capacity in health facilities and modelled estimates of the influx of non-home-based workers into the study area, and the findings of other chapters were discussed via the ETGs and presented at consultation. There has been no feedback or disagreement to the methods used.

Effects on local businesses in respect of the potential seascape, landscape and visual effects of the Proposed Development, both on- and off-shore during construction and operation

357 The development of AyM could support GVA of between £1.3m and £2.4m per annum in North Wales during the construction period (including onshore and offshore infrastructure). The range of estimates depends on whether a local port (in North Wales) is used during construction. This represents the additional economic value that could be secured by local businesses. For Wales as a whole, the GVA benefits are expected to be between £6.8m and £9.1m per annum which is considered to be beneficial although not significant in EIA terms.

Employment and training opportunities including monitoring and data-capturing

- 358 The Applicant has provided an outline strategy (REP4-007) that will be developed further through ongoing engagement with consultees into a SES, that will facilitate positive and meaningful commitments and activities within the North Wales region by the Applicant. The provision of a SES is controlled by DCO Requirement 20.
- 359 Data will be gathered accordingly regarding the implementation of the objectives, as laid out in the SES and as agreed with key stakeholders such as DCC as host authority and will be monitored in due course.

Community Benefits package

- 360 As the developer of AyM, RWE has extensive experience working with and supporting the communities that neighbour its projects through developing bespoke community benefits packages that respond to local community need.
- 361 AyM carried out early-stage community benefits package consultation in late 2021/2022. The aim of the consultation was to help gauge sentiment of local people and stakeholders at this point around how AyM might best support local communities, what their priorities are, and what the overall guiding principles for a community benefits package could be. This consultation was the first step in what will be an ongoing conversation as the project progresses to help AyM create a tailored community benefits package. This package sits outside the planning process and therefore should not be given weight by the SoS in determining the AyM application.

Adequacy of mitigation measures and monitoring

- 362 The assessment in ES Volume 3, Chapter 3: Socio-Economics (REP8-088) does not identify any significant adverse effects. Therefore, no mitigation measures have been proposed and no mitigation (in addition to the SES DCO Requirement) have been requested.

Tourism and Recreation

Baseline assessment methodology and tourism evaluation

363 The assessment in ES Volume 3, Chapter 4: Tourism and Recreation (APP-065) describes the nature of the tourism and recreation offer in the study area (defined as the local authority areas along the North Wales coast), the volume and value of tourism to the North Wales economy and how this has changed over time. This draws upon a wide range of secondary datasets including visitor surveys, employment and business datasets, as well as desk-based research and consultations to identify key tourism and recreation assets. The assessment has considered how onshore and offshore assets could be directly affected as a result of disruption during the construction process, and how tourism volume and value could be affected as a result of seascape, landscape and visual effects. This part of the assessment has drawn upon a literature review of the relationship between offshore wind development and tourism.

Effects on tourism and recreation activities in respect of the potential landscape, seascape and visual effects of the Proposed Development, both on and offshore during construction and operation

364 The Tourism and Recreation assessment (APP-065) finds there will be limited disruption to tourism assets during the construction phase; all affects are assessed as negligible or minor adverse which is not significant in EIA terms. Similarly, there are expected to be non-significant effects on tourism volume and value in most locations during the construction period. The exception to this is the Great Orme and Llandudno where the assessment finds the significance of effect on the tourism economy will be moderate adverse in the latter stages of the construction programme and in the early years of the operational phase (up to two years). This is expected to change to minor adverse in the longer term as the sector and market adapts to the presence of the wind farms.

365 This was discussed during ISH2 (a written summary of the Application's oral submissions to this hearing can be found at REP3a-004), where the Applicant confirmed that this assessment was made on a precautionary basis and identified a small risk at the final stage of construction and initial period of operation. However, there is no evidence from studies of other OWFs in the UK (including existing wind farms off the coast of North Wales) pointing to negative impacts on local tourism economies, which suggests AyM will not have an impact on tourism. The risk identified in the ES is small given the nature of the scheme and ongoing strength of the tourist economy in Llandudno.

366 All effects on onshore and offshore recreation receptors are assessed as negligible or minor adverse during the construction and operation phase once embedded mitigation measures are taken into account, which is not significant in EIA terms.

