The Planning Inspectorate
Yr Arolygiaeth Gynllunio

The Planning Act 2008, as amended

Walney Extension Offshore Wind Farm

Examining Authority's Report of Findings and Conclusions

and

Recommendation to the
Secretary of State for Energy and Climate Change

Robert Macey
Philip Asquith
Kelvin MacDonald

Examining Authority

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Examining Authority's findings and conclusions and recommendation in respect of the proposed Walney Extension Offshore Wind Farm

File Ref EN010027

The application, dated 28 June 2013, was made under section 37 of the Planning Act 2008, as amended, and was received in full by The Planning Inspectorate on 28 June 2013.

The Applicant is DONG Energy Walney Extension (UK) Ltd.

The application was accepted for Examination on 22 July 2013.

The Examination of the application began on 12 November 2013 and was completed on 12 May 2014.

The development proposed comprises the construction and operation of up to 207 wind turbine generators and a network of subsea inter-array cables, together with associated development offshore of up to three substation platforms and connection works of up to five export cable systems.

Associated development onshore consists of up to five onshore export cable systems; an electrical substation compound to the north of the A683 Heysham-Morecambe bypass; permanent access to the electrical substation compound; temporary access roads and working areas; and up to two 400kV export cable systems running from the new substation in a north-westerly direction. These will connect to a new National Grid Middleton substation (subject to an extant planning permission) to the north-west of the junction of the A683 and Imperial Road.

Summary of Recommendation:

The Examining Authority recommends that the Secretary of State for Energy and Climate Change should make the Order in the form attached at Appendix 4.

Contents

Appendices

The Planning Inspectorate

ERRATUM SHEET –Walney Extension Offshore Wind Farm - Ref. EN010027

Examining authority's Report of Findings and Conclusions and Recommendation to the Secretary of State for the Department of Energy and Climate Change, dated 7 August 2014

Correction agreed by the Examining Authority prior to a decision being made

Page No.	Paragraph	Error	Correction
115	5.44	113 breeding season collisions	111 breeding season collisions

1 INTRODUCTION

1.1 This report sets out the main findings, conclusions and recommendations in relation to an application for a Development Consent Order (DCO)[1] for the construction of up to 207 wind turbines and associated grid connection infrastructure. The turbines are proposed for an area of the Irish Sea west of Cumbria; the grid connection is proposed via a new substation at Heysham, Lancashire.

1.2 On 4 October 2013, Robert Macey, Philip Asquith and Kelvin MacDonald were appointed under sections 61 and 64 of the Planning Act 2008, as amended (PA2008) [PI-004], under delegation from the Secretary of State (SoS) as the Examining Authority (ExA) to examine and report on this application. Robert Macey was appointed the lead member of the panel.

Procedural decisions

1.3 The ExA conducted its Examination between 12 November 2013 and 12 May 2014. It issued two full rounds of written questions and four further requests for information. There were three issue specific hearings (ISHs) and two open floor hearings (OFHs), and a number of site visits as discussed below. No requests were received for a hearing on compulsory acquisition (CA).

1.4 The full list of procedural decisions and events in the Examination is at Appendix 2.

Site visits

1.5 No proposals for accompanied site visits (ASVs) were suggested on the UK mainland, with the Planning Performance Agreement Authorities (PPAA)[2] identifying no such need [D1-031]. The Isle of Man Government (IoMG) [D1-035], Isle of Man Steam Packet Company (IoMSPC) [D1-029] and Mr John Pennington [D1-003] suggested visits to the Island via a ferry crossing. The IoMG further suggested a visit to the airport to view radar operations. The IoMSPC suggested attendance at a bridge simulation exercise to inform the issue of safety to shipping, with this latter suggestion reiterated by Stena Line [D1-032].

1.6 The ExA undertook a number of unaccompanied site visits of the application site and surroundings. These visits took place between November 2013 and March 2014 and included:

- the site of the proposed substation, viewed from a number of relevant locations;

[1] Appendix 3 provides a schedule of abbreviations used in this report. Terms are spelt out in full the first time they are used.
[2] See paragraphs 3.9 and 3.10 of this report below for a description of the PPAA.

- Middleton Playing Fields and Middleton Sands on the proposed onshore cable route;
- the majority of sites of the Applicant's photomontages of the proposed turbines, including Black Combe summit and Maughold Head;
- a return journey on the Ben-my Chree ferry, the route of which passed close to the application site and to existing wind farms.

1.7 None of these visits were accompanied, and all locations visited were publically accessible. The issues informed by the visits are discussed below. We concluded that the evidence we received on navigation issues would be unlikely to be enhanced by the suggested viewing of simulation exercises and radar displays, with potential risks to the integrity of the Examination.

Other consents required

1.8 The Applicant has listed thirteen consents which may be required under other legislation [AD-051][3]. Its electricity generation licence has already been granted; three of the potential consents formed part of the Examination relating to appropriate assessment and CA and are considered as applicable below. Other consents to be sought if the DCO is granted have not been the subject of detailed consideration, with the Statements of Common Ground (SoCGs) with the Environment Agency (EA), local authorities and the Highways Agency (HA) addressing the main relevant issues and identifying no substantive issues impacting on the likelihood of consent being granted. We have no grounds for believing the relevant consents would not be forthcoming.

Deemed Marine Licences (DMLs)

1.9 The application also seeks the approval of two DMLs covering generator assets and transmission assets, with the recommended licences at Schedules 9 and 10 of the DCO. These have been considered in some detail during the Examination.

Undertakings given to support the application

1.10 The Applicant, and Christopher John Hargreaves, the owner of Shorefields Caravan Park, have made a Unilateral Undertaking for the benefit of Lancaster City Council under Section (s) 106 of the Town and Country Planning Act 1990 (as amended) [D4A-009]. A certified copy of the obligation was provided to the Examination on 14 March 2014.

[3] References in square brackets are to documents listed in Appendix 1, the Examination Library

Structure of report

1.11 The sections of this report are structured as follows:

1) an introduction to the Examination;
2) a description of the proposed scheme and its site;
3) an overview of the legal and policy environment;
4) a report into the main issues examined and the ExA's conclusions;
5) a report into the examination of Habitats Regulations issues and the ExA's conclusions;
6) a report into the application for CA and the ExA's conclusions;
7) the ExA's findings regarding the DCO;
8) a summary of conclusions and recommendations.

1.12 There then follow a series of appendices:

1) the Examination library, listing and coding each document;
2) a schedule of procedural decisions and events in the examination;
3) a list of abbreviations used in this report;
4) the DCO (including DMLs) recommended by the ExA;
5) the Report of the Impact on European Sites (RIES).

2 MAIN FEATURES OF THE PROPOSAL AND SITE

The present application

2.1 The Applicant is DONG Energy Walney Extension (UK) Limited, a wholly-owned subsidiary of DONG Energy. The Applicant reports that DONG Energy is 80% owned by the Danish Government and generates most of that country's electricity. DONG operates several wind farms in the UK, including the existing Walney I and II installation [AD-047].

2.2 The application is for an extension to the above Walney I and II offshore Wind Farm with an additional capacity of up to 750MW and associated transmission infrastructure, and is described more fully below. This qualifies as a Nationally Significant Infrastructure Project (NSIP) under s15 of PA2008 as an offshore generating station with a capacity in excess of 100MW located in waters adjacent to England, with the site partly within UK territorial seas and partly within the UK Renewable Energy Zone [AD-004, Schedule 1].

2.3 The proposal for an electricity generating station falls within Schedule 2 of the relevant Environmental Impact Assessment (EIA) Regulations[4]. It is classed as EIA development [AD-048] and in accordance with these Regulations is accompanied by an Environmental Statement (ES). We reach a view in Section 4 below on the adequacy of the environmental information available to us as the ExA.

Site

Offshore

2.4 The wind turbine array is proposed for a 149km^2 site to the north-west of the existing Walney I and II Wind Farm in the Irish Sea. At its closest points this is 19km west of the Cumbrian coast, 35km north-west of the Lancastrian coast and 31km south-east of the Isle of Man [AD-071].

2.5 The site is on the UK Continental Shelf, but only the eastern-most section of some 23km^2 is within UK territorial seas. Water depth ranges between 21m and 55m, with the central part of the site the deepest. The sea bed is largely coarse sand and gravel [AD-071].

2.6 The array site is crossed by a telecommunication cable connecting Cumbria and the Isle of Man. North of the site are zones for gravel dredging and a military firing practice area. South of the site are two gas platforms, extracting from the Millom and North Morecambe gas fields.

[4] The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009.

2.7 The proposed subsea export cable system is 96km long and is to be laid within a 1.1km wide corridor. Water depth is generally below 30m, gradually reducing towards the coast. This gradient is interrupted by Lune Deep, a glacial trench up to 41m deep between Fleetwood and Walney, through which the cables would pass.

2.8 The export cables would need to cross ten subsea pipelines and cables on their route including telecommunications, power, gas and chemical pipelines [AD-015].

Onshore

2.9 The cables are proposed to make landfall through the saltmarsh at Middleton Sands, north of the mouth of the River Lune. The cables would then run for 3km through flat agricultural land divided by hedgerows.

2.10 The proposed 40m wide cable corridor would skirt the south and east of Middleton village. The route crosses four public rights of way and two roads: Middleton Road, east of the village, and the A683, east of the Imperial Road junction [AD-016].

2.11 The substation is proposed to occupy about three hectares (ha), plus an access road from the roundabout and screen planting. Overall, the Applicant seeks 12ha within the Order limit boundary for the substation compound, access and temporary working area [AD-031]. The plot is generally flat agricultural land; the western part is rough pasture with some shrubs and the larger eastern section forms part of an arable field. There is an electricity pylon in the south of the plot carrying a 400kV line from the Heysham power stations.

2.12 To the immediate south of the proposed substation site is the A683, which links Heysham Port with the national road network. Beyond that is agricultural land with permission for the construction of three wind turbines [RR-039], and the Imperial Road industrial estate. To the east is open countryside with further pylons and a telecommunications mast. To the south-west of the site across the A683 is the existing National Grid substation. Adjacent to the west is a plot of agricultural land with planning permission for a further National Grid substation [D1-023]; beyond that, approximately 500m from the site, is the Mossgate Park residential estate on the edge of Heysham, from parts of which the site is visible. To the north of the site is Heysham Moss Nature Reserve, which includes a raised bog designated as a Site of Special Scientific Interest (SSSI) [D1-008].

The works

2.13 The application is for development consent for works identified by the Applicant as an NSIP, and for associated development. The

works are described in detail in Schedule 1 of the recommended DCO at Appendix (Appx) 4 and summarised below.

Principal works

2.14 The recommended DCO describes Work No. 1 as the NSIP, with all other works described as associated development. The relevant NSIP works comprise:

- Work No.1(a), an offshore wind turbine generating station with a gross electrical output capacity of up to 750MW comprising up to 207 wind turbine generators with rotating blades;
- Work No.1(b), a network of subsea inter-array cables between the wind turbine generating stations (WTGs) and the offshore substation(s).

2.15 The ES [AD-071] describes the design envelope for the wind turbines. Turbines with outputs between 3.6MW and 8MW have been assessed. This allows for a maximum hub height of 122m, rotor diameter of 200m and tip height of 222m. The minimum rotor clearance above sea level (mean high water spring tides) assessed was 22m and minimum separation distance of 737m between turbines. These limits are included in the requirements of the recommended DCO, Schedule 1, Part 3.

Associated development

2.16 The recommended DCO lists Work Nos. 2 to 27 as associated development. The main components of this are:

- Work No.2 comprises up to three offshore substations;
- Work No.3A comprises up to five export cable systems seaward of mean high water springs;
- Work Nos.3B to 24 comprise up to five export cable systems, jointing bays, temporary work compounds and access roads to the cable route;
- Work No.25 is an electrical substation compound and adjoining apparatus and facilities;
- Work Nos.26-27 connect the substation to the adjacent approved National Grid electrical substation by up to two 400kV underground export cable systems.

2.17 This split between principal works and associated development is as proposed by the Applicant. Some elements of the works are capable of being classed as associated development or principal (NSIP) works. We note substations and cable systems are identified as potentially associated development in guidance. (*Guidance on associated development applications for major infrastructure projects,* DCLG April 2013). This issue was examined and is reported on more fully below in Section 7 where the DCO is considered.

Planning history

Offshore

2.18 There are four offshore wind farms in the vicinity of the proposed development: Barrow, Ormonde, Walney I and II, and West of Duddon Sands (WoDS) [AD-072]. These were consented under regimes that pre-date the NSIP process [LIR-001].

2.19 The application is an extension to the existing adjacent Walney I and II Wind Farm, which is immediately south and east of the application site [AD-072]. This became operational in 2012 and comprises 102 turbines, generating a maximum of 367MW.

2.20 To the east of the Walney I and II Wind Farm is the Ormonde Offshore Wind Farm. This is east-south-east of the proposed Walney Extension and closer to the Cumbrian coast [AD-072]. This array became operational in 2011, comprising 30 turbines, generating a maximum of 150MW [LIR-001].

2.21 To the immediate south-east of the existing Walney I and II Wind Farm is the WoDS Wind Farm [AD-072]. The array is under construction and expected to comprise 108 turbines generating a maximum output of 389MW [LIR-001].

2.22 East of the WoDS Wind Farm is the Barrow Offshore Wind Farm [AD-072]. The array became operational in 2006, comprising 30 turbines, with a maximum generating capacity of 90MW [LIR-001].

2.23 South-west of the proposed Walney Extension is the Celtic Array zone within which development has not yet been consented. The Rhiannon project within the zone was planned for construction in 2017 subject to consent [AD-052].

2.24 However, shortly before submitting this report it came to our attention that the developers of the Rhiannon project have decided not to proceed. The analysis we have undertaken below takes account of cumulative impacts in relation to Rhiannon in a number of areas, including marine and avian species and noise. The withdrawal of the project would slightly reduce any adverse cumulative impacts, though not to a significant degree, and would not affect our overall conclusions and recommendation.

Onshore

2.25 The proposed substation is adjacent to both an operational and a consented National Grid substation. The cable route passes through open countryside used for agriculture, and through the saltmarsh at Middleton Sands. There is no known planning history of applications on any of the land affected by the cable route or the substation [LIR-001].

2.26 The existing operational substation to the south of the A683 services the Heysham nuclear power stations. It is also the connection point for a number of offshore wind farms [LIR-001].

2.27 To provide a grid connection for the Walney Extension, National Grid plans a second substation to the north of the A683 [AD-060]. Planning permission was granted by Lancaster City Council on 23 July 2013 [LIR-001].

2.28 Banks Renewables holds a planning permission to erect three wind turbines (the Heysham South Wind Farm) in the field to the south of the proposed substation site [RR-039].

3 LEGAL AND POLICY CONTEXT

Planning Act 2008

3.1 The Examination was undertaken in accordance with s104 of PA2008, where relevant national policy statements (NPSs) have effect. In accordance with s104, in deciding the application the SoS must have regard to:

(a) "*any national policy statement which has effect in relation to development of the description to which the application relates,*

(aa) the appropriate marine policy documents (if any), determined in accordance with section 59 of the Marine and Coastal Access Act 2009,

(b) any local impact report submitted to the Secretary of State before the deadline specified in a notice under section 60(2),

(c) any matters prescribed in relation to development of the description to which the application relates, and

(d) any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision."

National Policy Statements (NPSs)

3.2 The two NPSs most relevant to the application for an offshore wind farm were designated in 2011:

- EN-1 *Overarching National Policy Statement for Energy*, which establishes the need case for energy projects. This identifies an urgent need for energy infrastructure and notes that the decision maker "*should start with a presumption in favour of granting consent*" (4.1.2);
- EN-3 *National Policy Statement for Renewable Energy Infrastructure*, which applies in relation to the offshore wind turbine generators. These are expected to make up *"a significant proportion of the UK's renewable energy generating capacity up to 2020 and towards 2050*" (2.6.1).

3.3 EN-5 *National Policy Statement for Electricity Networks* is also relevant in relation to the associated development works connecting the generating station to the National Grid (1.8.2).

3.4 In considering the application and its impacts the SoS must decide an application for energy infrastructure in accordance with the NPSs (PA2008, s104(3)) unless to do so would:

- lead to the UK being in breach of its international obligations;
- be in breach of any statutory duty;
- be unlawful;

- result in adverse impacts from the development outweighing the benefits;
- be contrary to regulations about how decisions are to be taken.

3.5 In addition to identifying the need for new sources of energy the NPSs are the primary basis on which decisions on applications under PA2008 are taken. The NPSs identify a wide range of issues affecting the natural and human environment that are relevant to decisions to be taken, and which in consequence need to be assessed. We have taken account of these in our Examination, with relevant issues including:

- biodiversity, including impacts on birds and marine mammals;
- geological impacts;
- civil and military aviation;
- traffic and transport;
- shipping;
- landscape, seascape and visual impact;
- noise and vibration;
- electric magnetic field impacts on humans and other species.

European requirements

3.6 In considering the impact of the proposed development (the Project) the SoS is required to take account of a range of European directives and international obligations, normally given effect by domestic regulations. International requirements relevant to assessing this application include:

- Environmental Impact Assessment Directive 1985, as amended;
- Renewable Energy Directive 2009;
- Habitats Directive (Council Directive 92/43/EEC);
- Birds Directive (Council Directive 2009/147/EC);
- Conservation of Habitats and Species Regulations 2010 (as amended);
- Offshore Marine Conservation (Natural Habitats, etc.) Regulations 2007 (as amended) (the 2007 Offshore Regulations);
- Offshore Marine Conservation (Natural Habitats etc.) (Amendment) Regulations 2012;
- European Marine Strategy Framework Directive.

Isle of Man

3.7 There is no international requirement to consult the Isle of Man Government (IoMG). As a Crown Dependency it is not subject to PA2008. The Applicant had consulted with the IoMG and other Isle of Man (IoM) interests prior to submitting its application and the IoMG and other interest groups from the IoM registered as

Interested Parties (IPs). Evidence considered from IoM interests included that presented orally in two hearings on the Island.

National policy and legislation

3.8 There is also a range of domestic policy and legislation which is important and relevant to the SoS's decision, including:

- Marine and Coastal Access Act 2009 and the UK Marine Policy Statement prepared under that Act;
- National Planning Policy Framework (the Framework) and Planning Practice Guidance (PPG);
- The National Parks and Access to the Countryside Act 1949;
- The Wildlife and Countryside Act 1981 (as amended);
- Natural Environment and Rural Communities Act 2006.

Local policy and plans

Local Impact Report (LIR)

3.9 A single LIR was submitted jointly by six local planning authorities operating under a Planning Performance Agreement [LIR-001]. Four of the authorities fall within the provisions of PA2008:

- Lancashire County Council, an upper tier host authority;
- Lancaster City Council, a lower tier host authority;
- Cumbria County Council, an upper tier neighbouring authority;
- South Lakeland District Council, a lower tier neighbouring authority.

In addition, the following authorities have been included as they have communities affected visually by the Project:

- Copeland District Council, a lower tier authority within the zone of visual influence of the Project's offshore turbines;
- Lake District National Park Authority, a national park within this zone of visual influence.

3.10 Collectively these are the PPAA. The last two authorities do not have the legal status of the earlier four; this is not a significant issue in the context of this Examination given the issues identified by the PPAA in the LIR and the limited extent of significant visual impact. These issues are discussed in Section 4 below.

The Development Plan

3.11 Lancaster City Council is developing a Local Plan; the extant development plan comprises the Lancaster District Core Strategy 2008 and policies from the Lancaster District Local Plan 2004, saved in 2008.

3.12 Policy E5 of the Lancaster District Local Plan (2004, saved 2008) designates the proposed site of the substation as within the Countryside Area, where development would not normally be permitted. However it notes that "*development for renewable energy generation … which is of major regional or national importance will be permitted where the Council is satisfied that the economic benefits clearly outweigh the environmental impacts*".

3.13 The Lancaster District Core Strategy 2008 promotes renewable energy development in policy ER7 *"encouraging the development of renewable energy resources across the District, including but not limited to, the promotion of South Heysham as a key focus for renewable energy generation including wind*".

3.14 The Lancaster City draft Land Allocations Development Plan Document (Preferred Options 2012) identifies the Heysham Energy Coast, in which energy investment will be supported.

Conclusion

3.15 In conducting the Examination and reaching conclusions and recommendations below we have given careful consideration to the range of international, domestic and local policies and plans that are relevant to the assessment of the Project, and give weight to them in the discussion below, as appropriate.

4 FINDINGS AND CONCLUSIONS IN RELATION TO POLICY AND FACTUAL ISSUES

MAIN ISSUES IN THE EXAMINATION

General introduction

4.1 Our findings and conclusions on the main issues raised by IPs and ourselves are set out in the sections and subsections below. Following general introductory matters the main issues are set out in alphabetical order, with sections on HRA, CA and the DCO following. This format does not seek to imply any specific weight or importance in the order in which they are reported on.

4.2 We have had regard to all representations made, our legal responsibilities as an ExA, the relevant NPSs and MPS, and the LIR. We have also had regard to all SoCGs and the concluded s106 Unilateral Undertaking by the Applicant and the owner of Shorefields Caravan Park to Lancaster City Council. In respect of the latter, we consider it fulfils the tests for planning obligations as set out in paragraph 204 of the Framework.

4.3 A wide range of matters has been raised and assessed in the Applicant's submitted application documentation, including the ES, its documentation submitted during the Examination and documentation raised separately in submissions from IPs.

4.4 We have considered all application and Examination documentation, supporting material and information, and representations submitted in coming to our conclusions as a whole. However, we concentrate on reporting on the main issues identified and the matters raised by IPs during our consideration of the application.

Initial identification of Principal Issues and matters to be examined

4.5 Our initial assessment of Principal Issues was prepared in accordance with s88 of PA2008 and Rule 5 of the Infrastructure Planning (Examination Procedure) Rules 2010.

4.6 The Principal Issues were identified and developed from the application documentation and Relevant Representations received. They were annexed to the Rule 6[5] letter [PI-004] notifying IPs of the Preliminary Meeting. They fell under 14 headings:

[5] Rule 6 Infrastructure Planning (Examination Procedure) Rules 2010

- biodiversity, ecology and the natural environment;
- compulsory acquisition;
- construction, maintenance and decommissioning;
- debris waste and contamination;
- the draft Development Consent Order;
- electric and magnetic fields (EMF);
- health;
- historic environment;
- landscape, seascape and visual impacts;
- marine and coastal physical processes;
- navigation (both marine and air);
- noise;
- socio-economic effects;
- transportation and traffic.

4.7 Following representations by EDF Energy (Nuclear Generation), made in writing [AR-004] and reiterated at the Preliminary Meeting, we also considered emergency planning as an issue. This is covered in the subsection below on construction, maintenance and decommissioning.

4.8 During the Examination we considered a range of detailed evidence and analysis in relation to these issues. We also took account of submissions and considerations in relation to other matters such as Habitats Regulations issues. We have considered all matters raised and report below on the main issues that have arisen for consideration during the Examination and do not, for example, report fully on issues where there is a substantial measure of agreement and with which we concur.

4.9 In reaching our decision as to what issues should be considered, we also had regard to the legislative framework set by s104 of PA2008, together with policy and guidance in relevant NPSs and other legislation referred to above in Section 3 of this report.

4.10 EN-1 (4.10) advises that issues relating to discharges or emissions from a proposed project which affect air quality, water quality, land quality and the marine environment, or which include noise and vibration, may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes.

4.11 In accordance with EN-1, when considering this application for development consent we have focussed on whether the development itself is an acceptable land use, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. We have worked on the NPS assumption that the relevant pollution control regime and other environmental regulatory regimes will be properly applied and enforced by the

relevant regulator (EN-1, 4.10.3). We have therefore acted to complement, but not seek to duplicate, these regimes.

Issues arising in the Local Impact Report (LIR)

4.12 The single LIR, jointly submitted at Examination Deadline I by the PPAA [LIR-01], considered the offshore and onshore elements of the Project in terms of likely impact on the authorities' administrative areas. In respect of known impacts, the LIR suggests these would be positive, neutral and negative.

4.13 In respect of the offshore elements, the LIR's conclusion is that the negative impacts are not significant overall and in most cases can be mitigated by requirements in the DCO. These relate to:

- consideration of transport impacts arising onshore relating to offshore construction activity and from the subsequent operation of the wind farm;
- economic impacts, most importantly the need to maximise job creation, training and supply chain benefits;
- ensuring radioactive particles in seabed sediments are not mobilised onto shore;
- ensuring a means of contact is provided to enable any concerns to be expressed by the public during construction;
- ensuring decommissioning takes place.