Whether the plans are appropriate to minimise disruption to users of the PRow network and to minimise effects on local and tourism community

367 In response to concerns raised by DCC regarding impacts on PRow, disruption to users of PRow will be minimised and managed through measures set out in the outline PAMP, that will be developed following detailed design into a final PAMP for review and approval by DCC under dDCO Requirement 10. The outline PAMP states that temporary disruption to any Active Travel Route (ATR) or PRow, will be managed by the Applicant and durations of disruption will be kept to a minimum.

Tourism and recreation opportunities

368 As noted in ES Volume 3, Chapter 4: Tourism and Recreation (APP-065), there are opportunities for AyM to potentially deliver a positive benefit to the tourism sector within the Llandudno and Great Orme area. The Applicant has been liaising with CCBC regarding a potential Tourism Fund and has provided CCBC with a set of key principles for such a fund.

369 The proposal is to establish a contract between the Applicant and CCBC in respect of tourism-related activities in Llandudno and the Great Orme. This will cover the period between construction ending and operation commencing, given the identification of the potential short-term impacts on tourism in these locations. The Applicant does not consider that this fund is necessary to address adverse impacts of the project, and therefore it is not proposed to be secured through a s106 planning agreement or DCO requirement.

Adequacy of mitigation measures and monitoring

370 Mitigation is proposed in the form of the outline PAMP (REP7-024). DCC has reviewed the outline PAMP and confirms within its SoCG that the Council is satisfied that sufficient control is retained regarding management of PRoW through DCC review and approval of a final PAMP (REP7-049).

Traffic and Transport

Traffic generation, traffic management and highway safety

371 The assessment of traffic and transport effects (APP-070) uses robust construction traffic generation figures that are based on the maximum trip generation forecast for each onshore Route Section and using worst case parameters for the assignment of construction vehicle movements to each construction access. The assessment uses both quantitative and qualitative assessment of the potential traffic and transport effects associated with worst-case construction activities and has been undertaken following the methods set out in Guidelines for the Environmental Assessment of Road Traffic (GEART), Design Manual for Roads and Bridges (DMRB) and the use of professional judgement. The assessment has not identified any significant effects.

372 An outline CTMP has been prepared (REP4-035) which sets out the key principles and types of measures to be implemented during construction of AyM. The outline CTMP includes considerations for the delivery of Abnormal Indivisible Loads (AILs). Evidence has been provided from the GyM substation construction that AIL deliveries can be accommodated as well as swept path analysis from the A55 to Glascoed Road (REP5-005 and Appendix D of REP7-004).

373 The Applicant has confirmed that elsewhere along the cable corridor, the access routes can accommodate the swept path of a low loader.

Effects on the PRow network including temporary and permanent diversion and / or stopping up

374 There are no proposals for permanent diversion and/ or stopping up as part of the AyM scheme. Construction of the onshore elements of AyM will require temporary closure or management of a number of PRow and ATR, these temporary closures would be discussed and agreed with DCC and managed accordingly through the approval of a final PAMP. An outline version of the PAMP (REP7-024) has been provided to set out the approach that will be taken to manage the potential impacts upon PRow and ATR.

375 Although DCC has raised concerns regarding loss of control in the management of PRow, the Applicant notes that DCC will still be able to take a strategic view when reviewing and approving the final PAMP.

Traffic modelling approach and effects on local, regional and national networks

376 With regard to traffic modelling, a 15% uplift has been added to new traffic data collected in April 2021 to account for the effects of Covid-19. The approach to using an uplift was discussed and agreed with DCC which confirmed 10-15% had been used elsewhere, and so the higher value of 15% has been utilised for the assessment of traffic for AyM.

377 With regard to the potential for traffic impacts to occur at a regional or national level, it is considered that construction traffic volume will have dissipated such that significant impacts on the wider highways network (including the A55) are not anticipated and Flintshire, as the Highways Authority, has previously stated that it does not intend to provide highway comment in regard of onshore operations.

378 It is worth noting that WM and AyM have agreed in principle PPs to cover the crossing underneath the A55, which should ensure no impacts to the operation of the A55, which is a strategic road in the region.