4.14 The LIR suggests the offshore seascape, landscape and visual impacts are only significant in EIA terms when considering the visual impact from high ground near the Cumbrian coast (such as the viewpoints at Black Combe). Because of the nature of the impact it is not possible to undertake any mitigation other than selecting scenarios involving the lowest number of turbines.

4.15 Having regard to known potential impacts of the onshore elements of the Project, the PPAA consider the negative impacts are not significant overall and they can be mitigated by DCO requirements and/or a s106 agreement. These relate to the following:

- further consideration of avoidance, mitigation and compensation relating to impacts on protected sites, and protected and priority species;
- consideration of the viability of the prior extraction of minerals from the area of search corresponding with the location of the substation;
- further assessment of the landscape and visual impacts of the substation proposals;
- the requirements for a 'strip, map and record' process of mitigation for any archaeological interest during the construction of the substation;
- safety of the local highway network, highways maintenance and the routeing of abnormal loads from the M6;

- the need to maximise the use of, and support for, local businesses and employment.

4.16 These matters were considered further in discussions and negotiations between the PPAA and the Applicant and through our questioning during the Examination. We have had regard to all these matters, which are considered below in the relevant sections of this report.

Isle of Man Government (IoMG)

4.17 As noted in Section 3 above, the IoM is a Crown Dependency and not subject to PA2008. Given the location of the proposed turbines, the Applicant has consulted with the IoMG and other IoM interests during the consultation stages, and a number of IoM organisations, including the IoMG, registered as IPs.

4.18 In its Relevant Representation [RR-040] the IoMG raised a number of issues of potential concern, with these addressed in subsequent representations and a SoCG [SCG-025]. There remained differences between the IoMG and the Applicant in relation to impacts on shipping, aviation and consequent socio-economic impacts. These are considered in the relevant sections below. The impact on air navigation has been a major consideration in the Examination.

General conformity with NPSs

4.19 In terms of general conformity with relevant NPSs and the need for the development, as the Project is for an offshore generating station with a capacity of over 100MW it falls under PA2008 sections 14 and 15(3) definitions of a Nationally Significant Infrastructure Project. The relevant NPSs are therefore EN-1, EN-3 and EN-5, as set out in Section 3 above. Conformity of the application proposal with these is considered as appropriate throughout this report. The need for generating stations of the type described in the application is established in EN-1 where it is stated: *"The UK has committed to sourcing 15% of its total energy (across the sectors of transport, electricity and heat) from renewable sources by 2020 and new projects need to continue to come forward urgently to ensure that we meet this target "* (3.4.1).

4.20 EN-1 (3.4.5) emphasises this urgency in indicating that:

"to hit this target, and to largely decarbonise the power sector by 2030, it is necessary to bring forward new renewable electricity generating projects as soon as possible".

4.21 We consider there to be a need for the Project in accordance with EN-1.

Technical viability

4.22 Requirement (r.) 2 of the recommended DCO and condition (c.) 1 of the Generator Assets DML (DML(G)c.1[6]) would allow for wind turbine generators (WTGs) up to 222m in height and with rotor diameters of 200m. These are indicated in the Project Description section of the ES as being *"conceptual 8MW turbines"* [AD-071, s4.5].

4.23 We are not aware of any turbines of this size currently deployed either offshore or onshore in or around the UK. Nevertheless, with regard to technical viability required by EN-1 (4.1.9), the WTG options being considered for the Project also include much smaller ones of 3.6MW. The Project could just as well be developed using these, which are currently deployed elsewhere (including the existing Walney I and II Wind Farm). None of the other aspects of the Project elements are technically unusual. We have therefore no reason to conclude that the Project would not be technically viable.

Financial viability

4.24 Having regard to the financial viability of the Project, the Applicant is a company specifically created for the purposes of promoting, developing and operating the Project. Although it does not have assets of its own, the company is a wholly-owned subsidiary (via other wholly-owned subsidiaries) of Dong Energy, a company incorporated in Denmark [AD-047]. The company's financial standing and its ability to finance compensation due in respect of any claims pursuant to any necessary CA are more fully considered in the section below on CA.

4.25 We asked questions about these matters at an ISH [EV-018, D5-026]. In short, and having regard to EN-1 paragraph 4.1.9, the evidence produced leads us to conclude that the financial viability of the Project has been properly assessed by the Applicant.

Grid connection

4.26 EN-1 sets out at paragraph 4.9.1 the importance of securing connection of the electricity generating plant to the electricity transmission network (the Grid). The Project's onshore substation would connect to a new Middleton substation, to the immediate west, to be built by National Grid Electricity Transmission PLC (NGET). This has separately been granted planning permission following NGET's consideration of the capacity of its existing substations [AD-064]. The Applicant and NGET entered into grid connection agreements on 22 September 2011 which provide for

[6] DML(G)c.1 refers to condition 1 of the deemed marine licence for generator assets (Schedule 9). References to conditions in the licence for transmission assets (Schedule 10) follow a similar structure.

connection of the Project to the Grid. Under this arrangement NGET would be responsible for designing and building its substation as the interface between the Grid and the onshore transmission system, it having determined that a new 400kV substation was required to connect the Project to the Grid [AD-060].

4.27 The grid connection agreements were converted to a 'Generator Build Option' to seek consent, design, procure, construct and commission the offshore transmission assets before transferring responsibility to an appointed Offshore Transmission Owner (OFTO). The ExA sees no impediment as to why such a connection to the Grid should not proceed, as agreed between the Applicant and NGET [AD-060].

Conformity with the UK Marine Policy Statement (MPS)

4.28 The MPS is the framework for preparing Marine Plans and taking decisions affecting the marine environment. It provides the high level policy context within which national and sub-national Marine Plans will be developed, implemented, monitored and amended, and will ensure appropriate consistency in marine planning across the UK marine area. No Marine Plan has yet been prepared for the area within which the Project is located.

4.29 Paragraph 3.3.1 of the MPS makes clear that: *"A secure, sustainable and affordable supply of energy is of central importance to the economic and social well being of the UK"*. It continues that *"Contributing to securing the UK's energy objectives, while protecting the environment, will be a priority for marine planning"*. In the absence of a specific Marine Plan, proposals need to be aligned with the MPS. As a renewable energy project, the proposal would be in general conformity with the MPS.

National Planning Policy Framework (the Framework)

4.30 The Framework does not contain specific policies for NSIPs though it does address matters such as energy and climate change and indicates at paragraph 3 that NSIPs should be determined in accordance with PA2008 and relevant NPSs. The Framework may be considered, however, as a matter both important and relevant to an application.

4.31 A core principle of planning as set out in paragraph 17 is that it *"should support the transition to a low carbon future in a changing climate… and encourage the use of renewable resources (for example, by the development of renewable energy)".*

4.32 Framework paragraph 93 states that *"planning plays a key role in helping to shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of*

renewable and low carbon energy and associated infrastructure. This is central to the economic, social and environmental dimensions of sustainable development".

4.33 Paragraph 162 indicates that *"local planning authorities should work with other authorities and providers to… take account of the need for strategic infrastructure including nationally significant infrastructure within their areas".*

4.34 The Project takes forward a Framework core principle in facilitating the transition to a low carbon future. We consider that the Project is consistent with the thrust of this guidance.

Local planning context

4.35 EN-1 and EN-3 provide the primary policy basis for decisions on applications for offshore wind farm developments that fall within the scope of the NPSs. However, paragraph 4.1.5 of EN-1 indicates that the decision-maker may consider Development Plan Documents or other documents in the Local Development Framework which are important and relevant to consideration of an application. Section 3 above of this report sets out the local planning context in respect of the onshore elements of the Project.

4.36 Lancashire County Council adopted Site Allocation and Development Management Policies for the Joint Lancashire Minerals and Waste Local Development Framework in September 2013. The plan provides site-specific policies and allocations, and detailed development management policies, for minerals and waste planning. This document was not addressed in the Project application.

4.37 The onshore substation site lies within a mineral safeguarding area identified in this plan. In the context of the urgent national need for renewable energy projects, the existence of a lengthy land bank for gritstone resources, and the fact that the substation site would not be a permanent land use, the PPAA and the Applicant agree the Project would not conflict with either national or local planning policies on mineral resources [SCG-012, para 6.22].

4.38 The ExA has not been pointed to any other extant local planning policies with which the proposals, subject to the controls exercisable through requirements of the recommended DCO, would materially conflict. We conclude that no such conflict would exist.

Environmental Statement (ES) and Environmental Impact Assessment (EIA)

4.39 NPS EN-1 section 4.2 covers matters relating to the adequacy of the ES. The ExA has taken into consideration all the environmental information (as defined by Regulation 2(1) of the EIA Regulations) in reaching its recommendation. Much of this

has included the 35 chapters of the ES and its accompanying annexes, as corrected by the Applicant's schedule of errata [D1-078].

4.40 In the early stages of preparing a DCO application it may not be possible to have resolved all the details of a project. Details may change as it progresses through pre-application stages. These may include matters such as the number of turbines, foundation types and location of cable routes and landfall. Environmental assessment can take account of the need for such evolution providing clearly-defined parameters are established within which variations may take place. Such parameters are referred to as the 'Rochdale Envelope'[7]. In accordance with these principles, the ES has assessed impacts by establishing parameters which would provide for the maximum potential adverse impacts of the Project.

4.41 The few changes made to the application post-submission, including the removal of the use of gravity-based foundations for the wind farm structures and the commitment to using horizontal directional drilling (HDD) beneath the saltmarsh at Middleton Sands, have not extended the 'Rochdale Envelope' parameters against which the Project has been assessed. We consider further changes made to the Project in Section 7 below on the DCO.

4.42 The consideration of alternatives by the Applicant has been set out in the ES, as required by the EIA Regulations [AD-072, Chapter 5]. A detailed, iterative site selection process was carried out which took into account environmental, technical and economic considerations. The locations of the offshore and onshore elements were selected through this process, which involved consultation with statutory advisers, stakeholders and the public.

4.43 The PPAA did identify concerns about the adequacy of the assessment relating to the onshore impact of offshore construction and suggested the EIA was inadequate given the limited information included in the ES on this matter [D1-017; D5-042]. This was considered during the Examination and is reported on below in the discussion on traffic and transport. In the light of clarification provided by the Applicant [D4A-015], the PPAA agreed that the environmental information satisfies the purposes of the EIA Regulations [D5-042].

Trans-boundary Effects

4.44 Under Regulation 24 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (EIA Regulations), the SoS is required to consider whether the proposed development would be likely to have significant effects on the environment in another

[7] The Rochdale Envelope arises from two cases for outline planning permission for a proposed business park in Rochdale: R v Rochdale MBC ex parte Milne (No. 1) and R v Rochdale MBC ex parte Tew (1999); and R v Rochdale MBC ex parte Milne (No. 2) (2000).

European Economic Area (EEA) State. Following screening, trans-boundary issue notification took place with Iceland (in relation to migratory avian species), Belgium (in relation to commercial fishing) and the Republic of Ireland (in relation to commercial fishing and migratory avian species) in February 2013. At the time only Belgium responded in relation to commercial fishing and it subsequently registered as an IP [RR-016]. Following a further screening, letters were sent to the three Governments and the Republic of Ireland subsequently responded noting that the Project would have no likely significant effect (LSE) on its environment [D4-037]. No response has been forthcoming from Iceland. The issues in relation to Belgium are addressed in the subsection below on commercial fishing.

Assessment of effects

4.45 The ES describes the likely significant environmental effects predicted to occur as a result of the development, operation and decommissioning of the Project, whether alone or in combination with other development.

4.46 In order for the EIA to assess the worst environmental outcome based on Project parameters, assessment of each environmental topic was based on an interpretation of the maximum adverse scenario (MAS) for each impact under investigation. The Applicant assessed the environmental effects by comparing baseline conditions with the conditions that would prevail if the Project is constructed, operated and decommissioned. Information about the Project is then used to identify potential impacts, which are assessed for the level of significance of their effect on receiving environmental receptors.

4.47 The sensitivity of a receptor is a function of its capacity to accommodate the proposed form of change and would reflect its capacity to recover if it is affected. The magnitude of an impact refers to the size or amount of impact and varies from 'no change' to 'major'. A number of criteria have been used to determine the significance of the environmental effects identified, the most important being the sensitivity of the receptor and the magnitude of the impact. Following the identification of receptor sensitivity and magnitude of impact the ES calculates the significance of effects. This has followed an assessment matrix set out in Table 33[8] of the Chapter 3 of the ES [AD-070]. The descriptions of magnitude of impact and significance of effect used in our report reflect the methodology employed in the ES, which has been broadly agreed and accepted by the parties.

[8] It is assumed that the Table should be reference 3.3.

Conclusion on the adequacy of EIA

4.48 The ExA considers that the entirety of the information about the environmental effects of the Project has been adequate for the SoS to take a decision in compliance with Regulation 3(2) of the EIA Regulations.

Habitats Regulations Assessment (HRA)

4.49 Under the Habitats and Species Regulations it is necessary for the decision-maker, prior to granting a DCO, to consider whether the Project may have a significant effect on a European site, or any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects (EN-1, 4.3.1).

4.50 A number of European sites (species and habitats) would potentially be affected by the Project. The 2010 Habitats Regulations require that the competent authority (in this case the SoS) before authorising a project likely to have a significant effect on a European site *"must make an appropriate assessment of that site in view of the site's conservation objectives"*[9].

4.51 The ExA's consideration of issues included a review of these effects to enable the SoS to be in a position to carry out any appropriate assessment. This review is considered in detail in Section 5 below on Habitats Regulations considerations. Discussion of the Project's effects on other protected sites and species is carried out in the subsection below on biodiversity and ecology.

4.52 Mitigation in terms of Habitats Regulations considerations would be achieved through the range of requirements within the recommended DCO and conditions of the two DMLs. These are discussed in detail in subsequent relevant Sections and subsections of this report.

BIODIVERSITY AND ECOLOGY

4.53 EN-1 (5.3) requires the decision-maker to attach appropriate weight to designated sites of international, national and local importance, protected species, habitats and other species of principal importance. Sites of greatest importance for biodiversity are those which are identified through international conventions and European directives (5.3.9).

4.54 EN-1 further requires decision-makers to ensure SSSIs that are not European sites are given a high degree of protection. Many species and habitats of less than European importance receive

[9] Regulation 61(1) of the 2010 Habitats Regulations and Regulation 25(1) of the Offshore Marine Regulations.

statutory protection under the Wildlife and Countryside Act 1981. EN-1 requires decision-makers to refuse consent where the development will cause harm or detriment to these features, unless the benefits of the development, including need, outweigh that harm. The Natural Environment and Rural Communities Act 2006 (NERC) places a duty on every public body in exercising its functions to have regard to the purposes of biodiversity (5.3.10-5.3.11).

4.55 An applicant is further required by EN-1 to propose appropriate mitigation for all stages of the development as an integral part of the 'works' (5.3.18). If the applicant cannot demonstrate that appropriate mitigation measures will be put in place the competent authority should consider what appropriate requirements should be attached to any consent and/or planning obligations to achieve the required mitigation (5.3.19). EN-1 also requires decision-makers to take into account agreement reached between the applicant and Natural England (NE) and the Marine Management Organisation (MMO) over mitigation measures and intentions to refuse or grant licences for protected species (5.3.20).

4.56 EN-3 lists the effects on the subtidal environment that should be assessed (2.6.113). It states that construction and decommissioning methods should be designed to minimise effects on subtidal habitats and the decision-maker should be satisfied that activities have been designed taking into account sensitive subtidal environmental aspects (2.6.115-2.6.119).

4.57 In addition, EN-3 lists the effects that should be assessed in relation to fish, marine mammals and birds. It makes specific reference to offshore piling, which can reach noise levels that are high enough to cause injury or even death to some species. If the noise or vibration generated by piling could lead to an offence, such as disturbing or killing a European Protected Species (EPS), an application for a wildlife licence is required. The decision-maker should be satisfied that designs reasonably minimise significant disturbance effects on marine mammals (2.6.91).

4.58 The Joint Nature Conservation Committee (JNCC) and NE Relevant Representation (RR-063) set out the respective responsibilities of the two organisations and the legislative framework for all aspects of sites and species relevant to this application. The offshore elements of the proposal are located within both United Kingdom (UK) inshore territorial waters up to 12 nautical miles (nm) and UK offshore waters that lie between the 12 nm and 200 nm. As a consequence, both NE and the JNCC had statutory responsibilities and responded as joint consultees on marine biodiversity matters.

4.59 However, new arrangements[10] came into force during the course of the Examination whereby NE took over the sole responsibility for providing advice for offshore renewable energy projects out to 200 nm. This means that the provision of advice on projects within both inshore and offshore waters is now provided solely by NE rather than being split across the two agencies. Responses subsequent to the jointly-made Relevant Representation have consequently been provided by NE.

4.60 This subsection of our report addresses the following biodiversity and ecology matters in the sequence set out below:

- nature conservation designations;
- marine (non-ornithological ecology: benthic community);
- marine mammals;
- fish and shellfish;
- ornithology - introduction;
- offshore ornithology;
- intertidal ornithology;
- onshore ornithology;
- terrestrial ecology;
- conclusions on biodiversity and ecology.

Nature conservation designations

4.61 The Applicant's ES has adopted different study areas for both the offshore and onshore Project elements, these being defined by the detailed assessments undertaken. For the onshore works, two study areas were defined, one for terrestrial habitats and species and one for intertidal birds. For the former, designated sites for nature conservation within 2km of any works were identified. Relevant sites of conservation importance for intertidal birds within 10km of the offshore cable export route were identified [AD-082].

4.62 The offshore works were considered within the ES to have a greater potential for wider-reaching environmental impacts because of the mobility of the species considered (i.e. fish, birds and marine mammals) and a greater potential for a larger zone of influence (such as noise propagation within the marine environment). Agreed study areas were selected appropriate to the spatial scale of the assessment following consultation with relevant Statutory Nature Conservation Bodies (SNCBs) and local authorities. This facilitated the process of determining: how qualifying features of designated sites might interact; how the the impacts on mobile species might be assessed; and how the impacts on sites some distance from the Project might be assessed [AD-082].

[10] Paragraph 17(c) of Schedule 4 of the Natural Environment and Rural Communities Act 2006.

4.63 Sites of international and European significance, whilst referenced below, are dealt with more fully in the discussion on the HRA process in Section 5 of this report.

4.64 The export cable route would pass through the internationally-designated Morecambe Bay Ramsar[11] site. It also passes through the European designated sites of Morecambe Bay and Liverpool Bay Special Protection Areas (SPAs) and the Morecambe Bay Special Area of Conservation (SAC)[12]. Potential impacts on a considerable number of additional SPAs and SACs, geographically separate from the Project, have been identified. These are considered in Section 5 on HRA below [The location of these sites is shown in AD-108 Chart 10.1; AD-117, Table 15.3, Charts 15.1 and 15.2].

4.65 The export cable corridor would pass through the recommended Marine Conservation Zones[13] (rMCZs) of the Lune and Wyre Estuaries, and West of Walney, with part of the WTG site being within the latter [AD-117, Chart 15.3].

4.66 The export cable corridor crosses the Lune Estuary SSSI and within the onshore 2km study area is the Heysham Moss SSSI, to the north of the site for the proposed substation. The majority of this latter SSSI is designated as a Local Nature Reserve (LNR), whilst that part of the LNR not within the SSSI is a non-statutory Biological Heritage Site (BHS) designated by Lancashire County Council [AD-082, Charts 14.2, 15.4, 15.5; AD-116; AD-126, Fig 24.1].

Marine (non-ornithological) ecology: benthic community

4.67 Impacts are assessed within the ES on subtidal and intertidal ecology. This takes account of impacts arising from the location of the turbines, offshore substations, inter-array cabling and the export cabling. It includes the construction, operational and maintenance, and decommissioning phases of the Project. Impact on benthic ecology is addressed in ES Chapter 10 [AD-077]. Matters assessed include:

- the suspension and subsequent settling of sediments causing light attenuation and smothering of benthic species and communities;
- permanent loss of the seabed because of the presence of WTGs and offshore substations with associated scour protection and cable protection and crossing structures;
- temporary disturbance of the seabed during foundation construction;
- release of sediment-bound contaminants;

[11] The Convention on Wetlands of International Importance (1971).
[12] European designated sites (Natura 2000).
[13] Marine and Coastal Access Act (2009).

- noise effects on benthic communities both during construction and operational phases;
- localised changes in hydrodynamic or sedimentary regimes;
- electromagnetic fields and heat generated by transmitting cables;
- colonisation of the wind farm structures by invasive non-native species;
- changes to fishing activities that may affect the benthic habitat.

4.68 Three potential foundation options were originally assessed within the ES, including the use of gravity-based foundations. This form of construction would have covered a greater area of seabed and, following discussions with NE and the MMO, has been removed by the Applicant as a foundation option from the recommended DCO [AD-004; Appx 4, Work No.1].

4.69 The ES concludes that no significant site-specific or cumulative effects on benthic and intertidal species and habitats are anticipated. The impact of the Project on the marine and intertidal environment of the eastern Irish Sea has been assessed as having an overall slight (adverse) significant effect on the receptor intertidal and benthic habitats and species ecology. This includes impacts on the habitat features of the SAC sites and the rMCZ sites of the regional area [AD-077, Table 10.11].

4.70 Fish, marine mammals and birds feed on benthic species and benthic habitats are also important for fish spawning and nursery areas. Impacts to benthic habitat arising from the Project may affect the abundance or distribution of these species in response to prey items. Biologically important activities such as reproduction may also be affected. Such possible impacts are discussed below in sections on these species.

4.71 Neither the MMO nor NE has expressed disagreement with the ES assessment of benthic ecology. Mitigation and control of the proposed development is achieved by r.3-11 and 14 of the recommended DCO, DML(G)c.1-4, 8, 11-15 and DML(T)c.1-2, 6, 8-12. Amongst these, approval is required by the MMO, in consultation with NE, of various plans, programmes and protocols. These include a construction method statement, project environmental management and monitoring plan and a scour protection management plan [SCG-001; Appx 4].

4.72 We have seen nothing that would contradict the ES assessment that, with the proposed mitigation, the Project in any of its stages would have any significant impact on benthic ecology. Accordingly, we conclude no such significant impact would be likely to arise.

Marine mammals

4.73 Marine mammals and sea turtles are protected in the UK under various articles of national legislation, international directives and agreements. The Applicant summarises these in Table 12.2 in the ES [AD-079]. The Habitats Directive[14] protects all cetaceans because they are classified as endangered, vulnerable or rare. Impacts on marine mammals are considered specifically in ES Chapter 12 [AD-079]. Assessment of likely offshore noise and vibration generation from the Project, including noise modelling and potential effect on marine mammals, is considered in ES Chapter 9 [AD-076]. Baseline surveys of marine mammals from site-specific boat-based and aerial surveys were undertaken across the Project study area[15]. These, together with a variety of information and data sources, informed the EIA as to the commonly occurring marine mammal species within the area [AD-076; AD-079].

4.74 A European Protected Species (EPS) licence is likely to be required[16] from the MMO to cover the risk of potential disturbance to cetacean species from percussive piling. Preliminary information on the species, surveyed abundance and potential impact to inform the licence was provided with the shadow EPS licence which accompanied the DCO application. The MMO advised the Applicant that an EPS licence cannot be applied for as part of the DCO. This is because, ordinarily, the duration of such licences is one year and therefore any consent granted as part of the DCO would not remain valid until the commencement of construction [AD-067].

4.75 However, NE and JNCC indicated that, given the likely requirement for an EPS licence, it would be beneficial to have access to the information which would be likely to support an EPS application as part of the DCO application process; the provision of such information in a shadow EPS licence would facilitate NE's future consideration of issues related to marine mammals and ensure that, if the DCO was made, the likelihood of a future breach of legislation would be low. Additionally, the provision of information in the shadow EPS licence would benefit the Applicant by ensuring that issues that the MMO would consider as part of any future EPS licence application were considered; the additional information provided has helped inform the Examination process [AD-067].

4.76 Whale and Dolphin Conservation (WDC) in its Written Representation considered that, because surveys were not

[14] EU Council Directive 92/43/EEC, as amended by Directive 97/62/EC.
[15] This was taken as the proposed wind farm footprint and a 4km buffer area extending from the boundary of this footprint.
[16] As advised to the Applicant by the MMO, NE and JNCC. Such a licence may be required to ensure no offence is committed under Regulation 39 of the Offshore Marine Conservation (Natural Habitats, & c.) Regulations 2007 in respect of the potential for noise from construction of the Project to disturb marine mammals.

continuous, a true representation of marine mammal populations and their use of the area cannot be established. However, the scope of the surveys carried out for assessment of the Project was agreed with NE and the JNCC and, whilst boat-based surveys were not continuous, aerial data have also been used to provide a meaningful dataset. WDC has not produced any contradictory data [D2-007].

4.77 Only the harbour porpoise (*Phocoena phocoena*) was regularly recorded in surveys. The conservation status of harbour porpoise within UK waters is 'favourable'. The only other marine mammal recorded regularly was the grey seal (*Halichoerus grypus*) although a small number of white-beaked dolphin (*Delphinus delphis*) and one solitary leatherback turtle (*Dermochelys coriacea*) were recorded [AD-067; AD-079; D2-007].

4.78 The potential adverse impacts on marine mammals arise from construction-related noise which could lead to lethal, physical or auditory injury, disturbance/displacement, including that related to loss of prey and reduction in water quality, collision risk, and electromagnetic field effects. The potential for disturbance/displacement arising from noise associated with simultaneous piling with the Burbo Bank Extension Wind Farm and the Irish Sea Zone Rhiannon Project is also considered in the ES Chapter 11 [AD-079].

4.79 The Applicant summarises the predicted impacts on marine mammals in ES Table 12.37 [AD-079]. The conclusion for almost all phases of the Project (construction, operation/maintenance and decommissioning) is that the magnitude of impact for all potential effects is negligible. The sole exception is for potential for behavioural effects/displacement from noise levels generated through construction piling where the magnitude of impact would be minor. For harbour porpoise, white-beaked dolphin and grey seal the potential impact on these species is assessed as neutral to slight adverse significance with mitigation in place.

4.80 Having regard to cumulative impact, the assessed potential disturbance/displacement that could result from simultaneous piling for the Project and the Burbo Bank Extension Wind Farm is of minor magnitude for harbour porpoise and moderate magnitude for grey seal, with effects on only small percentages of their populations. The same levels of magnitude of impact are predicted for simultaneous piling between the Project and Rhiannon (based on early-stage engineering assumptions for this latter in-planning project) [AD-079, 12.9.5.8 - 12.9.5.14].

4.81 Proposed mitigation during the construction phase includes the use of soft-start (ramp-up) piling, and marine mammal observations over an identified monitored mitigation area to prevent the start of piling if marine mammals are in the area. This would be secured by DML(G)c.9 and DML(T)c.11. These require a

Marine Mammal Mitigation Protocol (MMMP) to form part of an agreed Project Environmental Management and Monitoring Plan. In addition, DML(G)c.13 requires the submission for approval by the MMO of a noise monitoring scheme to include measurement of piling noise (Appx 4).

4.82 WDC expressed generalised concerns in its Relevant Representation about the potential impacts on cetaceans [RR-024]. This was particularly in relation to piling noise and the levels of uncertainty and possible negative impacts, both individually and cumulatively, of the proposed form of development. These concerns were made more specific in its Written Representation [D1-011].

4.83 In particular, WDC raised concerns about the reliance to be placed on the conducted surveys in assessing the densities of cetaceans in this part of the Irish Sea. It also disagreed with the Applicant that the impact of pile driving of foundations would be short and intermittent and that animals would quickly return after displacement [D1-011].

4.84 WDC considered that effects on a wider range of cetaceans should have been assessed, including Risso's and bottlenose dolphins (*Grampus griseus,Tursiops truncatus*) and minke whales (*Balaenoptera acutorostrata*). It further felt that a wider study area than the 4km buffer extending from the boundary of the Project site should have been adopted. This was on the basis that potential impacts of noise from pile driving extend into a habitat important to harbour porpoises, minke whale and bottlenose dolphin [RR-024; D1-011].

4.85 WDC had additional concerns about prey impacts and the Applicant's assessment that marine mammals would adapt to changes in prey availability. It believed that additional mitigation measures, including acoustic barrier methods, should be employed at the construction stage to reduce noise impacts that could result in injury and/or disturbance. Should the development proceed, WDC considered that a robust research monitoring strategy should be in place to understand potential impacts [D1-011].

4.86 WDC did not further participate in the Examination beyond its Deadline I Written Representations. It did not respond to our second set of written questions which arose from its Written Representations and the Applicant's comments on these, nor did it attend the ISH session dealing with biodiversity matters or respond further in writing after the audio recording of the ISH was publicly available [D1-011].

4.87 The concerns of WDC are not shared by NE. NE agreed at the ISH (biodiversity session) that the Applicant's impact assessment was adequate, including that for species such as Risso's dolphin, bottlenose dolphin and minke whale, and modelling work was

satisfactory in respect of marine mammals. The SoCG with the Applicant indicates that NE (and, at that time, JNCC) has no outstanding concerns in respect of likely impact on marine mammals either from the Project alone or cumulatively. There is agreement between the Applicant and NE to work collaboratively to develop a suitable MMMP closer to the time of construction in accordance with the DML conditions [SCG-018; SCG-019; D3-009; D4-036; D5-039; Appx 4].

4.88 Similarly, the MMO agrees that the Applicant's underwater noise assessment has been presented appropriately and it has no outstanding issues regarding impact on marine mammals that would not be adequately addressed through the DML conditions [SCG-002; D2-07].

4.89 The findings and conclusions of the Project-specific surveys, which employed a buffer area agreed with SNCBs, and noise modelling which has been applied according to recognised criteria for assessment, also agreed with the SNCBs, in our view are to be accorded greater weight than the more generic and largely unsubstantiated concerns of WDC [D2-007].

4.90 Further, the ES suggests that significant adverse effects on marine mammals can be effectively mitigated by established methods of soft-start piling and the monitoring of an exclusion zone, and that wider disturbance effects are likely to be temporary in nature. Given the predicted non-significant effects, NE considers the application of additional technologies would not be an essential additional mitigation measure [D4-036; D5-039].

4.91 As such, we consider the use of additional acoustic barrier and other methods suggested by WDC would not be proportionate to the risk involved of harm to marine mammals. Similarly, we are of the view that WDC's suggestion that a research programme to consider population-level impacts on wide-ranging species across the large area of the Irish Sea would be disproportionate to the low level of impacts identified in the ES. Such a research programme has not been requested by the SNCBs [SCG-001; SCG-002; D2-07].

4.92 In light of the level of impact assessed within the ES and agreement between the Applicant, NE and MMO on the mitigation that can be secured, we conclude that no further mitigation beyond that secured by the DML conditions is necessary for the adequate protection of marine mammals.

Fish and shellfish

4.93 EN-3 (2.6.73) indicates that there is potential for construction and decommissioning phases to have impacts because of interaction with seabed sediments for fish communities, migration routes, spawning activities and nursery areas of particular species. There

are, additionally, potential noise impacts which could affect fish in terms of physical injury and behavioural response. ES Chapter 11 and ES Annex B.5.A assess the likely impact of the Project on fish and shellfish ecology [AD-078; AD-164]. Commercial fisheries and fisheries monitoring are considered in a separate subsection below.

4.94 Magnitude of impact and significance of effect are summarised in ES Table 11.25 where the potential effects listed include:

- temporary disturbance of the seabed during construction;
- lethal and traumatic hearing and behavioural impacts from construction noise;
- loss of habitat;
- introduction of hard substrate;
- EMF;
- operational noise.

Cod and herring

4.95 The MMO has agreed that the Applicant's underwater noise assessment has been presented appropriately For the majority of fish and shellfish receptors, including elasmobranch species, significant impacts in EIA terms were not identified as a result of the construction, operation and decommissioning phases of the Project for any of the potential effects identified. The ES notes that an exception to this is the effect of construction noise on herring (*Clupea harengus*) and cod (*Gadus morhua*) for which a significant impact was identified in terms of behavioural response [SCG-002, Ref 11.4].

4.96 However, mitigation is proposed, involving soft-start piling and the avoidance of the piling activity during the key cod spawning period. This temporal restriction is secured by DML(G)c.10(1) and would prevent piling between the period 15 February to 31 March within areas to be agreed with the MMO. This period is consistent with that included in the marine licence for the WoDS Wind Farm [AD-078, 11.9.2.104; Appx 4].

4.97 Similarly, a restriction on piling during the herring spawning season is secured by c.10(2) of the same DML, the restricted period being 15 September to 15 November. This period represents a two-week increase over that suggested in the ES. It follows the IoMG Department of Environment, Food and Agriculture's emphasis that the temporal extent of the restriction on piling should be informed by the most appropriate data. The Applicant agrees that it is important to broadly align the piling restriction with the period of the closed season included in the IoMG's *Sea-Fisheries (Technical Measures) Bye-laws 2000, (Part III Special Provisions Relating to Fishing for Certain Sea-Fish)* and hence accepts the two-week extension from 31 October in the no-piling period [Appx 4; SCG-025; D5-016].

4.98 DML(G)c.10(2) also requires the results of noise modelling, prepared to an agreed methodology, to be provided to the MMO to inform the selection of areas where piling between these times is to be restricted. These conditions are agreed with the MMO [D5-040]. With this mitigation, Table 11.25 of the ES concludes that the residual effect on cod and herring would be slight adverse, which would not be significant. We have no reason to conclude otherwise [AD-078].

Salmonid smolt

4.99 The EA has disagreed with the impact assessment conclusions on underwater noise from piling on salmonid smolt, and the subsequent need for mitigation. This is in relation to how migratory patterns from the Duddon and Morecambe Bay estuaries may be affected and the effect this could have on important salmon fisheries of rivers feeding into these. The ES concluded the behavioural impacts on salmonid smolt species - Atlantic salmon (*Salmo salar*) and sea trout (*Salmo trutta*) - from underwater noise to be slight (adverse) significance. This is based on the low sensitivity of the receptors and a minor magnitude of impact. However, the EA suggests that smolt sensitivity and magnitude of effect should both be medium, leading to a conclusion of moderate significance [AD-078; SCG-015; D5-022].

4.100 The issue was explored in some detail during the Examination, including within SoCGs between the Applicant, EA, NE and MMO, responses to two rounds of our written questions and at an ISH (biodiversity session) [EV-014]. The Applicant and the EA agree that distinct evidence is lacking in some areas. There is uncertainty of impact on the route of migrating salmon (whether this follows a coastal or a more open-sea route closer to the Project site), and the precise behavioural response of smolt to underwater noise from piling [D5-022].

4.101 However, the Applicant's position is that any uncertainty has been taken into account in the evidence that is available and in a manner which is consistent with good EIA practice. The MMO, having received advice from the Centre for Environment, Fisheries and Aquaculture Science (Cefas), considers that modelled noise impacts are not predicted to act as a barrier to migration of salmonids from English river estuaries. The Applicant's evidence, including that on salmonid behavioural responses, was elaborated upon at the ISH and in its response following the hearing [D5-018].

4.102 The EA initially suggested that mitigation should be secured through a condition to restrict piling at times of smolt migration. It now accepts that such mitigation would be too onerous for the impacts identified; such a restriction would considerably shorten the realistic time period for piling, with a consequent lengthening of the overall construction period and significant additional costs.

Instead, however, it has suggested that the DML(G) should have an attached condition. This would either: specifically require the wind farm developer to agree to a salmonid compensation scheme involving a financial contribution of no less than £50,000 towards the work of each of two river trusts; or require a compensation scheme to be submitted to, and approved by, the local planning authority. The EA has not elaborated on how such a figure has been derived or is justified [SCG-015, Q1.79; D4-019; D5-018].

4.103 The basis for such a compensation scheme is that it is seen as a reasonable 'offset' requirement to benefit declining local salmon populations for the migratory years during which construction piling would take place, given that impact on salmonid cannot be ruled out. It would allow the delivery of improvements by local river trusts to freshwater physical habitats for the benefit of the salmonid population and/or the removal of barriers that impede fish passage to the headwaters of river catchment environments [D5-018].

4.104 We acknowledge that there are clearly some areas of uncertainty having regard to salmonid migratory behaviour, particularly seaward migration routes, and responses to underwater noise generated by piling. Nonetheless, we are satisfied that the Applicant's evidence is sufficiently robust to support its overall ES conclusion of a slight (non-significant) impact on salmonid smolt. This is supported by Cefas's agreement with the Applicant's assessment with regard to impact and the fact that NE has not raised issues with this assessment [D5-022; D5-039]. On this basis, we agree that no mitigation other than that which would already be secured (soft-start piling, DML(G)c.11.1(f)) is required in relation to salmonid.

4.105 Furthermore, the EA's suggestions as to differently worded conditions to secure offsetting mitigation would not, in our view, accord with the Framework and PPG[17]. Given the assessed impact, a condition requiring a compensatory scheme to be agreed would fail the tests of necessity, relevance to planning and reasonableness as set out in the Framework and PPG. A condition as set out in one of the EA's suggested alternatives, specifying the payment of money, would not be an appropriate form of condition. Consequently, we have included neither of the EA's alternative conditions in the DML [D5-018; Appx 4].

Ornithology

4.106 This section should be read in conjunction with the discussion that follows in Section 5 later in this report regarding European sites and HRA. It considers the offshore, intertidal and onshore ornithological implications of the Project.

[17] Framework para 206 and PPG 'Use of Conditions', para 005.

4.107 In addition to the tests described earlier in EN-1, EN-3 sets out how offshore wind farms have potential to impact on birds:

- collision with rotating turbine blades;
- direct habitat loss;
- disturbance from construction activities and that associated with decommissioning;
- displacement during the operational phase, resulting in a loss of foraging/roosting areas;
- impact on bird flight lines (2.6.101);
- disturbance from construction/decommissioning, displacement and habitat loss are potential impacts for intertidal areas between high and low tides (2.6.80-81).

4.108 EN-3 also records that the scope and methods required for ornithological surveys should be discussed with the relevant statutory adviser. Assessment of collision risk modelling (CRM) for certain bird species may be appropriate. Where this is carried out the decision-maker will need to be satisfied that it has been conducted to a satisfactory standard having regard to the advice of the relevant statutory adviser (2.6.102 - 2.6.104). NE and JNCC have worked closely with the Applicant since 2010 to provide advice and guidance and they have also worked with the EA and MMO to provide coordinated advice [RR-063].

4.109 The ornithological implications of the Project are set out in detail in ES Chapters 13 (offshore) [AD-080] and 14 (intertidal) [AD-081], ES Annex B.7 A-F [AD170 - AD-175] and the Applicant's Habitats Regulations Assessment Report, Charts and Annexes. Assessment has included construction, operational and decommissioning phases and cumulative impact with existing and in-planning wind farms has been considered [AD-052 - AD-054].

Offshore ornithology

4.110 The mobility of birds, especially seabirds, can result in a wide distribution of individual species across habitats. The ES considered the distribution and abundance of key species known to occur in or adjacent to the offshore Project site within the regional and wider spatial context of the Irish Sea. The study area for the assessment of offshore ornithology was defined as the Project site plus a 4km buffer area, with a regional study area being the Irish Sea. A wide variety of literature and data sources were used combined with Project-specific boat-based and aerial surveys. [AD-080, 13.4.1 - 13.5.1.2].

4.111 The conclusions in the Applicant's ES in terms of EIA are that with mitigation and monitoring measures in place there would be no significant residual predicted impacts with regards to offshore ornithological sensitive receptors. This is with the exception of Manx Shearwater (*Puffinus puffinus*) during the operational phase (assessed to be of moderate but tolerable significance). Mitigation

was indicated as including a code of conduct for vessel operators to help reduce disturbance of seabirds during transit to the Project site, and the development of a monitoring protocol during both construction and operational phases. Securing this mitigation is discussed below [AD-080, s13.12].

4.112 ES cumulative impact assessment with other proposed or existing wind farms, with mitigation in place, predicts no residual effects with the exception of Manx shearwater displacement during the operational phase. Cumulative displacement is predicted to be moderate but tolerable [AD-080, s13.12].

4.113 In their Relevant Representation NE/JNCC raised concerns relating to offshore ornithological assessment and impact. These included the differing recorded returns from boat-based and aerial surveys for some sensitive receptors: lesser black backed gull (*Larus fuscus graellsii*); herring gull (*Larus argentatus*); Manx shearwater; great black-backed gull (*Larus marinus*); and guillemot (*Uria aalge*). In addition, there were concerns surrounding: the partitioning of birds identified at group level to species; the incomplete nature of the cumulative and in-combination assessment; elements of the Collision Risk Modelling (CRM) used, with lack of collision predictions from Band (2012) model Options 1 and 2[18]; and the assumptions and conclusions drawn within the assessment for SPA birds in the non-breeding season [RR-063, Sections 4 & 5; D1-019].

4.114 Subsequent discussion and clarification between the Applicant and NE took place and further Band modelling work was carried out. Additional evidence from this has been provided, including answers to our first and second sets of written questions, and discussion at the ISH biodiversity session [EV-014]. The main features of the additional works and assessments in relation to offshore ornithology are summarised below.

4.115 Following advice from NE, the Applicant conducted a study of survey precision for boat and aerial surveys. NE now agrees that it is appropriate to base assessment on the aerial survey data as these have been shown to be objectively more precise. It is also content that data identified to group level have been partitioned to the respective species appropriately [D1-019, Expert report, ornithology].

4.116 In terms of EIA, the Applicant updated the collision risk assessment for the regional population of breeding gannet (*Morus bassanus*) and kittiwake (*Rissa Tridactyla*) and the regional population of great black-backed gull outside the breeding season. The regional populations for these species were redefined (as

[18] The 2012 model of predicted collision risk to birds is the most recent of the 'Band' models and is preferred for offshore environments as it makes use of information on the density of seabirds to quantify flight activity at rotor height.

advised by NE). There is now agreement between the Applicant and NE, confirmed at the ISH biodiversity session, that for great black-backed gull and gannet the estimated scale of collision risk from the Project, alone and cumulatively, is such that a conclusion of no LSE on the regional populations is warranted [D4-036; D5-024; D5-039].

4.117 For the regional breeding population of kittiwake, NE and the Applicant agree the estimated collision risk is not significant for the Project alone. Nevertheless, the cumulative impact assessment conclusion is less certain as the increase in background mortality exceeded that indicated as being sustainable by reference to Potential Biological Removal (PBR) studies undertaken at other projects[19]. The PBR is only exceeded when considering collision rates using the Band (2012) Option 1 model and an avoidance rate of 98% [D5-024].

4.118 However, generic flight height data for this species using Band Options 2 and 3, and based on far greater numbers of records than those for the Project alone, are considered by the Applicant to provide a more accurate indication of collision risk for this species; in both Options 2 and 3 the predicted cumulative collision rates are lower than the threshold indicted by PBR. NE accepts that where site data are not robust the Option 2 model is acceptable and is satisfied that the appropriate Band Options have now been used for assessments [D5-024; SCG-018].

4.119 Additionally, tracking studies now suggest the foraging range for this species may be greater than previously thought and this assumption would have led to the definition of a significantly larger breeding population. The predicted collision rate mortality arising from the Project would therefore also represent a significantly smaller proportion of this larger population. Some uncertainty therefore remains as to impact on the kittiwake population in EIA terms. Nevertheless, NE does not suggest that, even if the greater impact based on more precautionary assumptions was to occur, this would be a reason for consent for the Project to be withheld. NE and the Applicant agreed that no further work could be reasonably done to refine this assessment [D5-024; D5-039].

4.120 Additional analysis by the Applicant of collision and displacement risk to Manx shearwater indicates collision risk to be negligible because of the flight height of the birds. The IoMG agrees that any effect on the Calf of Man colony, the closest to the Project site, is not likely to be significant [SCG-025, s9.3].

[19] PBR is becoming a widely used tool for assessing the sustainability of predicted impacts from offshore wind farms. Other projects have included the Triton Knoll offshore wind farm when a PBR study was carried out because of predicted effects on kittiwakes breeding at the Flamborough Head and Bempton Cliffs SPA on the Yorkshire Coast [D1-019].

4.121 Having regard to impact on various qualifying features of designated European sites, NE accepts that the Project would have no LSE on site integrity beyond reasonable scientific doubt. This is considered in more detail in Section 5 of this report on HRA.

Mitigation

4.122 There has been considerable discussion between the Applicant and IPs, particularly the MMO and NE, about ensuring that the details of the works to be undertaken are acceptable. DML(G)c.11 requires the provision and subsequent approval by the MMO, in consultation with NE, of various plans and programmes. This includes a construction and monitoring programme and a construction method statement (to include details of vessels and vessel transit corridors to reduce disturbance of seabirds). Condition 13 requires the approval of the MMO, in consultation with NE, of the details of any surveys or monitoring to be carried out during construction. We consider these conditions to be necessary to secure mitigation in respect of ornithological interests (Appx 4).

Intertidal ornithology

4.123 The offshore cable corridor would make landfall at Middleton Sands to the south of Heysham. It would cross the Morecambe Bay SPA and Ramsar site and the Lune Estuary SSSI [AD-116, Chart 14.2]. The intertidal ornithological assessment within the ES evaluated the importance to waterbirds of the area within a defined potential zone of influence (buffer zone) [AD-116, Chart 14.1]. Site-specific intertidal bird surveys were undertaken to provide data for the EIA with the objective of estimating the spatial distribution and abundance of waterbird species using the study area [AD-081].

4.124 Although open-cut trenching was initially proposed as the primary installation method for the export cables, HDD is now the chosen method for cable burial beneath the saltmarsh section of Middleton Sands. This is secured by r.16 of the recommended DCO and DML(T)c.8(2) (Appx 4). Open-cut trenching seaward of the saltmarsh may be employed and the ES considered this method as the maximum adverse scenario for the whole of the intertidal area [AD-081, s14.7-14.9].

4.125 The ES concludes that without mitigation there would be impacts of moderate or large significance during the construction phase on knot (*Calidris canutus*), grey plover (*Pluvialis squatarola*), dunlin (*Calidris alpina*) and bar-tailed godwit (*Limosa lapponica*). The area of the offshore cable corridor landfall supports internationally and/or nationally important numbers of these species. There would be similar impacts (without mitigation) for shelduck (*Tadorna tadorna*), oystercatcher (*Haemotopus ostralegus*),

curlew (*Numenius arquat*) and redshank (*Tringa toptanus*) [AD-081, s14.10].

4.126 The principal mitigation in respect of over-wintering bird species within the intertidal area is secured by DML(T)c.8. To avoid disturbance and temporary displacement, this prevents construction and installation activities between 1 October and 31 March and during a two-hour period either side of high tide between 1 April and 14 April, as well as securing HDD under the saltmarsh. This latter temporal restriction is to mitigate for the potential continued occurrence of internationally/nationally important numbers of knot and/or bar-tailed godwit. NE is satisfied that that these temporal restrictions would sufficiently reduce disturbance to the SPA/Ramsar non-breeding bird species. Condition 10.2(d) requires a baseline survey of the intertidal area prior to any construction work [D1-019; D1-050; SCG-019; Appx 4].

4.127 Additional controls over the cable installation works are secured by c.8. This controls the nature of the proposed works and requires the approval of an environmental management and monitoring plan (EMMP) by the RPA in consultation with MMO and NE. This is secured by r.16 of the recommended DCO. Both organisations are content with the scope of these conditions and we consider them to be necessary to secure adequate mitigation to offset any LSE.

Onshore ornithology

4.128 The maximum spatial extent of onshore land-take is about 31ha between the sea wall and the proposed substation. Of this, some 3.1ha represents the permanent substation development, 2.9ha being the loss of permanent improved grassland. The maximum duration of temporary land-take for onshore construction activities is 25 months. The ES indicates that the MAS for birds during the construction phase assumes potential disturbance/displacement and the removal of trees and hedging resulting in the loss of potential nesting habitat. The MAS during the operational phase assumes noise and light disturbance from the substation [AD-091, Table 24.9].

4.129 The ES considers the substation site to be sub-optimal for nesting birds and is unlikely to provide a rich foraging ground for wintering birds; given the availability of other suitable habitat in the vicinity, loss of this land is unlikely to have an impact on a significant number of birds, with significance only at site level [AD-091, 24.9.2.60/61].

4.130 Although the area is designated as priority coastal floodplain grazing marsh Biodiversity Action Plan (BAP) habitat, its loss would represent 0.6% of this habitat within 2km of the substation. There is likely to be temporary displacement of birds during construction of the substation. The area of highest importance for

breeding birds is Heysham Moss, some 400m to the north of the substation site, and the ES concludes construction noise levels experienced there would be below threshold levels so as not to cause disturbance for nesting birds [AD-091, 24.9.2.61, 24.9.3.11].

4.131 Cable installation (through open-cut trenching) would result in a reversible (temporary) loss of potential nesting habitat with the removal of hedgerows and some displacement of birds is likely as a result of construction noise and activity.

Mitigation

4.132 The ES indicates that mitigation for ornithological interests would comprise the erection of bird boxes, reinstatement of fields and hedgerows within the cable corridor, the adoption of a Construction Noise Management Plan (CNMP) to minimise noise generation and reduce potential for disturbance, and screen planting around the substation to provide habitat during construction and additional nesting habitat on completion [AD-091, 24.9.2.68-78].