Effects of other developments on the traffic modelling approach

379 The traffic and transport assessment has considered a number of potential developments where further consideration of cumulative effects may be required. Additional sites were identified in DCC's Local Impact Report (REP1-056). The Applicant has confirmed that these developments considered all comprise the following whereby no assessment in relation to cumulative effects is considered necessary with regard to these sites as they comprise:

- ▲ Minor schemes which would have negligible traffic movements;
- ▲ Schemes that would not impact on the AyM construction access routes;
- ▲ Schemes that would impact on some AyM construction access routes that are not fully assessed in this chapter, and with the addition of the development traffic associated with those schemes, would not breach the thresholds identified in Paragraph 97 of the Traffic and Transport chapter of the ES (APP-070);
- ▲ Schemes at screening stage and/ or without any traffic flow information;
- ▲ Schemes that have a decision pending and may not be consented; and
- ▲ Schemes that are already in construction or are likely to be constructed by 2026 when AyM construction is likely to commence.

Road and pedestrian safety

380 The Applicant has provided an outline CoCP (REP7-018) which contains Appendix 7 outline CTMP (REP4-035) setting out the principles that will be followed when managing construction traffic during the works to mitigate impacts on local receptors. A final version of the CoCP and CTMP will be approved by DCC, prior to construction commencing as secured via DCO Requirement 10. Notwithstanding the limited level of impact predicted for road safety (APP-070), the mitigation including the CTMP will ensure any potential impacts of vulnerable road users and road safety would be considered fully.

Adequacy of mitigation measures and monitoring

381 Mitigation for potential traffic and transport effects is proposed via the following:

- ▲ CoCP;
- ▲ Onshore CMS;
- ▲ CTMP;
- ▲ PAMP; and
- ▲ Travel Plan.

382 DCC has confirmed within the SoCG (REP7-049) that the proposals for mitigation relating to construction traffic can be adequately managed through approval of a CTMP and that proposals for mitigation relating to PRoW can be adequately managed through approval of a final PAMP, both secured via DCO Requirement 10.

3 Conclusion

383 The AyM application must be determined in accordance with s104 of the PA2008. This requires the SoS to have regard to:

- ▲ Any NPS that has effect – for AyM this is the 2011 Energy NPS EN-1, EN-3 and EN-5;
- ▲ The appropriate Marine Policy documents – in this case the WNMP;
- ▲ The local impact report submitted by DCC; and
- ▲ Any prescribed matters and any other matters that are important and relevant.

384 The SoS must also determine the AyM application in accordance with the extant NPS unless to do so would be unlawful or in breach of other obligations, or if the adverse impacts would outweigh the benefits of the project.

385 It is acknowledged that there are unavoidable (but reversible) significant seascape and landscape effects predicted, with associated unavoidable visual effects on the Llandudno pier. Taking a precautionary approach, there is also the risk of potential for a short-term adverse effect on the volume and value of the tourism economy in the Great Orme and Llandudno areas within Conwy.

386 There are also anticipated to be potentially significant, temporary adverse impacts on hedgerows and coastal dune invertebrates at a county level in the short term until the proposed mitigation is sufficiently mature and has become established.

387 However, all predicted significant effects have been mitigated as far as practicable and, when taken as a whole, there are no adverse effects, individually or cumulatively, that would be sufficient to outweigh the substantial benefits of, and need for, AyM.

- 388 The proposed AyM project would make a significant contribution to the achievement of the Welsh and broader UK national renewable energy targets, and to the UK's contribution to global efforts to reduce the effects of climate change. AyM has the potential to make a substantial contribution to UK's 50GW 2030 renewable energy target and a direct positive benefit by providing a secure renewable energy supply for approximately 500,000 UK homes.
- 389 AyM would reduce carbon emissions and contribute to the Welsh economy by providing socio-economic and other benefits that should be taken into account under NPS and other Government policies and legislation. The AyM project will also make an important contribution to energy security, seen as a critical driver for UK renewable energy.
- 390 For all of the above reasons, the SoS can conclude that AyM would bring significant benefits under a range of national, international and local policy considerations, would be in accordance with relevant NPS and legislation, and:
- Would not lead to the UK being in breach of any of its international obligations;
 - That the benefits of the proposed development outweigh any adverse impacts;
 - That there is no condition prescribed for deciding the application, other than in accordance with the relevant extant NPS; and
 - That under the terms of s104 PA2008, AyM should therefore be consented.



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