4.133 In its Relevant Representation NE recommended that the management and recovery of hedgerows and the provision of alternative habitat for birds should be considered further. The SoCG between the Applicant and NE/JNCC indicates that this was being taken further; the detail for the management of recovery of hedgerows was being advanced within a Landscape Management Plan, developed in consultation with the County ecologist [RR-063; SCG-018].

4.134 The recommended DCO does not refer specifically to a Landscape Management Plan. However, r.18 and r.19 would secure the need for an agreement of a landscaping scheme with the RPA prior to the construction of the substation, and the subsequent implementation and maintenance of landscaping. This is to accord with the principles set out in the Code of Construction Practice (CoCP), a document to be certified by the SoS (Appx 4, Article 40).

4.135 The CoCP refers to a reinstatement plan that would form part of an Ecological Mitigation and Monitoring Plan to be prepared as part of a Construction and Environmental Management Plan (CEMP). A CEMP, to be agreed by the RPA in consultation with NE, is required by r.28 (Appx 4).

4.136 A CNMP would need to be agreed with the RPA (r.34), with control of noise during the operational phase being secured by r.35 and control of light emissions by r.37. Requirement 40 indicates that on cessation of the commercial operation of the substation a scheme for the removal of the substation and reinstatement of the

land would need to be approved by the RPA in consultation with NE (Appx 4).

4.137 The ES concludes that with mitigation there would be no significant residual impact on birds through onshore habitat removal and disturbance at either construction or operational stages. Given the projected life of the substation of possibly 50 years, any significance of residual impact at the decommissioning stage would need to be assessed prior to decommissioning [AD-091, Table 24.15].

4.138 NE has not expressed any concerns regarding the assessment of significance of impact on birds as a result of the onshore elements of the Project. However, the PPAA, whilst acknowledging the impact of the substation would not be significant for populations of ground nesting or wintering birds regionally or nationally, remain concerned as to impact at the site and local level. This relates to the adjoining locally-designated Biological Heritage Site (BHS) and nature reserve to the north [D5-042].

4.139 The PPAA consider that in the absence of surveys within the zone of influence of the substation, it has not been demonstrated that that there would be no loss of biodiversity of the BHS/nature reserve. There is concern that:

- the cumulative impact of large-scale development in the area, (which would include the Middleton substation and the Heysham South Wind Farm), would have the effect of 'hemming in' the BHS, affecting bird flight lines, a concern echoed by The Wildlife Trust for Lancashire, Manchester and North Merseyside (LWT);
- constructional and operational noise impacts have not been specifically considered in relation to the BHS;
- there has been no assessment of how much land is likely to be sterilised for ground-nesting and wintering birds;
- whilst landscaping/screening around the substation would create a woodland edge, this would not provide appropriate compensation for open-habitat birds as they would not feed in these areas [D1-008; D5-042].

4.140 The PPAA consider that the Applicant's proposed mitigation may not be adequate and deliverable as their biodiversity enhancements would not be like-for-like. There is, however, no suggestion that the scheme should be rejected on the basis of possible impact in this regard [D5-042].

4.141 The substation site does not overlap with the BHS and there is no potential for direct impacts on it and its biodiversity. The Applicant acknowledges that there is potential for indirect disturbance/displacement of birds within the BHS during construction, though there is considerable extensive alternative

habitat of some 400ha of other open land within the area that could be used during this period [D5-025].

4.142 Furthermore, the areas closest to the substation are considered to be sub-optimal (a short sward subject to either grazing or regular hay cut). The landscaping that would be secured by recommended DCO r.18 is likely to be an integrated plan taking account of both landscape and ecological issues. The Applicant indicates that, as well as screen planting, additional scrub and grazing marsh areas could be created, with some 10ha of the site associated with the substation being available for landscape works. The scheme would require the agreement of the RPA which would therefore be able to exercise control over its design and implementation [D5-025; SCG-012, Q16.7].

4.143 The PPAA consider the rigour of assessment by the Applicant in terms of impact on the BHS has not been sufficient. However, the Applicant's approach to wintering bird surveys was agreed with NE and its assessment was supplemented by findings of additional surveys conducted earlier for the Heysham South Wind Farm site in 2010. It is apparent that the level of assessment and survey work was far greater than when planning permission was being considered for the adjacent Middleton substation site when it appears no bird surveys were undertaken [D-025]. Whilst we note the Applicant's reference to this latter point, we have placed more weight on the survey work carried out in respect of the present Project and consider it to have been adequate.

4.144 Nor, given the general topography and the presence of existing development in the immediate area, are we convinced that, once operational, the additional presence of the unmanned substation would be likely either to prevent birds using the BHS or to significantly alter the behaviour of those making use of it.

4.145 Our view is therefore that, subject to the mitigation discussed (which is primarily for landscape purposes), the Applicant's assessment of no likely significant residual impact for birds is more consistent with the evidence. Further, and as a consequence of the above, we do not consider it likely that there would be any significant constraints arising from the substation development on the general biodiversity value of the BHS. Accordingly, there would be no conflict with EN-1 (5.3.7), which requires appropriate compensation where *significant* harm to nature conservation interests is identified [D5-025; EV-015].

Conclusion on ornithology

4.146 Our overall conclusion on the Project's likely impact on ornithological interests, given the mitigation that would be secured through the requirements of the DCO and conditions of the DMLs, is that there are no matters outstanding that would argue against the DCO being made.

Terrestrial ecology

Belted Beauty Moth

4.147 EN-1 (5.3.4) requires an applicant to show how a project has taken advantage of opportunities to conserve and enhance biodiversity (and geological conservation interests). EN-3 (2.6.85) requires the decision-maker to be satisfied that cable installation and decommissioning has been designed sensitively taking into account intertidal habitat. Paragraph 2.6.88 of EN-3 acknowledges that effects on intertidal habitat cannot be avoided entirely and that landfall and cable installation should be designed appropriately to minimise effects on this habitat, taking into account other constraints.

4.148 A significant number of the Relevant Representations raised concerns about the potential impact on the Belted Beauty Moth (*Lycia zonaria*[20]) of cable installation under the saltmarsh at Middleton Sands. These included those from the Royal Society for the Protection of Birds, individuals, and Butterfly Conservation (BC), a registered charity dedicated to the conservation of moths and butterflies. The Lancashire Moth Group (LMG), an informal group recording the moths of Lancashire, also took an active role in the Examination and participated in the ISH biodiversity session alongside BC. The British Entomological and Natural History Society also submitted a Relevant Representation but subsequently confirmed that the position of BC/LMG, as set out in the SoCG with the Applicant, reflected its position. LWT also supported BC's position [RR-021; RR-032; RR-035; RR-050; SCG-010; EV-013].

4.149 The Belted Beauty Moth is a UK BAP priority species listed in Section 41 of the NERC Act 2006. The population of this moth at Middleton Sands, between Sunderland Point and Potts Corner, is considered to be the last healthy and viable population of this species in England and Wales. Considerable annual fluctuations occur in the population; species counts have varied since 2002 from a peak of nearly 1,700 in 2010 to 18 in 2013 [D1-005; SCG-010; EV-013].

4.150 In order to minimise habitat disturbance, HDD is proposed for cable installation, involving drilling under the saltmarsh. Both BC and LMG have suggested that the saltmarsh should be avoided and an alternative route for cable landfall provided. The ES sets out the process for the selection of the chosen route. The Applicant is satisfied that the selected route is optimal and that the approach of using HDD would provide a high level of environmental protection. Having regard to EN-3 (2.6.81), in respect of the installation of cable routes in the intertidal area we

[20] The English and Welsh species being *Lycia zonaria brittanica.*

consider the selection process has been thorough [AD-105; SCG-10].

4.151 An initial HDD feasibility report concluded that it would be possible to install the export cables at landfall to a depth of between 6-8m. This conclusion was confirmed by a subsequent feasibility review. This has not been questioned by NE, the MMO, BC or LMG and we have no reason for believing this to be an unreasonable conclusion. No permanent disturbance effect is anticipated from matters such as heat, vibration or electrical or magnetic fields because of the burial depth of cabling, with any potential disturbance confined to the cable installation phase. Drilling would be likely to proceed from a compound landward of present sea defences. A potential risk during installation would arise from the possibility of the breakout of drilling fluid[21] at the surface of the saltmarsh. This could result in smothering of moths at all life stages, disturbance and trampling connected with containment of any breakout, and localised areas of compaction and subsidence [D2-009; D4-003; D4-004; SCG-011; EV-013].

4.152 The total area of temporary disturbance (using a worst case scenario for areas of Bentonite breakout, containment equipment and associated habitat disturbance) would be in the region of some 6,200m^2. This represents about 1.13% of the extent of the saltmarsh habitat supporting the Belted Beauty Moth (estimated to be some 550,000m^2). The risk of such a breakout is suggested to be about 2% on the upper saltmarsh, rising to 5% in the lower saltmarsh. With the nature of the physical impacts predicted on habitat, should breakout occur, recovery of the saltmarsh is anticipated to be relatively rapid. With the risk of any breakout being more likely to occur closer to the seaward edge of the saltmarsh, access along the entire length of the HDD corridor would probably not be required and the area likely to be affected by trampling would therefore be smaller than the worst case scenario. If an even distribution of the moth across the saltmarsh area is assumed, the level of potential impact would be likely to be less than 0.5% of its population [D4-004; D5-020].

4.153 Mitigation would be secured by r.16 of the recommended DCO and DML(T)c.8. There has been considerable discussion of this requirement and condition between interested parties and we reviewed them at an ISH [EV-013]. The requirement and condition specify that cable installation under a defined area of the saltmarsh shall only be by means of HDD, with entry/exit points for drilling beyond this area, and with strict specification of what could take place within it. Work cannot commence until an Environmental Management and Monitoring Plan (EMMP) has been approved by the RPA, in consultation with NE and the MMO, and

[21] An inert substance comprising a mix of Bentonite (a clay) and water.

this should include detailed specifications of the means of HDD (Appx 4).

4.154 The EMMP also would require surveys to establish the pre-construction baseline condition of the saltmarsh and the distribution of the Belted Beauty Moth. It is anticipated that any pre-construction surveys would involve the translocation of any moths found within the cable corridor to other areas of saltmarsh beyond. A monitoring programme is required for five years post-installation to assess the recovery of the saltmarsh, the distribution of the moth and, if applicable, any receptor site to which it has been trans-located. NE agrees that finalising of proposed mitigation can be deferred to the EMMP as there would be more detailed information relating to the timing and risk of Bentonite breakout at that time [Appx 4; D5-020; SCG-019].

4.155 Requirement 37 of the recommended DCO requires the agreement by the RPA, in consultation with NE, of a scheme for the management and mitigation of light emissions during construction works. This would assist in mitigating any disruption to normal breeding patterns of the Belted Beauty Moth resulting from attraction of the male moth to artificial lighting [Appx 4; RR-035].

4.156 BC/LMG suggest that if HDD is to take place this should be between 1 August and 28 February as any drilling fluid breakout would then impact on the most robust life cycle stage of the moth (when it is in pupal stage) [D3-008; D5-039]. However, a closed period for working of October to March (inclusive), and no working two hours either side of high tide between 1 and 14 April, has been agreed between the Applicant and NE. This is to mitigate impacts on over-wintering bird species that are features of the Morecambe Bay SPA, secured by DML(T)c.8.(1) [D5-039; SCG-011].

4.157 We agree with the Applicant that, given the proposed HDD method of working, mitigation and assessed likely impact, any extension of the period when work could not be undertaken would not be justified to provide additional protection for the Belted Beauty Moth. Further, it would conflict with the mitigation objectives aimed at protecting qualifying features of the SPA [SCG-011].

4.158 It has also been suggested by BC/LMG that any post-construction monitoring should be over a ten-year and not a five-year period, particularly given their belief that there are remaining unknowns as to how the moth colony could be affected [D5-038]. However, we consider that with the suggested mitigation in place, and the assessed likely impact on the moth colony, such an increase would be disproportionate in relation to any beneficial returns that may flow from an extended monitoring period. A five-year post-construction monitoring period is supported by NE. No post-construction monitoring would be required in the event that there

was no drilling fluid breakout (DCO r.16(7)). The requirement and condition as drafted are in our view appropriate. [D5-039].

4.159 The MMO's position is that it is content for appropriate mitigation and monitoring to be agreed between the Applicant and NE. Provisions for monitoring of the saltmarsh and moth are contained also in the DML(T) and therefore fall under the jurisdiction of the MMO. As such, the MMO would wish to ensure future engagement with the local authority and the Applicant to ensure the approach to enforcement of conditions is streamlined and not subject to duplication [D5-044]. We consider that through continued dialogue between the bodies charged with enforcement of conditions adequate control would be exercised.

Conclusion

4.160 Overall, we consider adequate safeguards exist to ensure there would be no likely significant adverse effect on the Belted Beauty Moth colony; the chosen method of cable installation and the DCO and DML requirements and conditions provide significant mitigation to control this.

Other ecological impacts on the intertidal area

4.161 The saltmarsh section of the cable landfall comprises two habitat types listed in Annex 1 of the Habitats Directive (as amended); Salicornia and other annuals colonising mud and sand, and Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*). The area is within the Morecambe Bay SAC. Coastal saltmarsh is classified as a habitat of principal importance under Section 41 of the NERC Act 2006. Section 41(3(a)) requires the SoS to take steps that are reasonably practicable to further the conservation of priority species and habitats [AD-091, 24.6.3.18; D5-039].

4.162 There would be no direct impact on the saltmarsh from the buried export cabling. However, installation, with the risk of Bentonite breakout, and associated containment methods, which might involve trampling, could potentially affect saltmarsh features. Only a very small area of the saltmarsh features of the SAC would be potentially so affected - some 0.033%. The Applicant's HDD feasibility review [D4-003], and r.16 of the recommended DCO, have led NE to conclude that the possibility of an adverse effect on site integrity by affecting saltmarsh plants can be avoided. This is a view we share [D5-039; Appx 4].

4.163 It is likely that open-cut trenching for cable installation would take place through the mud and sand flats to the seaward side of the saltmarsh. In its Relevant Representation NE expressed some reservations about the effect on this particular feature of the Morecambe Bay SAC (and which is consequently a supporting feature of the Morecambe Bay SPA). This was on the basis of recovery times of invertebrates and the cumulative or in-

combination effects with installation and on-going maintenance of the WoDS export cable (which makes landfall approximately 1km to the north). The Applicant produced a clarification note which used a post-construction intertidal survey from the Burbo Bank Wind Farm as evidence of the recovery of a typical intertidal mud and sandflat [RR-063; D1-047].

4.164 NE has agreed in its subsequent representations that this habitat type is typically of low sensitivity and can recover more quickly than more sensitive habitats such as saltmarsh or pure mudflats. Furthermore, the affected area would be very small relative to the size of the SAC and SPA and, given the programme for installation, it is very likely that the whole area would not be impacted at the same time. Whilst some invertebrate mortality is likely to occur, the impacted area would recover both in terms of sediment habitat and associated invertebrate infauna. NE therefore concludes that there is likely to be no significant adverse effect beyond reasonable scientific doubt on site integrity of either the Morecambe Bay SPA or SAC [D1-019; D6-006].

4.165 DML(T)c.10 and c.11 require, respectively, pre-construction surveying and monitoring to establish a baseline environment of the inter-tidal area, and post-construction monitoring, the latter to be conducted for three years. Details of these require the approval of the MMO in consultation with NE. DML(T)c.9(c)(iii) provides for a cable installation plan which should include methods and specifications for reinstatement to open cut trenches. We consider these conditions to be necessary to secure appropriate mitigation for construction activities [PI-016; D6-005, Ref. 2.16].

4.166 The cable corridor also crosses part of the Lune Estuary SSSI but as the cabling would be installed beneath the saltmarsh by means of HDD there would be no likely significant impact on this feature of the SSSI [AD-091, s24.9.2].

Other ecological impacts - inland cable corridor and substation

4.167 Onshore ornithological impacts have been discussed above. The ES indicates that a range of protected species surveys were carried out including those for water vole and otter, bat roost potential and tree assessment, and great crested newt [AD-091 24.6.4.1; AD-215].

4.168 No water voles, otters or great crested newts were recorded within the cable corridor/site for the substation. There would be a loss of some 890m of hedgerow during the construction period and this would result in the reversible (temporary) loss of potential foraging habitat in the cable corridor. With similar suitable bat habitat in the vicinity, the ES considers any impact on bats would not be significant. Lighting associated with night-time working could have an impact on bats. We note that the species of bat

most sensitive to light (Myotis/Plecotus) is, based on local records, uncommon in the area, with a significant impact unlikely. Recommended DCO r.37 provides appropriate mitigation, requiring a scheme for the management and mitigation of artificial lighting to be agreed by the RPA in consultation with NE [AD-091, 24.9.2.47-24.9.2.54; SCG-012; Appx 4].

4.169 Furthermore, r.27 requires all construction work to be undertaken in accordance with the principles of the CoCP. In relation to construction lighting this indicates adherence to guidance produced by the Bat Conservation Trust concerning mitigation of lighting impact [D1-068].

4.170 These works would affect terrestrial habitat within 250m of identified great crested newt ponds. Cable installation, which could last for 18 months spread over a three-year period, could result in temporary loss of habitat and inadvertent killing or injuring of great crested newts. On the basis of survey work, the area of the cable works is considered to be sub-optimal terrestrial habitat for this newt. The ES suggests the works are unlikely to result in an offence under either the Wildlife and Countryside Act 1981 or the Conservation of Habitats and Species Regulations 2010 and no EPS licence under the latter regulations would be likely to be required, a position agreed by NE [AD-091, 24.9.2.33-46].

4.171 However, the Applicant's proposed approach is precautionary and further survey work would be undertaken before construction work commenced. This would be secured through r.28 and 30 of the recommended DCO. Requirement 28 specifies the need for agreement of a CEMP, which in turn needs to cover matters set out in the CoCP. Requirement 30, relating to EPS, requires the carrying out of pre-construction survey work to determine the presence of such species. Should presence be the case, a scheme of protection and mitigation measures needs to be agreed with the RPA in consultation with NE, and an EPS licence may be required [D1-040; Appx 4].

Heysham Moss

4.172 LWT's Relevant Representation outlined concerns regarding the potential for hydrological interactions between the Heysham Moss SSSI and the proposed substation. This concern, regarding the protection of the hydrological status of the Moss, remained in its Written Representation [RR-035; D1-008].

4.173 A detailed Technical Note reviewing the geology, hydrology and hydrogeology of the area was produced by the Applicant and discussed at the ISH (biodiversity session). This indicates that the SSSI is elevated some 3m above the site for the substation and demonstrates that there is no hydraulic connectivity (either groundwater or surface water) between the SSSI and the site; all

drainage ditches leading from the SSSI have been blocked and the orientation of the drainage ditch separating the sites indicates that no surface runoff from the SSSI could enter the substation site or vice versa [D4-005; D5-025].

4.174 It was also noted at this ISH that the geology of the area meant that there was unlikely to be any hydrological connectivity between the groundwater of the SSSI and the substation site. Any dewatering proposed as part of the substation construction would be to remove standing water from excavations. Given the lack of hydraulic connectivity between this site and the SSSI the risk to the latter is considered to be negligible [D4-005; D5-025].

4.175 LWT, having discussed the issue of hydrological isolation with NE, is now satisfied that there is no direct hydrological link between the sites and accepts that development of the substation would have a negligible impact on the SSSI. This conclusion is agreed by the EA [D5-025].

4.176 Notwithstanding this LWT, in response to our second round of written questions, suggests that it would be comforting/precautionary for a baseline to be established and monitored, at the Applicant's expense, in order to demonstrate no impact on the SSSI. Further, LWT considers it would seem sensible for additional hydrological work/modelling to be done in advance of construction to consider the most likely adverse scenarios and to design mitigation accordingly [D4-032; EV-015].

4.177 Given the clear lack of connectivity, and therefore an absence of any likely significant impact, the Applicant's view is that such monitoring is unnecessary and would not be reasonable; a requirement attached to the DCO to require this would not fulfil the tests for the imposition of conditions as set out in the Framework and PPG [EV-015].

4.178 We share the Applicant's view and consequently do not suggest within our recommended DCO a requirement to secure monitoring or additional modelling work.

Overall conclusions for biodiversity and ecology

4.179 Having regard to the ExA's and the SoS's duties in relation to nationally protected species and conservation of biodiversity under the NERC Act 2006, the protected species and habitats identified on and near the onshore and offshore sites, we are satisfied that there are no matters outstanding that would argue against the Order being made.

4.180 We are also satisfied that we have properly exercised the general duty every public authority has with regard to the purpose of conserving biodiversity under the NERC Act. The mitigation to be secured through the recommended DCO including the DMLs would deliver this.

CIVIL AND MILITARY AVIATION AND DEFENCE INTERESTS

4.181 Policy guidance (EN-1, 5.4) notes that energy infrastructure may interfere with air navigational infrastructure such as radar, including the potential to generate false returns when in line of sight of radar surveillance systems.

4.182 The Applicant's ES [AD-087] reflected consultation with the appropriate aviation stakeholders as noted by the Civil Aviation Authority (CAA) [RR-033]. The ES concluded that the pre-mitigation effects of the proposed Project on low flying operations, the Ministry of Defence (MoD) Eskmeals firing range, telecommunications systems and the aviation systems at Blackpool and the Isle of Man Airport (IoMA), would not be significant in EIA terms. Potentially significant effects were identified in relation to MoD interests relating to radar at Warton and to NATS (En Route) plc (NATS) radars at St Annes and Lowther Hill.

4.183 This assessment was not challenged by relevant stakeholders during the consultation on the preparation of the ES by the Applicant. The MoD [D1-036] and NATS [D1-014] registered objections to the proposed wind farm pending agreement on mitigation measures. During the Examination the IoMA and the IoMG, collectively referred to below as the IoM authorities, registered concerns about the impact of the Project on radar services provided by the IoMA. Issues relating to these potential impacts on the Isle of Man were a major consideration during the Examination. As the IoM authorities have requested mitigation on a similar basis to that proposed in relation to MoD and/or NATS interests, we initially discuss the MoD and NATS issues and agreements reached.

Ministry of Defence (MoD)

4.184 The MoD has highlighted the importance of Warton's coastal location adjacent to airspace that makes it "*unmatched in its ability to support a wide range of complex, flexible and state of the art flight test facilities in the UK*" [SCG-021]. It assesses the main risk from the proposed wind farm to be of false radar returns eroding levels of safety. This has not been disputed by the Applicant, with engagement between the Applicant and MoD (and BAe Systems as the operator of the Warton radar) focussing on the provision of adequate mitigation, with various technical solutions under consideration.

4.185 The SoCG records agreement between the Applicant and the MoD that appropriate mitigation would involve the creation of a transponder mandatory zone (TMZ) or, as a fall-back, the provision of in-fill radar. The Applicant's preferred solution of a TMZ emerged following discussions with the MoD and is one that the ES had indicated was not practicable [AD-216, 3.3.1]. It

requires the approval of the CAA, with processes that could not be concluded within the Examination timetable. There were also technical uncertainties about the detailed nature of the proposed fall-back option.

4.186 This raised questions about the feasibility of the proposed solution(s) and we issued a Rule 17 letter [P1-011] to seek clarification and, on a contingency basis, made provision to discuss this issue at the second ISH. The Applicant's response [D4A-011] adequately addressed the issues we raised and we did not discuss the substance of our queries at the ISH. The CAA, in response to questions [D4-019], noted it was unable to comment on the likelihood of an application for the establishment of a TMZ being successful given the processes to be followed, but further noted that there had been previous examples of a TMZ forming part of a package to mitigate wind farm impacts. No evidence has been submitted suggesting there are any overriding reasons why a TMZ application may not be successful.

4.187 Requirement 12 of the recommended DCO precludes the construction of a wind turbine until the SoS, having consulted with the MoD and the operator (BAe Systems), confirms he is satisfied with the proposed mitigation. This has been agreed between the parties. In considering such a Grampian-type requirement we note that the evidence suggests that there are reasonable prospects of more than one satisfactory option being available to mitigate the adverse impacts. We also note that the policy guidance (EN-1, 5.4.18) specifically envisages the use of a Grampian-type condition where it appears there are prospects of a technical solution becoming available within the time limit for implementation of the development. We consider that to be the case with respect to the fall-back option should there be difficulties in pursuing the preferred TMZ option.

Conclusion

4.188 We conclude the mitigation proposed and secured by r.12 in the recommended DCO to be necessary and appropriate.

Other defence interests

4.189 On a separate issue, the ES noted that the MoD maintained no objection in relation to its use of the Eskmeals firing range (Danger Areas D406 and D406B) subject to appropriate liaison arrangements. In response to a written question, the MoD confirmed that it was not aware of any such arrangement, and it was subsequently agreed that the need would be addressed in the appropriate DML [SCG-021]. DML(G)c.11(i) requires the development of a scheme and consultation protocol, and provides appropriate mitigation.

Air Traffic Services

4.190 It had been agreed between the Applicant and NATS early in the Examination that a technical solution which would mitigate adverse impacts had been identified in principle, with this involving "blanking" of the affected radars over the Project area. We again queried the feasibility of this and it appears a well understood approach, acceptable to the Applicant and to NATS [D4A-011]. It had been hoped that an agreement would be concluded before the close of the Examination but this did not happen.

4.191 Requirement 13 in the DCO addresses the need for mitigation measures in similar terms to r.12. The discussion above of Grampian-type conditions is relevant here and we reach a similar conclusion on the necessity for, and reasonableness of, the requirement. We proposed a number of small drafting changes to r.13 at the ISH and also in the ExA draft of the DCO which were designed to improve clarity and a consistency of approach with r.12. The Applicant's response indicated it had consulted NATS [D6-064] and that the proposed amendments to r.13 were acceptable to the relevant parties.

4.192 No direct response was received from NATS. However, at the end of the Examination NATS submitted a representation confirming that it was prepared to withdraw its objection to the proposal, subject to the proposed requirement being included in the DCO [D7-003]. The requirement as cited in that letter was not precisely as included in the ExA draft, differing in one small respect. The draft in the NATS letter states that no development shall commence "*until the Secretary of State in consultation with the Operator confirms in writing that he is satisfied…*". Our proposed redraft included in the recommended DCO (Appx 4) is "*until the Secretary of State, having consulted with the Operator, confirms in writing that he is satisfied…*". Whilst a small change, this was designed to clarify the consultation and approval process, and is also consistent with the wording in r.12 relating to MoD-related mitigation.

Conclusion

4.193 We conclude the mitigation proposed and secured by r.13 in the recommended DCO to be appropriate.

Isle of Man (IoM) Issues

Background

4.194 The IoMG is responsible for air navigation within IoM-controlled airspace (CAS). This is shown in Figure 1 to the east of the Island with the site of the proposed turbines and airway W2D (discussed below) also visible [AD-216, Fig 3.2]. The IoMG thus has the formal responsibility for services to and from the main airport

(Ronaldsway), including issuing relevant licences and approvals. Within the IoMG responsibility rests with its Civil Aviation Administration. Technical advice and support is provided under a commercial contract with CAA International, a commercial subsidiary of the UK's Civil Aviation Authority (CAA). There is an agreement with the CAA that UK air traffic services will take responsibility for aircraft flying above 6,500 feet in transit over the IoM [D5-006].

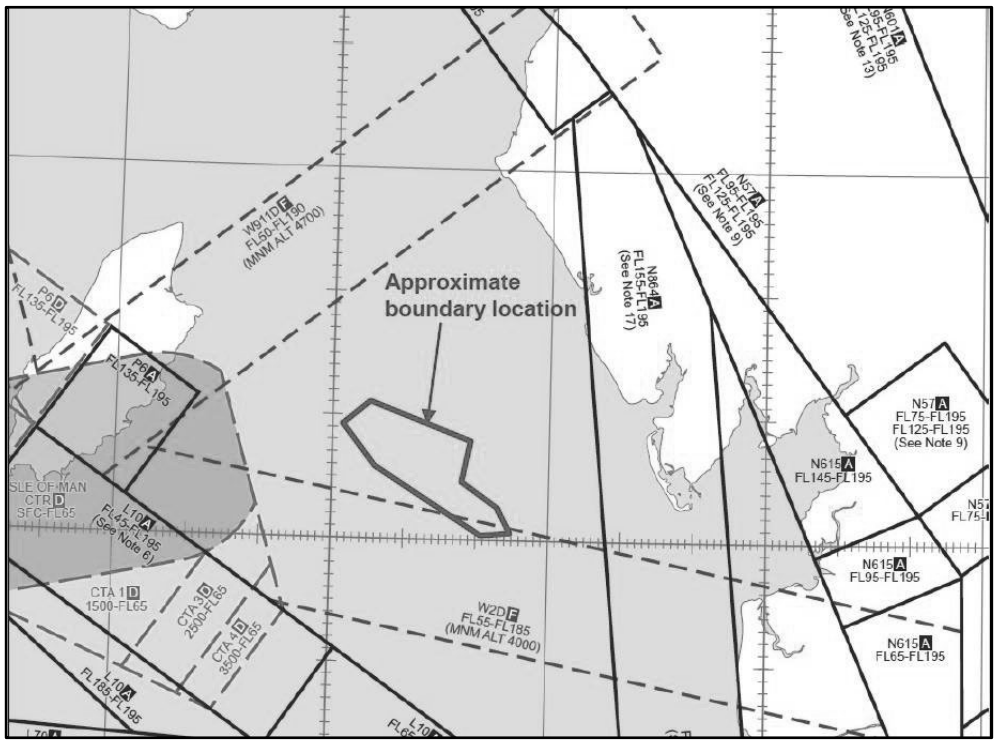

Figure 1: Airspace around Walney [AD-216, Fig 3.2]

4.195 The ES had identified that any adverse impact on the IoMA would not be significant. This conclusion was informed by the response of the IoMA to the Applicant which noted "*This extension is not under any ATS route so the area itself has minimal impact, but the cumulative effect of wind farms in the Irish Sea needs to be considered especially as both the radar and radar displays do already occasionally drop full sectors of returns in severe clutter conditions*" [SCG-025].

4.196 The proposed wind farm is located in Class G airspace, as designated by the UK's CAA in line with international classification criteria. Class G, extending to 19,500 feet, is uncontrolled airspace where there is no requirement for radar service providers to make radar services available, and nor is there any requirement for aircraft to avail themselves of any radar facilities that might be available.

4.197 While aircraft are not required to avail themselves of air traffic services (ATSs), both IoMA and Warton offer ATSs during their

operational hours. For Warton the service is provided when test and evaluation flights can take place and is available Monday to Thursday (07.30 - 19.00) and Friday (07.30 - 17.00). Service is available from Ronaldsway Monday to Saturday (06.00 - 21.00) and Sunday (06.45 - 21.00).

IoM concerns

4.198 During the Examination the IoM authorities raised concerns about the impact of the proposed wind farm on the air traffic services it provides, and is seeking to provide, for aircraft approaching or leaving the IoM. In response to our first written questions they challenged the Applicant's assessment and recorded the view that the impact was significant [D1-035]. The concerns arise in relation to impacts outside the airspace for which the IoM authorities are responsible, relating to the impact on services provided to aircraft approaching IoM airspace while they are flying in proximity to the proposed turbines. The SoCG notes that "*it is accepted that the potential effects do not extend within IoM controlled airspace*" [SCG-025].

4.199 The IoM authorities suggest that the construction of the proposed wind farm might necessitate a reduction in the service they provide to aircraft in the vicinity of the turbines. This is shown in a map provided by the IoMG in response to our second written questions [D4-035, p11]. The IoMA seeks to provide a deconfliction service which advises aircraft in receipt of this service with notification of other aircraft within 5nm. The Applicant has queried the need for this service, the extent of any impact if it is not provided, and whether Warton Airport is better placed to provide such a service [D2-005, Q11.B.8; D4-002, Q11.A.11; SCG-025].

4.200 Concerns raised relate to the impact on both Primary Surveillance Radar (PSR) services provided by the IoMA and on a new Secondary Surveillance Radar (SSR) that was in the process of being commissioned during the Examination. In general terms, PSR relies on radio echoes from aircraft to provide information about the location of targets while SSR provides additional information about the aircraft (for example, height and flight identification). SSR thus depends on a cooperative system of aircraft providing information, and normally complements PSR. There are various forms of PSR and SSR with further information in the ES [AD-087; AD-216].

4.201 Taking each in turn:

- it is agreed between the Applicant and the IoMA that the proposed wind farm would be in line of sight of the airport and, as such, there would be an adverse impact on the PSR, with false returns among the potential impacts. The issue is the extent of the impact. It is also agreed that the proposed

TMZ, if implemented, would render this effect to be of "*limited significance*" (SCG-025, s8, p6);
- it is agreed that the IoMA's current SSR, an analogue-based system, would not be adversely affected [SCG-025, Appx 1];
- during the Examination the IoMA was in the process of commissioning a new digital-based SSR. Trials had indicated a potentially adverse impact in the vicinity of existing wind farms in the Irish Sea, with radar targets tending to jump or stagger [D1-035]. The IoM authorities are concerned that the consequences would be greater in relation to the Walney Extension which would be closer to the IoM. The issues here relate to the probability that this adverse impact is wind farm related, and the extent of the adverse impact.

4.202 In its response to our first written questions the IoMG noted that within 60nm of the Airport, and outside its CAS, it sought to provide a suite of services within the category of Air Traffic Services Outside Controlled Air Space. These include the area of the proposed Walney Extension. While not required to provide such a service, the IoMA does so as it seeks to provide the best service possible to aircraft which request a service [D1-035]. The Applicant has further noted that the operational coverage of the IoMA in the UK Integrated Aeronautical Information Package (UKIAIP) is 40nm. This was also noted by the CAA [D5A-002]. The UKIAIP is a reference document produced by the CAA containing information on facilities, services, rules, regulations and restrictions in UK airspace. The proposed wind farm is located some 25nm from the IoMA [AD-087, Table 20.10].

Cumulative impact

4.203 The IoM authorities note that their concerns increase if further wind turbines were to be constructed in the North East Potential Development Area (NEPDA). We note the concern. In view of the absence of specific proposals for the development of the NEPDA we have not been able to examine this issue in detail. The NEPDA is discussed more fully in the subsection on shipping below, with a figure showing the location of the NEPDA.

Analysis

Nature of impact

4.204 Little evidence was provided to support the IoM authorities' concerns as set out in their representations, and the SoCG between the Applicant and the IoMG was slow in coming forward. To further our consideration we arranged an ISH on the IoM to examine the nature and extent of impact of the proposed turbines and the need for, and form of, mitigation should this appear necessary. This was not straightforward, with strongly held views by the IoM authorities but with little objective evidence provided in support. A SoCG [SCG-025] arrived a few days before the hearing

and provided an assessment of the issues of agreement and disagreement at that time.

4.205 In considering the IoM's new SSR we note that trials of the new system had identified problems in the area of the existing wind farms in the Irish Sea, which the IoM authorities suspected were due to the turbines, whilst acknowledging the uncertainty [SCG-025, 8.3]. The Applicant has acknowledged the possibility of such an impact [SCG-025, 8.3], noting it is not uncharacteristic of the type of SSR being commissioned and has queried why the IoMA has purchased a facility with this known characteristic.

4.206 That notwithstanding, we consider it prudent for the purpose of the Examination to assume that the impact identified in trials is due to the existence of wind turbines, and that an adverse impact can be expected on both the PSR and the planned SSR. Any adverse impact on the planned SSR would represent a reduction in a planned service improvement rather than a deterioration of historic standards of service, given that the existing SSR is not impacted by the proposed development.

4.207 For the purpose of assessing the impact on Isle of Man services we also consider it prudent to assume that the TMZ will not be approved, and thus not mitigate the expected impacts on the IoMA's PSR.

Significance of impact

4.208 Our main consideration has been with the extent of the impact, and whether it might be considered to be of a significance that would justify mitigation measures, with the potential impact on safety our primary concern. In considering this we are also conscious of the IoM authorities' concerns about the economic consequences should the quality of air services be compromised.

4.209 The Applicant has argued that the impact of the Project would not be significant, highlighting the fact that the relevant airspace in the vicinity of the turbines is uncontrolled airspace, or Class G as designated by the CAA. This means that aircraft flying in the relevant airspace are not obliged to avail themselves of radar services.

4.210 A significant part of the hearing was taken up with seeking evidence that would inform the issue of the significance of the impact. The evidence from the IoM authorities was not always consistent on the issue of significance, referring on more than one occasion to impacts likely to be not significant, as recorded in the Applicant's post-hearing submission [D5-012]. The written evidence from the IoM authorities has been consistent in arguing that the impact is greater than the slight adverse effect identified in the ES and should not be judged insignificant [D1-035; D4-035].

4.211 On the interpretation of significance, the IoM authorities had noted that *"it only takes 2 aircraft to result in a potential conflict*" [D4-035]. This was cited again at the hearing, with the IoM authorities confirming that they would consider any reduction in service provided to be significant [EV-007, 10 mins] as it would carry a risk. Whilst reference to risk is correct, we do not consider this a useful approach to assessing significance, particularly in air space that has been classified as uncontrolled and which reflects a judgement that it is safe to fly without radar.

4.212 While various numbers were cited at the ISH there was a lack of clarity about their interpretation. Despite promising more structured data [EV-007, 40+ min] these have not been forthcoming. The note submitted following the hearing [D5-014] by the IoM authorities is essentially qualitative with little quantitative evidence to support their assessment of a significant adverse impact.

4.213 The hearing did clarify that the IoM authorities' main concerns were with the impact on scheduled flights from Blackpool, which routinely fly into the IoM along the CAA-designated advisory flight route, W2D. This route and its proximity to the wind farm is shown in Figure 1 above and indicates that W2D passes primarily to the south, with the band around the advisory route clipping the southern part of the Project shown in red. There would be a greater overlap with the area in which the IoMA may need to withdraw its deconfliction services [D4-035, P11].

4.214 Separately, following the hearing, the IoMA submitted a schedule of weekday services to the IoMA which records that 14% of flight rotations route via the W2D corridor to the east, or some three return flights per day from Monday to Friday [D5-013]. No information was provided on the proximity of flights to the proposed wind farm other than within the W2D corridor, nor of the numbers availing themselves of (different forms of) ATC services provided by the IoMA and/or Warton.

4.215 The Applicant has observed that much of the traffic using the IoMA arises during times when Warton Airport is providing radar facilities, and thus if the IoMA reduced their services aircraft wishing to access radar services in the vicinity of the wind turbines could do so via Warton. When Warton is not providing services (broadly, evenings and weekends) air traffic is light, with risks further reduced with less military use. We enquired about traffic when Warton is closed and the IoM authorities noted traffic was variable and dependent on demand, with an increasing use of helicopters [D4-035]. Again, no substantiating data were provided.

4.216 In its submission following the ISH the Applicant noted that, on the basis of information provided to it by the IoMA, 13 aircraft movements per week occur during evenings and weekends outside

Warton's opening hours [D5-012, 3.3]. The Applicant subsequently suggested that there is one return helicopter flight per day which crosses the Project area [D5-001, 2.3]. These figures have not been challenged.

4.217 Later in the Examination the IoMA [D5A-003] provided radar-derived snapshots/figures. We sought clarification of the interpretation of these [PI-021], which the IoMA provided [D7-002]. The screenshots demonstrated that aircraft in the vicinity of the Project may be invisible to radar, and therefore no service would be able to be offered, and how busy the airspace approaching the IoM can be in busy periods (the TT races being the example), with one plane located over the current Walney I and II Wind Farm but not visible. We consider this exemplifies but does not add weight to the concerns identified by the IoMA. The airspace is designated as not requiring the provision or receipt of a radar service.

4.218 In responding to the IoMA's evidence the Applicant produced an analysis of one week's flight data from a NATS Report. This suggested that in one week in June 2012 only 2 flights could be seen to have transited within 5nm of the Project, and suggested this number could be expected to reduce further when W2D was disestablished [D6-002, para 4.7]. The disestablishment of W2D is discussed further below.

4.219 Given the gap between the parties on the issue of significance of impact, and the lack of evidence from the IoM authorities, we sought advice from the CAA [PI-017]. We included in the request our provisional view that, on the basis of the evidence provided thus far in the Examination:

- there was no significant evidence to support the IoM's view that the construction of the proposed wind farm would have a significant adverse impact on the IoMA radar;
- there were no grounds for believing that the proposed development would compromise the delivery of safe and efficient services to the IoM.

4.220 The CAA declined to offer a judgement recognising this as the responsibility of the IoMA, but did note that if the IoMA were to seek technical advice the CAA would advise them to support any objection by robust evidence [D5A-002].

4.221 The CAA also offered the following observations:

- the IoMA provides approach services as specified in the UKIAIP with a designated coverage of 40nm and 10,000 feet;
- that changes in airspace designation would be likely to lead to the removal of the W2D airway by the end of 2014.

Disestablishment of W2D airway

4.222 In April 2014 the CAA published *Replacement of Class F Airspace in UK Flight Information Regions*. Class F Airspace designates advisory routes and, in line with international agreements, is being replaced mainly by designating the relevant airspace as Class E where the provision of an ATS will be required. The W2D airway is currently Class F airspace.

4.223 Exceptionally the document proposes that advisory airways with very low utilisation should be disestablished. It is proposed to disestablish the advisory W2D airway (Figure 1 above), with the airspace reverting to Class G (uncontrolled) rather than to Class E as is proposed for most advisory routes. The CAA proposals followed an earlier consultation (*Consultation on the Replacement of Class F Airspace in UK Flight Information Regions*, April 2013).

4.224 The CAA documents are relatively technical and we sought clarification and confirmation, via a Rule 17 letter, on some tentative conclusions we had reached [PI-021]. The CAA response [D7-001] noted:

- it is reasonable to assume that W2D is likely to be disestablished by the end of 2014;
- the ExA's assumption that this reflects a recognition of the "*exceptionally low utilisation*" of the airway is reasonable;
- while there is no necessary reason for flight paths to change, the replacement of the W2D airway with Class G airspace would offer airspace users more flexibility;
- it would be reasonable to assume that disestablishment of W2D would give greater flexibility to aircraft and ATC providers to route traffic a little further to the south of W2D, mitigating such adverse or potential consequences as might arise;
- that aircraft would be able to fly in the relevant airspace without receiving an ATC service.

4.225 The Applicant's response [D6-002-3] to our questions, and on the issue of disestablishment more widely, noted:

- that the CAA's consultation document had recorded that informal feedback from Leeds Bradford, Blackpool and IoMA had indicated that "*removal of W2D would not have significant impacts on IoM operations*";
- the IoMA had not responded to the CAA's consultation, and nor had Citywing, the operator of the scheduled flights which use the corridor. This the Applicant took to mean that the parties were content with disestablishment of W2D;
- following the disestablishment of W2D, aircraft from Blackpool to IoMA can reasonably be expected to track further to the south, a more direct route, and will not be affected by any adverse radar impact that may arise;

- in consequence, those assessments in the ES of "slight adverse" [SCG-025, Appx 1] should be replaced by "neutral".

4.226 No substantive comments on the questions we raised or in response to the Applicant's interpretation were received from the IoM authorities other than noting that:

"*The consultation document does state that following withdrawal of W2D:*

> *'Every aircraft transiting the area would still require an ATS from either NATS, Blackpool, IoM, or Warton and will still need to be deconflicted in some way from other traffic in the area'."* [D6-007]

4.227 We note the extract highlighted by the IoM authorities was not a conclusion of the CAA. It was a report by CAA of informal feedback from affected airport(s), including IoMA. It is introduced in the consultation as "*Informal feedback from these 3 airports has indicated:*" and is one of a list of bullet points. The next paragraph of the consultation document makes clear CAA's intention to disestablish with no reference to the need for radar services (*Consultation on the Replacement of Class F Airspace in UK Flight Information Regions*, April 2013, paras 2.7.3-4).

4.228 In response to our questions, reported above, CAA confirmed aircraft would be able to fly in the area without receiving an ATC service.

Assessment and conclusions

4.229 The main factors we have taken account of in assessing the evidence and reaching an overall judgement are set out below.

4.230 In relation to the IoM authorities' concerns we have taken particular account of:

- the importance of ensuring the quality of air transport links is not compromised;
- the views of the IoM authorities given their status and responsibilities for the management of air services;
- the adverse impacts on PSR services within the vicinity of the proposed wind farm, and our view that it is prudent to assume that the new SSR too would be adversely affected given the evidence from the trials and information on characteristics of the chosen SSR system;
- our prudential judgement for the purpose of this assessment that a TMZ will not be approved and thus will provide no mitigation of adverse consequences for the PSR.

4.231 In assessing the significance of any adverse impact we have taken particular account of:

- the location of the proposed Walney Extension within uncontrolled air space in which it is judged safe to fly without the need for radar services to be provided or used by aircraft;
- the limited amount of traffic using W2D, the advisory flight path of most concern to the IoM authorities;
- the plans to disestablish this advisory flight path reflecting the "*exceptionally low utilisation*";
- the greater flexibility available to aircraft to route away from the proposed Walney Extension following disestablishment should adverse impacts on radar services arise and be a concern;
- the incentive, following disestablishment, to fly further south and away from Walney from the current advisory flight path for Blackpool to Isle of Man flights, the main service of concern to the IoM authorities;
- the availability of radar services from Warton to aircraft wishing to access such services during the times it is open;
- the absence of any substantive evidence in support of the IoM authorities' concerns;
- the narrow interpretation the IoM authorities have adopted in relation to assessing significance of impact.

4.232 In overall summary we find no substantive evidence to support the concerns of the IoM authorities that the proposed wind farm would have a significant adverse impact on the provision of radar services to aircraft approaching the IoM. Indeed, the main evidence points firmly in support of there being no significant adverse impact. The proposed wind turbines would be located in airspace where there is no general safety requirement to provide or utilise radar services. If there is an impact then increased flexibility of routeing following disestablishment of W2D provides scope for aircraft operators to avail themselves of IoMA radar services should they wish.

4.233 We conclude that the proposed Walney Extension in isolation will not compromise the provision of safe or efficient air services to the IoM.

Mitigation

4.234 In keeping with their stance that the Project would have a significant adverse impact on the radar coverage provided by the IoMA, the IoM authorities have sought to include mitigation proposals within the DCO. Following the ISH the IoMG requested mitigation comparable to that being provided for Warton Aerodrome, with this supported by arguments that the impacts on the IoMA were broadly comparable [D5-048]. Subsequently, the IoMA proposed amendments to the DCO to include the IoMA within r.13 which relates to the proposed mitigation to address NATS' concerns [D6-008]. This was not explained. In a subsequent submission the IoMA reverted to the need for mitigation to be on a comparable basis to that provided at Warton [D7-002].

4.235 The Applicant has noted that the proposed mitigation in r.13 relates to the impacts on NATS' PSR, supported by a commercial agreement between NATS and the Applicant, and would not address the IoMA's concerns about impacts on SSR [D8-001].

4.236 The Applicant has also queried whether the proposed requirement would meet the tests for conditions/requirements set out in the Framework and PPG [D5A-001]. Given our conclusions on impact we share the Applicant's reservations, with little in the way of evidence provided to support the view that a requirement as proposed by the IoM authorities is necessary or reasonable.

4.237 In considering the issues relating to IoM concerns throughout the Examination we have been conscious of the status of the IoM as a Crown Dependency. The IoM authorities have requested a requirement akin to r.12 and r.13; this would require the SoS to consult with the IoMA on the adequacy of mitigation measures that had been put in place. On planning grounds, and following our analysis above, we can see no case for such a requirement. Should the SoS disagree, then an additional requirement based on r.12 would appear to meet the concerns of the IoM authorities.

COASTAL PROCESSES, SEDIMENT, WATER QUALITY, WASTE AND DEBRIS IMPACTS

4.238 EN-3 (2.6.189) indicates that the construction, operation and decommissioning of offshore energy infrastructure can affect various elements of the offshore physical environment. This includes water quality - disturbance of seabed sediments or release of contaminants can result in indirect effects on habitats, biodiversity and fish stocks thus affecting the fishing industry. The presence of turbines can cause indirect effects on matters such as marine ecology and biodiversity, and also marine archaeology, considered in separate subsections of this report.

4.239 Scour effects - localised seabed erosion - could affect navigation channels and marine archaeology, whilst sediment transport could also impact on navigation channels for marine vessels. The release of suspended solids during construction and decommissioning can cause indirect effects on marine ecology and diversity (2.6.189). Decision-makers should "*be satisfied that the methods of construction, including use of materials, are such as to reasonably minimise the potential for impact on the physical environment*" (2.6.196). Consideration of mitigation is expected, including cable burial and the use of scour protection techniques around offshore structures (2.6.197).

4.240 Metocean[22], coastal processes, geology and geomorphology are considered in Chapter 7 and Annex B2 of the Applicant's ES [AD-

[22] Meteorology and Oceanography (generically used to refer to various aspects of the hydrodynamic and sedimentary marine environment).

074; AD-151]. Sediment and water quality are covered in ES Chapter 8 [AD-075]. The potential environmental effects arising from the Project's construction are listed in Table 7.5 of ES Chapter 7. The type and magnitude of impacts and the significance of likely environmental effects on differing receptors are summarised in Table 7.12.

4.241 An evidence-based approach to assessment was adopted in the ES, with a proposed methodology agreed by Cefas [AD-074, 7.5.5]. This used both historic and newly-collected field data and built upon previous studies for the operational Walney I and II, Ormonde, Barrow and WoDS offshore wind farms. Assessment for construction, operation and maintenance, and for decommissioning has been carried out. The cumulative impact of the Project has been assessed together with other offshore wind farms, offshore oil and gas platforms, active dredging and disposal sites and planned offshore cable installations [AD-074, Table 7.10].

4.242 Construction activities act as a short-term source of potential changes in suspended sediment concentrations (SSC). The likely worst case scenario for sediment release within the assessment undertaken arose from activities associated with gravity-based foundations (GBF) for the turbines. Displacement and accumulation of the greatest total sediment volume also arises with this foundation type. Following consultation with stakeholders, primarily the MMO, the Applicant withdrew this option from the DCO prior to the start of the Examination in order to mitigate potential impacts on sediment and water quality, benthos and fish ecology [CR-008].

4.243 Other construction effects assessed in the ES relate to seabed indentations (from construction vessels) and increases in SSC with seabed level changes associated with inter-array and export cable burial. These are assessed as of minor magnitude with no significance of effect [AD-074, Table 7.12].

4.244 Where the export cable makes landfall it crosses the intertidal zone. HDD is to be employed to take the cabling under the saltmarsh within the Morecambe Bay SAC, but open cut trenching with cable burial beneath the seabed is likely seaward of this. As discussed in Section 5 of this report on HRA, clarification by the Applicant provides further evidence that cable installation and operation, including rock armouring, would not result in a likely significant effect on the features of the SAC. In terms of impact on geomorphology, the ES ascribes a minor magnitude of impact with no significance of effect [D1-047; AD-074, Table 7.12].

4.245 The ES predicts minor impact from the operational phase of the Project in terms of scour effects, and negligible impact from changes to wave and current regimes because of the presence of the turbines and offshore substations, or disturbance to coastal

geomorphology at the cable landfall site; there would be no significance of effect [AD-074, Table 7.12]. Conditions 11 and 9 of the respective DMLs require the submission to, and approval by, the MMO (following consultation with NE) of a scour protection plan. DML(G)c.4 specifies the maximum volumes of scour protection for the turbines and inter-array cabling whilst DML(T)c.2 does the same for the offshore substations and export cabling (Appx 4).

4.246 The ES assesses a similar absence of significant effect during the decommissioning phase. Given this predicted level of impact, no mitigation in regard to metocean processes is proposed for any stage of the Project. However, both the recommended DCO and the two DMLs require the submission to, and approval by, the SoS (following consultation with NE, the MMO and the RPA) of a decommissioning plan (DCOr.14; DML(G)c.15); DML(T)c.12).

4.247 The Project would have the potential to result in deterioration of water and sediment quality because of the re-suspension of sediments from foundation and cable laying, accidental spillages during construction and maintenance, scour effects at the turbine structures, and disturbance of radioactive particles and debris during construction [AD-075, Table 8.11].

4.248 During consultation on the Project, the PPAA requested that appropriate consideration be given to the potential for the Project to disturb radioactive particles or debris on the seabed during construction. Radioactive particles arise in seabed sediments from current and historic discharges from nuclear facilities, including the Sellafield Nuclear Fuel Production and Processing Plant. This request was reiterated in the PPAA's LIR, which indicated the concern as being the possible contamination of the coastline from disturbed radioactive sediments. The PPAA wished to seek clarification of the methodology and assumptions underpinning the Applicant's approach before accepting a conclusion that there would be no impact to human health [AD-075, 8.5.10; LIR-001].

4.249 Assessment of the potential for disturbance of radioactive particles and debris within the ES was based on a review of existing data and literature, including a radiological assessment of sediment undertaken for the existing Walney I and II Wind Farm. This suggested that further monitoring of sediments for radioactive particles was considered necessary only in the case of GBF. The EA has agreed in the SoCG with the Applicant that it is highly unlikely that any disturbance of sediments would provide a noticeable increase in the radioactive exposure of the public as a result of the Project's construction. On the basis that GBF are not to be used, and the EA's views, the PPAA are content as to the ES assessment of risk [SCG-012, Ref 15; SCG-015, Refs 11.1, 11.2].

4.250 A full assessment would be concluded as part of the decommissioning plan, which would need to be agreed prior to

construction with the relevant regulatory authority (Department for Energy and Climate Change (DECC)) which would consult with local planning authorities as appropriate. Requirement 14, replicated in c.15 and c.12 of the respective DMLs, secures the provision and approval of an offshore decommissioning programme (Appx 4).

4.251 For both construction and operational phases, magnitude of impact relating to water quality and sediment is assessed within the ES as either being minor or absent, with no significance of effect. For the decommissioning phase the magnitude of impact from possible re-suspension of sediments and contaminants is assessed as minor with a neutral significance of effect. Decommissioning of the Project would be consented under the regime in place at that time and would be agreed with the relevant regulatory authority [AD-075, Table 8.11]. We have seen no evidence to contradict these overall assessments.

4.252 Given the assessment of impact and significance of effect, the ES indicates there are no potential mitigation measures proposed. However, conditions of the two DMLs would provide control that would assist in minimising any possible Project impacts.

4.253 These include identical c.8 and c.6 of the two DMLs relating to, amongst other matters, control over the use of chemicals, their handling and storage, protective coatings and paints and disposal of materials. In part, this condition is tied to DML(G)c.11 and DML(T)c.9 which require the approval of the MMO of various programmes and plans. These include a construction and monitoring programme, a construction method statement and a project environmental management and monitoring plan, the latter to include a marine pollution contingency plan.

Conclusion

4.254 On the above basis, we consider that there are no matters outstanding in relation to these issues that would argue against the DCO being made.

COMMERCIAL FISHING

4.255 The ES (Chapter 31) records that commercial fishing activity within the site is relatively low, being both less frequent and less intense than in many other areas around the UK. The socio-economic assessment notes that in the North West as a whole fishing accounts for some 250 jobs, or 0.01% of total employment [AD-098, 31.9.2.33]. The impact of construction, operation and decommissioning has been assessed as slight adverse for most receptors with little mitigation proposed, save for restrictions on piling activity to mitigate the impacts on cod and herring. This is secured by DML(G)c.10.

4.256 EN-3 notes the need for liaison arrangements between the renewables and fishing industries to facilitate successful co-existence (2.6.133-4).

4.257 During construction there is potential for the temporary loss of access to fishing grounds in relation to potting for lobster, crab and whelks, and also in relation to drift netting for salmon. The impact is assessed as moderate adverse. The DCO includes no specific mitigation proposals but the Applicant has established on-going engagement with relevant interests. An *Agreement of Coexistence (ACE) with Commercial Fishermen* [SCG-020, Annex 1] has been signed highlighting principles of dialogue throughout the Project, an agreement to minimise impacts (by each party) and provision for compensation for loss of earnings.

4.258 SoCGs with the National Federation of Fishermen's Organisations (NFFO) and the North-West Inshore Fisheries and Conservation Authority (NW-IFC) [SCG-022; SCG-020] endorse these arrangements and note that a requirement to appoint a fisheries liaison officer, secured by DML(G)c.11(1)(d)(v) and DML(T)c.9(1)(d)(v), would help ensure effective cooperation. We consider this an appropriate way forward given the scale of the industry, the limited likely impact, and the need for relevant issues to be addressed at the time detailed decisions on time and place of works are being considered.

4.259 The NFFO has registered concerns about the absence of detail of the quantity of cable protection permitted within the DCO. We sought clarification from NFFO [PI-009] but none was forthcoming. We consider that DML(G)c.11.1(c)(iii) and DML(T)c.9(c)(iii) requiring a construction method statement to include cable protection, and subject to MMO approval, to be appropriate and sufficient to address any concerns that may arise.

4.260 The NW-IFC has registered its view that the impact of cable-laying on the cockle beds in Morecambe Bay could be substantial [D1-015; SCG-020]. This would arise if the cable-laying were to impact on the only, or part of the only, commercial stock present at the time works were undertaken. We note that the proposed works would impact on only a small area of the Morecambe Bay cockle beds, and the beds have been closed since 2008 [D4-02].

4.261 The Applicant's view is that the likelihood of the adverse scenario identified by NW-IFC is so low that it does not fall within the scope of a realistic worst case scenario. This is primarily an issue about classification of impacts within the ES. We concur with the Applicant's view and note that the SoCG records no disagreement over liaison arrangements with the relevant interest groups, in line with the ACE discussion above, as a means of mitigation.

4.262 There is a trans-boundary dimension to this issue; fishermen from Belgium have raised concerns about compensation arrangements

and site layout [D1-009; D2-006]. Following discussion with the Applicant, and clarification of compensation arrangements, their concerns remained about site layout and spacing between turbines, including a request that the turbines be located within the 12nm limit [D2-006]. Given that there would be a minimum gap of 737m between turbines (and more if larger turbines are deployed) we sought clarification of these concerns, and a view from the Applicant of the impact of such a restriction on the Project [PI-009]. The Applicant's response highlighted that the impact on capacity would make the Project not viable, and that there was no policy basis for restricting development to within 12nm. No further information was received from Belgian interests.

4.263 We did not probe further on viability but note that the proposed restriction would, even if a viable project remained, have a substantial impact on the output of the Project and we attach little weight to the suggestion of the relevant fishermen.

Conclusion

4.264 Given the limited potential adverse impacts identified we conclude that the agreements reached and the mitigation in the DCO are proportionate and appropriate.

Fisheries monitoring

4.265 Policy advice (EN-3, 2.6.51) notes that consideration should be given to requiring the applicant to monitor and measure the effects of the development, both to inform the accuracy of the original predictions and potentially the scope of future EIAs. This advice is generic rather than fisheries-specific.

4.266 The MMO has requested that provision be included for monitoring of the impact on certain fish. The Applicant has proposed no such monitoring, noting the absence of predicted impact in the ES, and has resisted the MMO's proposals in a series of submissions [D2-011; D4A-016; D5-023]. The MMO has argued that there is sufficient uncertainty in the data presented in the ES to recommend future monitoring [D4-029; D5-044].

4.267 Given the gap between the parties, and following the response to written questions, we included this item on the agenda of an ISH (biodiversity session). We sought clarification of the purpose of the proposed monitoring surveys and probed the issue of the likelihood of getting robust results which would inform the issue of the impact of the Project. The MMO proposes monitoring in relation to Nephrops, the most significant commercial species in the area, and of elasmobranchs, reflecting ecological concerns, particularly the potential impact of EMF, with an initial baseline survey followed by up to three post-construction surveys.

4.268 The Applicant has argued that such monitoring is not appropriate [D2-011; D4A-016; D5-023] noting:

- agreement with the MMO that no adverse impact is predicted in the ES;
- Nephrops are not abundant in the site and thus a significant impact is unlikely;
- the impact of EMF is appropriately mitigated by cable burial;
- conditions requiring such monitoring would not meet the requirements of the six tests for planning conditions, in the Framework and PPG.

4.269 The MMO's views are set out primarily in its representation following the ISH [D5-044]. This does not, however, reflect some of the data issues acknowledged by the MMO in the ISH to which we attach considerable weight given their relevance to the likelihood of research yielding robust conclusions. During the hearing it was confirmed that in two of the surveys of the Walney Extension site (May and September 2011) no Nephrops were caught [D2-011] and that there were data difficulties in relation to a range of the elasmobranchs of concern [EV-014, 45 mins et seq].

4.270 Given their differing views, the Applicant (on a without prejudice basis) and the MMO agreed a form of words for such a condition [D5-023].

Conclusion

4.271 We note that there are practical problems in monitoring fish stocks. Surveys can be expensive, with potential difficulties in measuring an impact and assigning a cause, though the use of control areas can provide some guide. But given natural variability and sampling variability (as evidenced by the absence of Nephrops in some surveys) we have reservations about whether the proposed surveys would yield relatively robust results. We have considered this carefully given that EN-3 endorses requirements to measure and monitor the impact. With no likely significant effect identified in the ES, we do not feel it would be reasonable to require that such monitoring be undertaken in relation to the identified species for this Project, and recommend against the inclusion of such a requirement or condition.

CONSTRUCTION, MAINTENANCE AND DECOMMISSIONING

Construction

4.272 Chapter 4 of the ES provides a description of the Project in terms of its nature, construction, operation and maintenance, and its eventual decommissioning. The nature and scope of the Project has been summarised and set out in Section 2 of this report. Detailed elements of construction, and methodologies to be applied, are referred to in the differing subsections of the report

relating to specific matters which the process of construction could affect or impinge upon [AD-071].

4.273 The DCO application was accompanied by a CoCP [AD-065] setting out a series of measures to be applied throughout construction to mitigate the potential impact of onshore site activities. Works include site preparation, material delivery, waste removal, infrastructure construction and onshore works. The CoCP was updated[23] during the course of the Examination following comments from the PPAA and in the light of our first set of written questions [AD-065; D1-068]. It forms one of the suite of documents to be certified by the SoS (Article 40) as discussed in Section 7 of this report on the DCO.

4.274 An onshore CEMP is to be produced to cover each of the mitigation measures set out in the CoCP. Requirement 27 of the recommended DCO stipulates that all connection works must be undertaken in accordance with the principles set out in the CoCP. Requirement 28 requires the prior submission to and approval by the RPA (in consultation with NE) of a CEMP for each stage of onshore connection works. The CoCP would be enforceable through construction contracts, the DCO requirements and the provisions of the Control of Pollution Act 1974 [AD-065; Appx 4].

4.275 Separate construction traffic management plans dealing with traffic for the onshore components would also require the prior approval of the RPA, in consultation with the highway authority (DCOr.31). This is considered in detail in the subsection of this report dealing with traffic and transport.

4.276 As the CoCP relates only to the Project's onshore elements, separate controls relating to the construction of the offshore components are required. These are secured by conditions within both the DMLs with reference to various programmes, statements, plans, protocols and schemes, all to be implemented following approval by the MMO. DML(G)c.11 requires, amongst other matters, a construction and monitoring programme, a construction method statement and an environmental management and monitoring plan. These all require the approval of various baseline surveys, secured by c.12, whilst construction, monitoring and post-construction monitoring are secured by c.13 and c.14 (Appx 4).

4.277 There are equivalent conditions within the DML(T), with c.9, 10 and 11 respectively controlling construction plans, pre-construction surveying and monitoring, and post-construction monitoring. Additionally, c.8 serves to control cable installation works within the inter-tidal area (Appx 4).

[23] To include reference to measures to keep parties informed about the progress of complaints regarding noise and that the 'good housekeeping' policy for construction areas would also include the introduction of dust avoidance and suppression measures and site screening as appropriate.

4.278 Prior approval by the MMO, in consultation with the Maritime and Coastguard Agency (MCA), of a plan for an active safety management system, which includes an emergency response and co-operation plan, is secured by c.16 and c.13 respectively of the two DMLs (Appx 4).

4.279 There are no outstanding disagreements between any party in respect of the suggested wording, necessity or relevance of any of the requirements and conditions that seek to control the proposed development and mitigate its potential impacts.

Operation and maintenance (O&M)

4.280 The physical characteristics of the Project are summarised in Section 2 above, and will require maintenance throughout the lifetime of the Project. Consent for O&M facilities, including facilities at any future O&M port and those for maintenance helicopters, is not being sought through this DCO process. An overall O&M strategy has not been finalised for the Project. This is to await the choice of an onshore base location and finalisation of the technical specification of the wind farm [AD-071, s4.14].

4.281 An outline O&M 'envelope' has been developed in order to define key parameters against which the environmental effects of the O&M strategy can be assessed. A schedule of maintenance activities, their frequency and method of employment for the offshore components are summarised in ES Table 4.39. This has been updated in discussion with the MMO and a revised schedule of offshore maintenance activities is to be a certified plan under Article 40 of the recommended DCO.

4.282 The onshore substation would not be staffed and it is estimated that only some four vehicles per month carrying personnel for general operation and maintenance purposes would be likely to visit [AD-071, s4.15].

4.283 The extent and scope of maintenance activity that might be undertaken should the Project be consented is discussed more fully in Section 7.

Emergency planning

4.284 The onshore works would be relatively close to the Heysham nuclear power stations. A concern was raised by EDF Energy (Nuclear Generation) that the emergency planning arrangements in the DCO were too narrow in relation to these [AR-004]. We sought clarification and the Applicant's response indicated that, following explanation, EDF was satisfied with the arrangements [D1-040, Q15.1]. Requirement 29 of the recommended DCO stipulates that no stage of connection works shall start until an emergency response plan relating to the construction and operation of that stage has been approved by the RPA after

consultation with the Heysham Power Station Emergency Planning Consultative Committee [Appx 4].

Safety zones

4.285 The DCO application was accompanied by a Safety Zone Statement prepared in accordance with Regulation 6(1)(b)(ii) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 [AD-061][24]. A Safety Zone application would be made to DECC once the final number and precise location of turbines has been determined. The current anticipated need for safety zones at the wind farm site for some or all phases of the development are set out in ES Chapter 16, with safety zone need being supplemented by the detailed Navigational Risk Assessment annexed to the ES [AD-083; AD-177 - 182].

4.286 For the construction phase, 500m safety zones would be established where construction was taking place, with a 50m safety zone around each turbine and/or their foundations when construction works have been completed but prior to the wind farm being commissioned. The need for operational safety zones would ultimately be guided by the final project design and by the approach to the operation and maintenance of the site. The Applicant's Safety Zone Statement [AD-061] assumed a 50m safety zone would be required, on a precautionary basis, around each turbine and offshore substation.

4.287 However, the Applicant and the Royal Yachting Association (RYA) agree that the findings of the Navigational Risk Assessment do not suggest the requirement for an operational safety zone, irrespective of activity or craft size [SCG-04]. The RYA was concerned that the imposition of operational safety zones which, if applied under the provision of the Energy Act 2004, carry with them the threat of a criminal offence for anyone contravening the zone; this would be unreasonable in that a recreational sailor could enter such a zone in error or in an emergency and face the prospects of being pursued for a criminal offence. To avoid this, the Applicant proposes that operational safety zones would be advisory only, marked on navigational charts and notified by Notice to Mariners, but would not carry the threat of criminal action if contravened.

Decommissioning

4.288 The Crown Estate lease is for 50 years, although the ES indicates that the turbines have a design lifetime of 25 years. After 25 years the Project may be 're-powered' depending on the integrity of the offshore structures. Re-powering would likely involve replacing existing turbines and electrical plant with newer, more

[24] Section 95 and Schedule 16 of the Energy Act 2004 referring to the process for applying for safety zones for offshore wind turbines.

efficient versions although this would only be necessary if the original structures/plant were no longer functional [AD-071, s4.17].

4.289 Changes in technology would mean that the re-powered Project would be likely to be significantly different from the current proposal with the need for new consents and new EIA. Whether re-powered or not, the future decommissioning of the Project is therefore likely to be some considerable time off [AD-071, s4.17].

4.290 Project decommissioning is regulated under the Energy Act 2004. Under this legislation the construction of an offshore wind farm cannot commence until a decommissioning plan is submitted to and agreed by DECC. ES Chapter 4 suggests how the different components of the Project, both offshore and onshore, may be dealt with at the decommissioning stage [AD-071, s4.18].

4.291 Requirement 40 of the recommended draft DCO stipulates the need for the submission to and approval by the RPA (in consultation with NE) of a written scheme for the demolition of the onshore substation at the end of its commercial operation. The decommissioning would need to be implemented in accordance with the approved scheme (Appx 4).

4.292 DML(T)c.12 and DML(G)c.15 also provide for the submission of decommissioning programmes for the approval of the SoS for the offshore components of the Project. Prior consultation on such programmes with the MMO, NE and RPA by the relevant undertaker is required by the conditions (Appx 4).

Conclusions

4.293 Overall, subject to our comments made in relation to specific topics elsewhere in this report, we are satisfied that the suite of requirements and conditions within the recommended DCO and the DMLs adequately provide for the necessary control and mitigation of impact of construction, operation and maintenance, and decommissioning of the Project. We therefore consider there to be no impediment to the SoS confirming the Order.

ELECTRIC AND MAGNETIC FIELDS (EMF)

4.294 We have considered the advice in EN-5 (2.10) regarding the technology-specific consideration of EMF which notes (2.10.12):

"Undergrounding of a (power) line would reduce the level of EMF experienced, but high magnetic field levels may still occur immediately above the cable. It is not the Government's policy that power lines should be undergrounded solely for the purpose of reducing exposure to EMF".

4.295 EN-5 makes reference to the International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998 guidelines. Regard

should be paid to compliance with these guidelines in the decision-making process.

4.296 The Applicant provided an EMF Briefing Note as a supporting document with the DCO application [AD-063]. This provides an overview of current knowledge on EMF, and possible impacts on human health relevant to the Project. Impacts of the Project on health are considered in a specific subsection of this report below. The potential impacts of EMF on offshore ecology are considered within ES Chapters 10 (benthic ecology), 11 (fish and shellfish resource) and 12 (marine mammals) [AD-077; AD-078; AD-079]. These are discussed in subsections of this report on these matters, and are also relevant to the consideration of fisheries monitoring, which is considered in the subsection on commercial fishing.

4.297 Onshore 400kV cables would typically be buried between 1 and 2m although deeper burial may be required where services or obstructions need to be crossed. There would be no installation of overhead lines as part of the Project, the various works in Schedule 1, Part 1 of the recommended DCO specifying the undergrounding of cabling [AD-063, s4; Appx 4]. The EMF Briefing Note indicates that the Applicant intends to undertake site-specific assessments of EMF in accordance with Electricity Networks Association recommendations, Government policy and industry best practice. This assessment will only be possible if development consent is granted and when the relevant transmission equipment has been procured [AD-063, s3].

4.298 The Project would be designed to ensure that all electrical components (cabling and substation equipment) are compliant with ICNIRP public exposure guidelines for EMF.

Conclusions

4.299 Overall, our conclusion is that there is no reason to suppose that construction methods and the future assessment of the detailed transmission components of the Project to ensure compliance with established safeguarding standards would not be adequate. This would ensure that impacts are minimised to an acceptable level in accordance with current guidance and best practice and would meet the requirements of NPS EN-5. There are no EMF matters that would argue against the Order being made.

HEALTH

4.300 Few health issues have arisen, with the then Infrastructure Planning Commission's Scoping Opinion not identifying a need for a health impact assessment [SD-001]. In its Relevant Representation Public Health England (PHE) raised a number of issues relating to EMF, radioactive contamination of the seabed, and the geological, hydrological and ground assessment.

Following clarification from the Applicant, PHE confirmed it was content with the Applicant's analysis and plans [D1-071].

4.301 The Applicant advised of an intention to consult PHE in relation to EMF issues after relevant equipment had been procured and we queried whether this should be secured by a requirement. This is not normal practice and PHE responded that it saw no grounds for departing from the normal practice of self-regulation given the Applicant's proposed approach to the relevant works [D4-012]. We see no exceptional circumstances to justify a departure from normal practice, and make no recommendation for a requirement.

4.302 The PPAA also raised issues in relation to the disturbance of radioactive particles, with their concerns subsequently assuaged. This is discussed more fully in the subsection on coastal processes etc above.

HISTORIC ENVIRONMENT

4.303 EN-1 notes that "*the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment*" (5.8.1). It requires applicants to provide, as part of the ES, a description of the significance of heritage assets affected by the proposed development and the contribution of their setting to that significance (5.8.8).

4.304 Section 5.8 sets out the criteria decision-makers should apply in considering the significance and value of heritage assets and the weight to be given to their conservation in determining whether or not to approve the development consent application. There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be (5.8.14).

4.305 EN-3 recognises the potential importance of the offshore historic environment. Heritage assets can be affected by offshore wind farm development in two principal ways:

- from the direct effect of the physical siting of the development itself;
- indirectly from changes to the physical marine environment caused by the proposed infrastructure itself or its construction (2.6.139).

4.306 The decision-maker should be satisfied that offshore wind farms and associated infrastructure have been designed sensitively taking into account known heritage assets and their status, for example, features designated as Protected Wrecks (2.6.144).

4.307 The MPS also recognises the need for the protection and management needs of marine cultural heritage according to its significance (2.6.6).

4.308 The Applicant considers the potential impact of the Project on both the offshore and onshore historic environments in ES Chapter 18 'Marine Archaeology and Cultural Heritage' [AD-085] and the accompanying Annex B.10.A: 'Archaeological Impact Assessment' [AD-184], Chapter 27 'Archaeology and Cultural Heritage' [AD-094] and Annex B.11: Onshore Archaeology & Cultural Heritage Baseline Assessment' [AD-186]. We consider the offshore and onshore environments in turn.

Offshore marine archaeology and cultural heritage

4.309 A detailed understanding of the historic character of the site for the wind farm and the associated export cable corridor was developed through analysis, interpretation and synthesis of baseline data, geophysical data assessment and consultation with statutory and non-statutory bodies and stakeholders, with assessment of the Project's potential impacts. Consultation has included that with English Heritage (EH), which has responsibility for marine archaeology in the English area of the UK territorial sea. To establish impacts on known or potential marine archaeological sites within the Project, 2km buffer zones were defined around the wind farm and export cable corridor [AD-085; RR-062].

4.310 Site-specific geophysical data indicated anomalies that might point to features of archaeological potential. These were categorised as high, medium or low. There are no known wrecks of either high or medium archaeological significance within the wind farm site but there are several within the export cable corridor and the 2km buffer[25] [AD-085, 18.6.1.5, 18.6.1.6 and Chart 18.2]. In addition to such features, paleoenvironmental information (submerged prehistoric land surfaces) may be affected by the development.

4.311 Potential impact on features of interest could arise at all stages of the Project. Summaries of the types of impacts are set out in Table 18.7 [AD-085]. They include removal of sediment containing undisturbed archaeological contexts, piling intrusion disturbing archaeological features, penetration and compression effects, scour and drawdown of sediment. Cumulative impact with other consented and proposed adjacent offshore wind farms, oil and gas infrastructure and gravel extraction sites was also assessed.

[25] There is one recorded loss of a military aircraft at an estimated location in proximity to the export cable corridor. The ES indicates that any military aircraft will be subject to statutory protection under the Protection for Military Remains Act 1986 (Protected Place), if located prior to construction, or at any time in the future.

4.312 Impacts are summarised in Table 18.11 and indicate that, unmitigated, the magnitude of impact could be major with large or very large significant adverse effects for some operations. They are likely to be permanent as there is no capacity for recovery from impacts on what is a finite resource [AD-085, 18.9.1]. However, with mitigation, the residual effect becomes neutral or, in some cases, there would be a net slightly insignificant (beneficial) effect (since assessment would result in additional knowledge).

4.313 The proposed mitigation measures set out in the ES include the identification of Archaeological Exclusion Zones (AEZs). These are suggested as being of 50m radius centred on each anomaly or, where the site is particularly extensive, based on a 50m buffer around the feature outline (in relation to findings of high archaeological potential) and 25m (for findings of medium archaeological potential) [AD-184, s5.1].

4.314 In its Relevant Representation EH suggested several amendments to conditions in the two DMLs within the Applicant's then draft DCO. Amendments have been incorporated (or considered not to be necessary) in subsequent iterations and the Applicant's agreed position with EH is set out in a SoCG between them [SCG-017].

4.315 Offshore mitigation would be secured by DML(G)c.11(1)(h) and DML(T)c.9(1)(h). These would require the development and implementation of a written scheme of archaeological investigation in consultation with EH. This would include details of any mitigation, including where necessary AEZs, monitoring and a reporting and recording protocol of any wreck or wreck material. Conditions 12(2) and 10(2) respectively would also secure pre-construction high resolution swath-bathymetry and side-scan sonar surveys around the site of offshore works, including a 500m buffer, to assess seabed anomalies or sites of historic or archaeological interest (Appx 4).

4.316 We are not aware of any outstanding issues or disagreements between any parties relating to the historic marine environment that are not covered by the suggested DML conditions included in the recommended DCO. We consider them to provide suitable mitigation.

Onshore archaeology and cultural heritage

4.317 The ES considered two study areas. That for the assessment of archaeological and cultural heritage impacts arising from the onshore elements of the Project was based on a 500m buffer around the onshore cable corridor and substation site (the onshore study area). The second was a 40km study area surrounding the offshore wind farm elements (the visual study area). This was based on a zone of theoretical visibility (ZTV) to allow assessment of the possible effects on the setting of terrestrial designated

heritage assets. The study area was agreed with statutory consultees (Manx National Heritage and EH) [AD-094, s27.4].

4.318 Within the onshore study area there are no Scheduled Monuments, Conservation Areas, Registered Parks and Gardens or Battlefields. There are nine Grade II listed buildings together with records for 33 non-designated heritage assets. Surveys as part of the EIA process suggest a moderate potential for the survival of as yet unknown buried archaeology within this study area. Within the visual study area a total of 1,423 designated heritage assets were identified within a 40km radius of the Project in the IoM and England [AD-094, s27.6].

4.319 Potential impacts identified at construction stage include direct and indirect physical damage to buried archaeology and temporary visual, noise, dust and vibration impacts. During the operational phase there could be visual impact effects on the setting of designated heritage assets from both the onshore substation and the offshore wind farm. Cumulative effects in terms of damage to buried archaeology and visual impact on the setting of designated heritage assets were also considered, arising from the development of other nearby projects: the Port of Heysham Wind Farm, Middleton Substation, the BT Heysham Wind Turbine and Heysham South Wind Farm [AD-094, Table 27.4].

4.320 There are two non-designated archaeological heritage assets that could be directly affected by the Project, being within the cable corridor and substation site. Asset ID 16 is an area of ridge and furrow recorded by the Historic Environment Record but no longer evident as earthwork remains during field reconnaissance work in 2012. The ES assesses the magnitude of impact as minor. EH, in its response to our first written questions, agreed with this assessment [AD-094, s27.9 and Chart 27.1; D1-034].

4.321 Asset ID 30 is not a discrete asset but is an area where ground conditions near the substation site suggest that paleo-environmental evidence and organic artefacts could be preserved at depth. Damage to archaeology could result from piling works or from de-watering. The PPAA recognise that the presence of well-preserved peats within the Heysham Moss SSSI means that there is a larger resource available and this reduces the significance of the impact on the substation site. However, the substation site's potential for other types of remains leads them to consider an impact of major significance (rather than moderate as suggested in the ES) would be a fairer overall assessment [AD-094, s27.9; LIR-001].

4.322 The PPAA suggested that a phased programme of work including both coring survey and 'strip, map and record' elements should be required [LIR-001]. Requirement 26 of the recommended DCO provides for a written scheme of investigation of areas of archaeological interest to be agreed with the RPA. This would

apply to works within the cable corridor and the substation site. The detailed wording of this requirement has been agreed with the PPAA. At the close of the Examination there were no outstanding expressed concerns in this regard. We have no reason to disagree with the ES conclusion that, with such mitigation in place, there would be no significant residual effect on the archaeological resource [AD-094, Table 27.7; SCG-012, s18].

4.323 The cable corridor would result in a temporary visual effect on the setting of the Grade II listed Downy Field House and Downy Field Farmhouse and Barn, which lie some 200m to the east of the closest section of the corridor. We have had special regard to the desirability of preserving the setting of these and other listed buildings as required by section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990. The impact of the cable corridor works would be indirect, intermittent and temporary. This would be limited to the period of construction or in the case of hedgerows until their reinstatement is complete (12-24 months) [AD-094, s27.9].

4.324 There would also be some visual effect in terms of the setting of these designated heritage assets from the substation construction. However, the separation between them would be over 1km, the farmhouse and associated buildings would remain within their agricultural landscape and their setting has already been modified by the presence of modern industrial buildings and infrastructure within the area. In response to our first written questions EH concurred with the assessment that there would be no harm to these listed buildings in terms of visual effects. We conclude that there would be no harm to the significance of these listed assets arising from impact on their setting [AD-094, s27.9; D1-034].

4.325 Having regard to visual impact on the setting of designated heritage assets from the offshore components, of those identified within the visual study, the ES assessed 72 in more detail. Of these, it was concluded that 65 would experience no change to their setting. Of the remaining seven, an adverse effect of minor magnitude was concluded. Significance of effect was assessed as slight for all but one of these; Piel Castle, a ruined castle on Piel Island (to the east of Walney Island) and which is a designated Scheduled Monument and Grade I listed building, where the ES assessment is moderate (adverse) [AD-094, s27.9].

4.326 EH suggested in its Relevant Representation that it would not have a credible case for objecting on the basis of visual impact given distance (about 24km from the nearest part of the wind farm), partial screening by Walney Island, and a range of other closer impacts on the setting of the castle. This was confirmed in response to our first written questions. Also in response to our first written questions, Manx Natural Heritage accepted that because of the Project's distance the wind farm would have no

unacceptable visual impact on statutorily protected monuments on the IoM [RR-062; D1-033; D1-034].

4.327 No significant effects are predicted for the decommissioning phase of the Project [AD-094, Table 27].

Conclusions

4.328 We are content that, on the basis of the Examination and the submissions and responses we have considered, the potential impact of the Project on both the offshore and onshore archaeological and historic environments has been properly addressed in terms of EN-1 and EN-3. There are appropriate safeguards within the recommended DCO to ensure that archaeology that might be associated with the construction of the Project is properly investigated and recorded.

4.329 We therefore recommend to the SoS that there are no heritage or historic environment matters that argue against the Order being made subject to r.26 of the recommended DCO and DML(G)c.11(1)(h) and DML(T)c.9(1)(h) (Appx 4).

LANDSCAPE AND VISUAL IMPACTS

4.330 The Project comprises both offshore and onshore components. Consequently, we have considered advice set out in EN-1, EN-3 and EN-5. Section 3 of this report refers to the wider legal and policy context that has also been taken into account.

4.331 Regard has been paid to the specific matters to be applied in the consideration of offshore wind farms set out in EN-3 (2.6.198-210). The electricity export cabling from the offshore wind farm (OWF) would be undergrounded and so, when operational, the main visible landside component of the Project would be the associated substation. We have had regard to sections 4.5 and 5.9 of EN-1, relating to the need for good design for energy infrastructure and the assessment of landscape and visual impact.

4.332 The offshore and onshore visual and landscape effects of the Project are considered separately below.

Seascape and landscape assessment - offshore element

Introduction

4.333 The seascape, landscape and visual impact of the OWF are discussed in Chapter 19 of the ES [AD-086; AD-121] and ES Annex B.13 [AD-195 et seq). A series of photomontages and wireframes are contained in separate ES Folders 1 and 2 [AD-200 - AD-212].

4.334 A Seascape and Landscape Visual Impact Assessment (SLVIA) was carried out to consider the potential effects of the OWF on the

existing seascape, landscape and visual environment within a study area based on a zone of theoretical visibility (ZTV). This was defined as a 40km radius from the OWF within which it may be possible to see any part of the proposed development. The definition of the study area and most of the viewpoints resulted from early pre-application consultation and agreement with 10 local planning authorities, the IoMG and NE [D1-040].

4.335 The National Trust (NT) expressed disappointment in its Relevant Representation that there were no viewpoints assigned to the Sandscale Haws National Nature Reserve near Barrow [RR-054]. However, additional clarifying information provided by the Applicant allowed the NT to agree that judgements reached in the SLVIA were robust and valid in relation to visual impacts on Sandscale Haws and no further clarification was necessary (SCG-013].

4.336 The OWF Project site would be approximately 19km at its nearest point to Walney Island on the Cumbrian coast, 35km from the Lancashire Fylde coast and 31km from the IoM. Given these distances, and the fact that it would be adjacent to the existing Walney I and II Wind Farm, we consider the SLVIA to be of a scale proportionate to the predicted impacts. It accords with EN-3 (2.6.201-2.6.206), which sets out the requirements for testing seascape and visual effects [AD-195].

4.337 A substantial proportion of the SLVIA study area comprises open seas, equating to about 89% of the overall area within the 40km radius. The ES indicates that this sector of the Irish Sea is one of the busiest in the UK in terms of offshore development; it currently supports three operational wind farms (Barrow, Ormonde and Walney I and II, and one in construction, WoDS, totalling some 270 WTGs. Additionally, there are a number of gas platforms within the area. The coastal components of the study area are varied, including parts of the Lake District National Park, Heritage Coast (St Bees Head), Cumbrian Fells and the expansive intertidal areas of Morecambe Bay and the Duddon Estuary. There are also major tourist centres and settlements on the Fylde coast and on the IoM [AD-195; LIR-001].

Assessment

4.338 Four indicative layouts for the OWF, having regard to the 'Rochdale Envelope' principle, were considered to establish a MAS for assessment in the SLVIA. These were tested by reviewing the comparative ZTVs for each scenario together with analysis of wireframes and panoramas using selected viewpoints. The assessed maximum adverse scenario (worst case) exhibits 207 x

3.6MW WTGs on 40m x 40m jacket foundations with three 50m x 50m offshore substations [AD-195)[26].

4.339 In our first written questions we queried what the impact of the much taller (222m), but fewer, WTGs would be when seen from low-lying coastal viewpoints [PI-006]. The Applicant's response noted that, because of the effects of distance, perspective and the earth's curvature they would appear to be of similar scale to the existing, albeit smaller, turbines. The smaller but greater number of 3.6MW turbines would create a greater vertical contrast with the operational turbines, confirming the conclusion of MAS, an assessment accepted by the PPAA [SCG-012].

4.340 The study area included eight regional seascape units and 12 landscape designations, the latter ranging from national designations (the Lake District National Park and St Bees Head Heritage Coast) to landscapes of county or local importance. Assessment was based on consideration of the sensitivity to the offshore development and the magnitude of impact, resulting in a categorisation of significance of effect [AD-195].

4.341 The Project has been assessed as having the potential to result in direct impacts on terrestrial and marine receptors arising from the intervisibility of the WTGs, their bases and offshore substations, and the presence of marine vessels to support the construction and decommissioning phases. The SLVIA assesses impacts to be greatest during the operational and maintenance phase because of the vertical scale of the WTGs and the presence of moving rotors in some views. There would be night-time lighting arising from the need for aviation and navigational lighting for the perimeter WTGs and for the offshore substations [AD-086].

4.342 Having regard to the operational phase, the SLVIA anticipates landscape impacts to be very limited, ranging from low to negligible and none, and significance of effect varying between minor to none. Similarly, impacts on seascape character are judged to be limited, ranging between low and none, with significance of effect varying between moderate and none [AD-121]. The PPPA agree that impacts upon landscape character types would range from negligible to moderate and, in terms of regional seascape types, moderate to moderate/minor and negligible (Duddon Estuary), moderate/minor, (Walney Island), and negligible (Morecambe Bay) [LIR-001].

4.343 The ZTV confirms that the operational WTGs would be visible from a large number of coastal areas within the study area. From the UK mainland impact of the WTGs would be substantially moderated by distance (assessed viewpoint distances ranging from about 21km at Biggar Bank, Walney Island to 40km at St

[26] The SLVIA considered the construction, operational and maintenance, and decommissioning phases of the Project.

Bees Head), the presence of existing operational and under-development wind farms, major coastal infrastructure of the Sellafield and Heysham nuclear facilities and a dynamic and frequently animated seascape resulting from a substantial volume and variety of shipping. The magnitude of impact in terms of changes to the nature/composition of views for marine and onshore receptors, resulting from the presence of the WTGs and night-time lighting, would range from high to none. Significance of effect would range between major and none [AD-086; LIR-001].

4.344 There would be seascape, landscape and visual effects within the IoM territorial waters with impacts related primarily to the intervisibility of the WTGs from selective land, coastal and marine areas. The SLVIA records negligible significance of effect for all landscape types within the IoM during the operational phase and minor to negligible significance for those regional seascape units which include a marine component within IoM territorial waters. The IoMG confirmed its agreement with the assessment that there would be an adverse minor effect, which is not significant, given the distance from the site [D1-035].

Cumulative impact

4.345 The assessment also considered the cumulative effects that would be experienced by seascape, landscape and visual receptors and the impact that would arise from the addition of the Project to existing and under-development wind farms. For the majority of receptors there would be no significant cumulative effects. This would be because of the often greater combined presence of existing wind farms closer to the UK coast and the relatively long-distance views of the Project. The significance of cumulative effect upon regional seascape units is assessed as being moderate to moderate/minor, with minor impact on landscape character types and viewpoints [AD-086; LIR-001].

4.346 The two exceptions to this would be in views from Black Combe (about 28km from the Project site) within the Lake District National Park (and highest point on the mainland within the study area), and from Maughold Head on the IoM (about 31km from the Project site). Here the effects would be of major/moderate significance for recreational walkers. A similar level of significance of effect would be experienced by those at sea within 10-15km of the Project site. However, this assessment for Maughold Head is based on the possible cumulative impact of the proposal and existing and under-development schemes, as well as the in-planning Irish Sea Zone NEPDA for which we have seen no proposals. Combined with the existing and in-development WoDS scheme the Project would have a low-negligible magnitude of impact with minor significance of effect for viewers at Maughold Head. [AD-086; AD-195].

4.347 The ExA viewed the Project site from the majority of the selected viewpoints within the SLVIA on unaccompanied daytime visits, including from the approaches to and summit of Black Combe and from Maughold Head when visibility was good to variable. Views towards the site at closer quarters were also obtained on our daytime crossings to and from the IoM on board the Ben-my-Chree ferry. Because of the presence of existing wind farms in views this allowed us to compare the accuracy of the photomontages within the SLVIA and the general assessments of visual impact. Our experiences also served to underline the influence of meteorological and atmospheric conditions in limiting visibility (for example, at St Bees Head visibility is less than 40km for 98.6% of the time and at Walney Island visibility is less than 20km for 55.9% of the time) [AD-086].

4.348 The PPPA commissioned its own review of the SLVIA Technical Report. It considered there to be some variances in magnitude of change from some viewpoints and suggested there should be a revised assessment of sensitivity for some receptors. Nonetheless, the PPPA are in general agreement with the methodology used to establish magnitude of impact, together with the predicted impacts. They have not suggested that visual impact of the OWF would be a reason for not confirming the DCO. We consider the perception of an increased presence of turbines that would result from the Project for those receptors on Black Combe and at Maughold Head, given distance and attenuation of visibility through weather and atmospheric conditions, would be unlikely to materially diminish their experience of these locations. [AD-086; LIR-001; SCG-012].

Mitigation

4.349 Opportunities for significant measures to limit landscape and visual impact are restricted due to the scale and nature of the proposal. The offshore site boundary has been aligned with Walney I and II Wind Farm and, so far as possible, the WTGs would be positioned to reflect the existing arrangement. Opportunities to adapt this arrangement are restricted by the presence of existing pipelines, cable routes and shipping lanes. Turbine colour would be consistent with adjacent offshore wind farms. Foundations would be high visibility yellow for safety reasons though these would only be visible from relatively close proximity (about 10km). The three offshore substations would be positioned within the turbine array to minimise their visual impact from coastal areas [AD-086].

4.350 Controls over the detailed design parameters of the OWF are secured by r.2 of the recommended DCO and DML(G)c.1 and c.2, whilst c.17(4) of this DML specifies paint colour for the structures. Yellow paint for the foundations would be from at least Highest Astronomical Tide level to a height specified by Trinity House. Agreement of lighting, as aids to navigation, and as directed by

Trinity House and the CAA, would be secured through c.17(1) and (5) of this DML (Appx 4).

4.351 Our conclusion is that the mitigation proposed, and as defined by requirements and conditions in the recommended DCO, is satisfactory and no further control is required (or practicable).

Trans-boundary and other impacts

4.352 There would be no landscape and visual effects on other European member states. The IoM is a self-governing British Crown Dependency. It is not a European Economic Area state and therefore not a trans-boundary consultee under Regulation 24 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended). Nonetheless, as noted above, the SLVIA has fully taken account of potential impacts for those parts of the Island and its waters which fall within the study area [AD-086].

Landscape assessment - onshore elements

4.353 The Project includes export cable landfall, with cable burial below the intertidal and saltmarsh areas and landwards for approximately 3.5km to a new substation to be located to the north of the A683, east of Heysham. Landscape and visual impacts for construction, operational and decommissioning stages are considered in ES Chapter 26 and Annex B.12 of the accompanying Technical Report [AD-093; AD-128; AD-187 - AD-194].

4.354 The EIA considers a MAS which incorporates an indicative layout of components within the limits/constraints of specific design parameters. There is a suggested maximum construction period of 18 months for the cable corridor and 25 months for the substation [AD-071; AD-187].

4.355 A Landscape and Visual Impact Assessment (LVIA) was undertaken based on a ZTV of a 3km radius from the proposed substation and a 500m offset from the working corridor for the onshore cable corridor and temporary and permanent access roads associated with this. This study area and representative assessment viewpoints were agreed with Lancaster City Council, Lancashire County Council and NE. The methodology and assessment of significance of effects of the Project in the ES are agreed by the PPAA [AD-071; SCG-012].

4.356 There are no nationally or locally designated landscapes within the study area. The landscape beyond the shore through which the cable corridor would pass is predominantly low-lying pasture, as is that for most of the almost 3ha site for the substation. About 500m to the south-west of the latter is the existing National Grid Electricity Transmission (NGET) Heysham substation. Planning permission exists for a new NGET substation to the immediate

west of the proposed substation site. There is also an existing permission for a wind turbine at Fanny House Farm 600m from the substation site, and for Heysham South Wind Farm, about 250m distant [AD-093].

4.357 The design envelope parameters indicate the maximum height of the substation building and its major components would be 15m above development floor level[27]. A required lightning protection system would be likely to consist of a series of up to 16 lattice or lamp post-type towers with a maximum height some 23m above development floor level. The total footprint of any building would not exceed 170m in length and 170m in width. These parameters are secured by r.16 of the recommended DCO [AD-033; AD-071; AD-187].

4.358 Unaccompanied site visits enabled us to view the site of the substation and to see this from the selected viewpoints within the LVIA, together with the route of the undergrounded export cable. Views across the immediately surrounding landscape of the substation site are already considerably influenced by the presence of the existing NGET substation, high voltage overhead power lines, a telecommunications mast to the east and the more distant bulk of the Heysham nuclear power stations to the south-west [AD-190].

Mitigation

4.359 Having regard to mitigation for the substation element, r.16 of the recommended DCO requires subsequent approval of details, scale, levels and external appearance by the RPA. Requirements 18 and 19 similarly require the approval, implementation and maintenance of a landscaping scheme. This would enable screen and structure planting to be provided although, given the probable size of the substation and accompanying elements, screening effects are likely to be limited in the short to medium term. A scheme for the management and mitigation of artificial light emissions both during construction and operation would be secured through r.37 (Appx 4).

4.360 All connection works are to be undertaken in accordance with the principles of the CoCP. This would be secured by r.27. Details of fencing and other means of enclosure would require the approval of the RPA, subject to r.23. Requirement 39 stipulates the reinstatement of land that may be used temporarily for construction of the connection works [AD-065; Appx 4].

[27] Development floor level is the flood safe level and would be set at least 600mm above ground level (which at the site is approximately 4.5m AOD) to mitigate the effects of any localised flooding [AD-071, 4.12].

Cumulative impact

4.361 The substation is assessed in the LVIA as having no significant effects at either construction or operational stages on landscape character for users of principal highways, or on residential amenity (in the sense of causing by way of visual impact existing dwellings to become unsatisfactory places in which to live). Similarly, there are anticipated to be no significant cumulative effects arising from the substation development in conjunction with other approved nearby projects on landscape character, users of principal highways or residential amenity. We have no reason to disagree with this assessment or that the principles of good design relating to functionality and appearance, as referred to in EN-1, would not be followed [AD-071; AD-128].

4.362 The LWT has suggested that the substation development would result in significant changes to views from the Heysham Moss Reserve and to its general ambience; in combination with the approved Middleton substation the sense of remoteness of the Moss would be severely impacted. We consider there would undoubtedly be some visual impact experienced by users of the Reserve. However, proposed landscaping and new habitat enhancement associated with the substation would increasingly serve to offset some impact as it became established over time, particularly bearing in mind the nature of the existing landscape with its considerable infrastructure presence [SCG-023].

4.363 The only significant visual impacts of the substation, whether individually or cumulatively, are likely to be those experienced by users of footpaths to the immediate north and west of the substation site boundary and occupiers of up to 25 dwellings in the Mossgate Park residential area on the south-eastern fringe of Heysham, over 400m distant.

4.364 The LVIA suggests a major/moderate (adverse) effect for these receptors. We consider that though certain views from these nearest residential properties may be affected, the overall assessment that visual impact would not unacceptably impinge on living conditions for their occupiers is a correct one. Views may change but the proposal would not be unduly dominant or oppressive. It is notable that there have been no representations on this matter from any residents within this locality. Similarly, views for users of nearby footpaths would be affected but these need to be seen within the context of a landscape already significantly influenced by existing major infrastructure [AD-071].

4.365 The LVIA identifies no significant effects in relation to construction works within the onshore cable corridor. With the cabling being buried, and following land reinstatement, there would be negligible impact during the operational stage. We have no reason to disagree with this assessment [AD-071].

Conclusions

4.366 We consider the Project in terms of both its offshore and onshore elements, together with the mitigation as described above and as controlled through requirements in the recommended DCO, the CoCP and conditions of the DML, are such that there are no visual or landscape issues that would argue against the Order being made.

4.367 The mitigation that would be effected and under the auspices of relevant discharging authorities would provide sufficient control to ensure the requirements set out for decision-making in EN-1 and EN-5 are met.

NOISE

4.368 We have considered the guidance in EN-1 at section 5.11 that excessive noise can have wide-ranging impacts on the quality of human life, health and use and enjoyment of areas of value such as quiet places and areas with high landscape value. EN-1 (5.11.4) indicates that the nature and extent of noise assessment should be proportionate to the likely noise impact. EN-3 states (2.4.2) that renewable energy proposals should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise.

4.369 Chapter 30 of the Applicant's ES [AD-97] sets out an assessment of the potential noise and vibration impacts of the onshore elements of the Project at construction, operational and decommissioning stages having regard to human receptors.

4.370 Subsea noise and vibration impacts associated with the construction, operation and decommissioning of the wind turbines is discussed in ES Chapters 11 (Fish and Shellfish Resource) and 12 (Marine Mammals) [AD-078; AD-079]. These are considered within the subsection of this report on biodiversity and ecology.

4.371 Potential noise impacts upon terrestrial ecology receptors are discussed within ES Chapter 24 [AD-091] and are also considered in the biodiversity and ecology subsection of this report.

Offshore noise

4.372 ES Chapter 9 [AD-076] considers noise and vibration from the offshore component of the Project. The greatest potential noise is likely to be generated during construction if piling for the turbine and substation foundations is used. The closest position of piling to the coast would be some 19km [AD-076].

4.373 Assessment suggests that even with the upper estimate for pile driving noise it would be extremely unlikely that noise levels experienced by humans onshore would be a cause for concern when judged against World Health Organisation or British

Standards night-time guidelines. Indeed, levels would be expected to be significantly below the suggested guidelines at all stages of construction. Detailed assessment of offshore noise generation and effect during decommissioning has not been undertaken because of the long future timescale (20-25 years) but is likely to be significantly lower than during construction. We have seen no evidence to contradict such a conclusion [AD-076].

4.374 The ES also considered cumulative impact with other projects. The nearest wind farm that could result in a cumulative impact is the adjacent WoDS although the ES suggests the construction schedule for the two sites makes this scenario unlikely. Distance from other potential wind farm projects - Burbo Bank Extension and Rhiannon (part of the Celtic Array (Irish Sea Zone) - significantly reduces the potential cumulative impact of simultaneous piling [AD-076, 9.9.5].

Onshore noise

4.375 A 500m study area surrounding the landfall, onshore cable corridor and substation site was assessed. Consideration of construction noise (including that for construction traffic) was based on the indicative construction programme and project details and consideration of impact at two of the closest receptors to the cable corridor. The predicted noise generated by the operational substation took into account background noise levels at nearby sensitive receptors, in this case these being the residential housing estate at Mossgate Park to the north-west of the substation site and a static homes site at Borrans Lane to the south-west. [AD-097, s30.5 and Chart 30.1].

4.376 Predicted noise impacts for the construction phase of cable laying and substation construction range from no change to negligible to moderate/major (the latter associated with any HDD under the saltmarsh at Middleton Sands) [AD-097, Table 30.26].

4.377 The Applicant has also committed to undertaking all construction work in accordance with the CoCP, which sets out a series of measures to be applied throughout construction to mitigate the potential impact of onshore site activities. This is secured by r.27 of the recommended DCO (Appx 4).

4.378 An onshore Construction Environmental Management Plan (CEMP) would cover each of the mitigation measures set out in the CoCP. The CEMP would need to be approved by the RPA and is secured by r.28. A Construction Noise Management Plan (CNMP) would be adopted once detailed construction methods were known, in order to minimise noise generation and reduce its potential cause of disturbance. The CNMP would set out the best practical means for undertaking the works [AD-097, s30.9]. Requirement 34 of the recommended DCO provides for the submission and approval by the RPA of a CNMP (Appx 4).

4.379 Within the CNMP a scheme would be required for the monitoring of noise from construction work to ensure compliance with noise limits and effectiveness of attenuation and mitigation measures. Requirement 33 would also control construction hours and construction-related traffic movements.

4.380 In response to the Relevant Representation from the PPAA and our first written questions, the CoCP was updated to refer to measures to establish and manage a system for dealing with enquiries and complaints, with reporting to the relevant local authority [RR-052; D1-040; D1-068].

4.381 Through implementation of a CNMP, the residual effect from construction noise is predicted to reduce to slight, except for noise from HDD which is assessed as moderate (or large if 24-hour working were necessary). Having regard to HDD noise, certain operations - pilot drilling and back pulling - require 24-hour working since they need to be done continuously. However, such an impact would be of relatively short duration and would be only one component of the 18-month programme for onshore cable laying and 25 months for the totality of the substation construction and commissioning [AD-071, s4.14].

4.382 The linear nature of the cable installation would mean that noise generated by construction work would be transient and would be likely to only impact on any one specific receptor for a short period. Controls through the implementation of the CNMP and work in accordance with the CoCP would assist in minimising impact and could be supplemented through controls under section 61 of the Control of Pollution Act 1974 [D1-040, Response to Q3.7].

4.383 Article 8 of the recommended DCO limits the defence of statutory nuisance provided by s158 of PA2008. Such a defence would only be available in respect of noise emitted from premises used by an undertaker for the use of or in connection with the construction or maintenance of the authorised Project, or use attributable to the authorised Project where it cannot reasonably be avoided, or where it is in accordance with r.35 (control of noise during the operational phase of the Project). This would provide additional control in relation to noise generation.

4.384 The predicted noise levels from the substation's operation when assessed at the residential receptor sites at Mossgate Park and Borrans Lane would be respectively of major and moderate magnitude with large and moderate levels of significance of impact. However, mitigation through detailed design, which could include acoustic enclosures, barriers, firewalls or earth bunds, would allow noise levels to be reduced to a BS 4142[28] 'very low'

[28] BS 4142:1997 Method for rating industrial noise affecting mixed residential and industrial areas.

rating noise level so that any residual impact would be slight [AD-097, s30.7 and s30.9.3].

4.385 Requirement 35 of the recommended DCO imposes limits to noise levels emanating from the substation site as measured at the nearest residential receptor, which would also take into account tonal or impulsive noises[29]. Specified monitoring sites are set out in the Noise Monitoring Location Plan, a certified document under DCO Article 40. The ES indicates that there would be no significant sources of vibration during the operational phase [AD-097, s30.7; Appx 4].

4.386 With an assurance that noise disturbance would not be experienced by local residents, the PPAA have not raised concerns regarding noise issues. There have been no representations from residents within proximity of the proposed substation expressing concern about possible noise nuisance from either its construction or operation [LIR-001].

4.387 The noise generated by the decommissioning of the substation is considered to be comparable to the noise level expected during construction as similar equipment and plant are likely to be involved in both phases. A written scheme for the demolition and removal of the substation would require the approval of the RPA and is subject to r.40 of the recommended DCO [AD-097 s.30.5.4; Appx 4].

Conclusion

4.388 Our conclusion is that the combination of operational control, limitations and mitigation measures secured by the recommended DCO Article 8, r.28, r.33-35, the CoCP and CNMP and the Control of Pollution Act would provide adequate safeguards. These would ensure noise impacts are minimised and controlled to an acceptable level.

4.389 In terms of the relevant NPS advice, excessive noise would be limited by controls included in the requirements and Best Practical Means through the CNMP and impacts on such matters as the quality of human life and health would be largely mitigated or avoided.

4.390 We are therefore satisfied that there are no matters outstanding that would argue against the Order being made.

SHIPPING

4.391 EN-3 notes the potentially adverse impacts offshore wind turbines can have on maritime navigation and shipping, and that wind

[29] Noise levels should not exceed 35dB(A) with noise measurements expressed as 5 minute L(A)eq values.

farms should not be consented where they would pose unacceptable risks (2.6.147). The potential impact on shipping raised concerns from more corporate bodies than any other issue considered during the Examination.

4.392 The main conclusions of the ES [AD-083] relevant to the Examination and decisions to be taken are:

- the main shipping lanes in the vicinity of the Project will not be significantly affected by the Walney Extension in isolation given the impact of the WoDS Wind Farm, with a navigational risk assessment (NRA) supporting this;
- an Emergency Response Cooperation Plan (ERCoP) will be developed in liaison with the MCA;
- risks to recreational traffic are low, with traffic able to transit through the wind farm when operational;
- the main cumulative impact assessment relates to future development within the Irish Sea Zone's NEPDA, with simulations leading the Applicant to conclude that "*4.3nm of sea room is adequate for the type and level of traffic*" [AD-083, 16.10.1.12].

This last conclusion has been the most contested.

4.393 Each issue is considered in turn below. The impact on commercial fisheries is discussed in the subsection above and the Port of Millom is briefly discussed in the subsection dealing with socio-economic impacts.

4.394 Our analysis below has been informed by experiencing (day-time) ferry crossings (each way) between Heysham and the Isle of Man, and witnessing the proximity of the shipping lanes to both operational and under-construction wind farms to the north of the route. The weather conditions on both crossings were good, with the ferry sailing to schedule.

Walney Extension in isolation

4.395 The ES assessed that the impact of the Walney Extension in isolation on shipping routes would not be significant. We sought to test this with stakeholders via our first written questions where we asked about the impact of the Walney Extension if there were no development in the NEPDA. The responses support the analysis in the ES, for example:

- Isle of Man Steam Packet Company (IoMSPC): "*a small but manageable impact on our routeing, including those of weather routeing*" [D1-029];
- IoMG: "*agrees that the Walney area alone may not pose a critical risk*" [D1-035];
- UK Chamber of Shipping: "*no outright objection to the Walney extension in isolation…where no development takes place within the NEPDA we agree that the impacts of the*

Walney extension on ferry traffic…will be manageable" [D1-030];

- Stena Line: "*the project, in isolation, will not have a significant impact upon commercial vessel operation; or the safe navigation of vessels operating in the vicinity of the proposed site*" [D1-032];
- Maritime and Coastguard Agency (MCA): "*assuming…there is no development of the NEPDA, it is considered that adequate sea room and options for traffic avoidance and weather routeing remain available*" [D1-039].

4.396 These responses were consistent with Relevant Representations, Written Representations, SoCGs and subsequent oral representations made at the OFH on the IoM discussed below. A map provided by the IoMSPC [D1-029] provides a helpful illustration of the routes from England to the IoM in relation to the existing and potential wind farms that may be developed, and is reproduced as Figure 2.

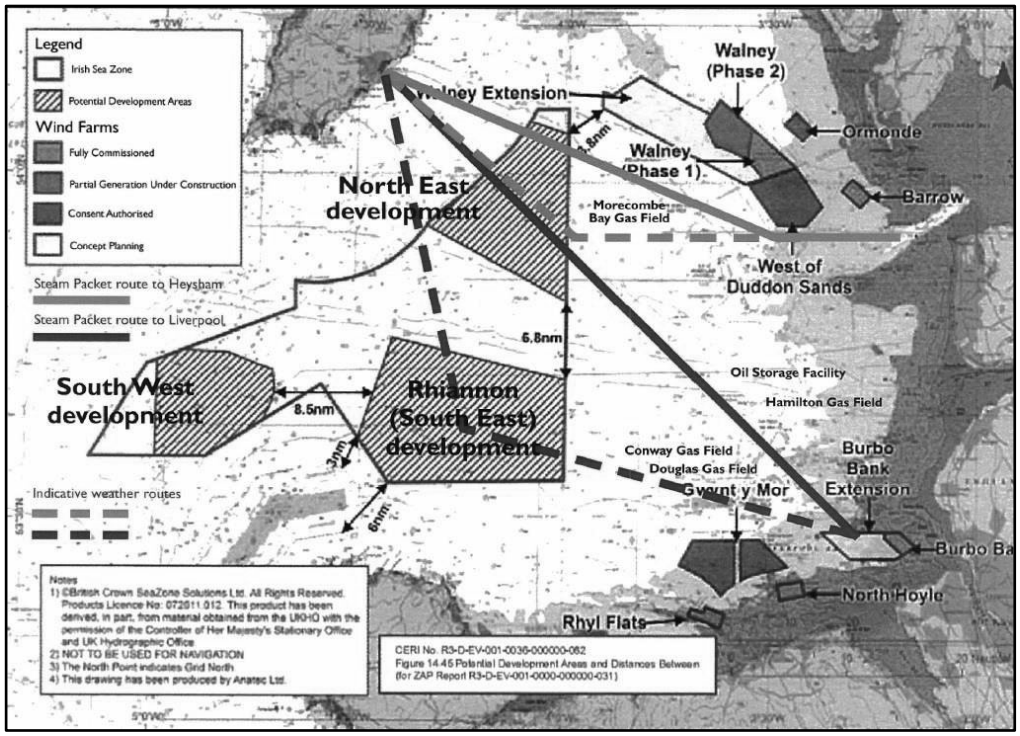

Figure 2: Eastern Irish Sea wind farms and ferry routes [D1-029]

4.397 The MCA further noted in response to our first written questions that "*Taken in isolation the Walney extension has undertaken a detailed NRA, including stakeholder engagement in accordance with guidance provided by the MCA, to that end we are satisfied that all aspects of the NRA have been adequately assessed*" [D1-039]. This judgement did not extend to the assessment of cumulative impact should development within the NEPDA take place.

4.398 It was noted that there were uncertainties over the extent of the adverse impact of the proposed turbines on radar given that the maximum turbine size is in excess of those where impacts have previously been assessed. There was little evidence of major concern over this issue in relation to the Walney Extension in isolation, with significant sea room available to mariners to the south and west. We queried this issue and the MCA did confirm that turbine size had been considered in its assessment of the NRA, again noting that concerns would increase significantly if the proposed NEPDA were to be developed [D4-034].

Safety Management including ERCoP

4.399 The need for an active safety management plan, including an ERCoP, is addressed in the two DMLs, together with the requirements for navigational aids, including lighting (DML(G)c.16-18; DML(T)c.13-15). The plan would require the approval of the MMO, in consultation with the MCA. While subject to drafting clarification during the Examination, the principles have not been a source of dispute.

Recreational craft

4.400 The NRA identified little recreational vessel activity, with only seven vessels tracked passing through the site in a 28-day summer survey, and none in a 14-day winter survey [AD-098, 31.9.2.49]. The Applicant had engaged with the Royal Yachting Association (RYA) during the development of its proposals. The main concerns of the RYA related to operational safety zones and impact on charted depths as a result of the protection of export cabling. A SoCG with the RYA [SCG-004] records plans to apply for safety zones during construction and maintenance, and notes agreement that these are appropriate. Detail relating to cable burial plans will require the agreement of the MMO (DML(G)c.11(1)(c) and DML(T)c.9(1)(c)). The SoCG records agreement that "*the project development will not be a detriment to the recreational sailing activities and established routes in the Walney extension area*". This has not been a significant issue during the Examination.

Cumulative impact - NEPDA

4.401 The main source of concern from shipping interests has related to the cumulative impact of the proposed Walney extension alongside the potential development of the NEPDA. Concerns have been primarily expressed about the proximity of the two potential development sites, and also about the Applicant's interpretation of the evidence in relation to cumulative impact. The IoMSPC [RR-037] graphically described its concerns about a "wall of windfarms" in the Irish Sea with the risk of inadequate sea room leading to cancellation and delays in adverse weather conditions. The chart at Figure 2 illustrates its concern.

4.402 At its narrowest point the gap between the proposed Walney extension and the NEPDA is 3.8nm [AD-176, 17.2.4]. While no indicative layout of turbines exists for the NEPDA (discussed below), for the purpose of the ES the narrowest distance between turbines on the two sites was assessed at 4.3nm, with this wider gap reflecting the need to avoid cables and address navigational concerns [AD-181]. Simulation exercises were conducted to inform the issue of the impact of cumulative development of the two potential areas.

4.403 There were strong views about the size of the gap assumed in the simulation exercises, of the assumptions utilised and of the conclusions drawn by the Applicant and its technical advisers. The gap was seen as insufficient in SoCGs, representations and answers to questions from a range of shipping interests. A particular concern is for the need for flexibility of routeing options during adverse weather conditions ("weather routeing"). The IoMSPC [SCG-007] identified concerns that with a gap of the size indicated in the simulation exercise there would be occasions when they would need to route around the NEPDA, adding over an hour to journey times, which would not allow them to run their full schedule of services. This was not agreed by the Applicant [SCG-007].

4.404 Notably the MCA [SCG-003]:

- did not agree with the conclusion of the Applicant or its technical advisers that the cumulative impact with NEPDA could be assessed as acceptable on the basis of the analysis undertaken;
- identified concerns over the value that can be attached to simulation exercises given their artificiality;
- noted the need for bad weather routeing options to be adequately addressed.

4.405 In response to our first written questions the Applicant confirmed that Celtic Array Ltd, the relevant licence holder, had not yet identified any proposal for development of the NEPDA, and noted its assessment was based on a "*worst case scenario of the whole of the NEPDA being built out*" [D1-040].

Open Floor Hearing (OFH)

4.406 We note that at the OFH held on the Isle of Man [EV-008] it was not only IoM interests (IoMSPC, IoMG and TravelWatch IoM) who participated but also the MCA, the British Chamber of Shipping and Stenna. The messages were consistent from the parties and in line with the evidence reported above:

- despite some concerns about the impact on radar, given the size of the turbines, in isolation the impact of the Walney extension was broadly agreed to be not significant by the

interested parties. There is sufficient sea room to the south-west of the Project to allow mariners the flexibility to navigate in response to bad weather (weather routeing) or other navigational events;

- the simulation exercises conducted by the Applicant did not provide robust evidence that development of both sites would be acceptable, with concerns over both the adequacy of the specific simulation exercises and the reliance that could be placed on simulation exercises;
- if the NEPDA were developed in full the flexibility for routeing would be significantly constrained. This would impact on sailing schedules with adverse consequences for the IoM's essential communication links.

4.407 We have noted these concerns. Given the absence of specific plans for the development of the NEPDA these were not issues on which we felt further examination would enable us to reach a useful conclusion. But given the concerns, and notably the views of the MCA that the Applicant's interpretation of the evidence on cumulative assessment was not proven, we note that approval of the proposed Walney Extension may have implications for the extent to which it will be possible to develop the NEPDA without significant adverse impacts on shipping. Cumulative impacts can be fully taken into account should particular proposals be brought forward for the NEPDA.

Conclusion on shipping

4.408 Our overall conclusion on shipping issues is that the impact of the proposed Walney Extension in isolation is not significant, and that the technical requirements set out in the DCO (primarily via the DMLs) adequately mitigate potential impacts.

SOCIO-ECONOMIC IMPACTS

4.409 Socio-economic effects have been assessed in the ES [AD-098] in line with the guidance in EN-1 (5.12). The main identified effects are a positive impact on employment at the regional (North West) and national level, with local effects not identified by location given that the port(s) for construction and maintenance operations have not been selected. The main employment effects have been estimated using Keynesian-type multipliers drawing on input-output data where available. The analysis seems unexceptional and has not been the subject of material representations.

4.410 Some 230 jobs are identified as being created directly within the regional impact area over the 4-year construction period and some ten jobs during the 3-year decommissioning. Most of these would be existing contractor staff and are unlikely to be recruited locally [AD-098, 13.9.2.7]. Around 185 jobs are likely to be created directly in operation and maintenance activities, with many of these being taken by people who live locally [AD-098, 13.9.3.7].

Further employment would be created via supply chain consequences (discussed further below) and from increased spending by those employed in the construction, operation and decommissioning activities. In the context of three million employed in the North West the effects are beneficial but minor, but may have a greater significance around the chosen port(s).

4.411 Some of these employment effects may arise outside the North West if, for example, the Isle of Man or Belfast were chosen for some or all of the port operations for construction or operational support.

4.412 Negligible effects are expected for commercial fisheries, discussed separately above, reflecting both the low impact and the low level of fishing activity in the North West, with a similar assessment for commercial shipping discussed above. A minor negative impact on tourism has been identified reflecting, in part, the limited visual impact (see the subsection above on seascape etc). The broad thrust of the Applicant's analysis has not been substantively challenged, with few representations, though a number of concerns about specific actual or potential socio-economic consequences have been raised and are discussed below.

PPAA and supply chain consequences

4.413 The PPAA agree that the ES "*has adequately assessed and described the socio-economic impacts*" [LIR-001]. Their main concern, exacerbated by the absence of selected ports, is to maximise the economic benefits for the area by seeking to take full advantage of employment, training and supply chain opportunities. The SoCG records a commitment by the Applicant to engage further with the PPAA and local enterprise partnerships to deliver a Memorandum of Understanding on Economic Cooperation.

Isle of Man concerns

4.414 The economic issues identified by IoM interests arise primarily from concerns about the potential impact of this and other potential wind farms on air and shipping services to the IoM. Relevant concerns are exemplified by the IoM Chamber of Commerce in a response to a written question [D1-029] and in oral representations at the OFH [EV-008, 1hr 9mins]. Particular concerns were identified about the impact on supply chains for manufacturing and retail sectors, threatening just-in-time delivery needs both to and from the Island, and for the tourism industry dependent on both air and sea links in broadly equal measure. Similar concerns were expressed by the IoMSPC and TravelWatch IoM [EV-008].

4.415 The parties recognise these issues are only significant if transport links are adversely affected, and our assessment of shipping and

air navigation impacts suggests this would not arise from the proposed Walney Extension in isolation. Cumulative impacts would be more appropriately appraised if and when there are specific proposals for the development of the NEPDA to be assessed.

Other impacts

4.416 A number of representations have been raised in relation to specific issues or the potential impact on individual businesses. Those relating to commercial fishing are discussed in that subsection.

Port Millom

4.417 Port Millom raised concerns about the impact of the proposed wind farm on access to and the operations of Millom Harbour [D1-016; AR-006; AR-007]. The concerns were also set out at the OFH in Cumbria [EV- 009]. It appeared from responses to questions at the hearing that the major concerns arose in relation to the operation of existing turbines, with the Walney Extension some distance further from Millom Harbour.

4.418 The Applicant has noted that the proposed wind farm would not block any likely approaches given its location in relation to the Port and to existing wind turbines. The Port's concerns about the impact of the Eskmeal's Firing Range were misplaced as there were no access restrictions on shipping. The Applicant's representation addressed these and other concerns (not all submitted to us as the ExA) including a map of the Harbour and relevant wind farms [D5-047]. We do not consider that the evidence suggests a likely significant adverse impact on Port Millom from the proposed Walney Extension.

Mr Pat Riley

4.419 Mr Riley runs a small beach-front business at the end of Carr Lane, Middleton Sands and raised concerns in his Relevant Representation that cable works would lead to beach closure with adverse impacts on his business [RR-001]. The Applicant's response to our first written questions noted the nature of the works would have a limited impact on access, that such impacts would be mitigated under the Public Access Strategy [AD-066], that construction works are controlled via the approval requirements of construction transport management plans (DCO r.31) and that the workforce would provide trade for Mr Riley's business. The Applicant further noted that Mr Riley's concerns had been influenced by an earlier project which had more significant impacts on access. The response concluded by noting its assessment had been discussed with Mr Riley who "*has confirmed he concurs with this assessment*" [D1-040]. No further representations were received.

Conclusion on socio-economic assessment

4.420 The Applicant's ES identified a range of positive and negative socio-economic impacts from the proposed development, with most of these assessed as slight [AD-098, Table19]. We consider that the evidence supports the Applicant's assessment and attach limited weight to socio-economic issues in considering the case for development.

TRAFFIC AND TRANSPORT

4.421 In examining issues surrounding traffic and transport, we had particular regard to section 5.13 of EN-1, which deals, among other things, with the need for a traffic assessment and a travel plan and the need to ensure that sufficient cost-effective mitigation of any impacts is put in place, including for likely HGV traffic. We also had regard, in particular, to paras 2.6.4 and 2.7.10 of EN-3 which deal with the need to consider at what phases of the Project issues such as transport are most relevant and the suitability of the access routes to the proposed site.

4.422 We examined the issues through written questions [PI-006, Q2.1-2.14; PI-009, Q2.15-2.35] and at an ISH [EV-011/2].

4.423 During the course of the Examination we covered a range of related issues including the enforcement of management plans associated with transport, worker parking and the use of public transport. We consider, however, that the key issues that need to be addressed are those set out below:

- impacts of delivery of offshore components, including choice of port(s), the scope of the EIA in this respect, and abnormal loads for offshore construction;
- assumptions behind traffic forecasts including construction worker travel scenarios;
- adequacy of mitigation in, for example, the Construction Travel Plan and Outline Construction Traffic Management Plan;
- abnormal loads – onshore construction;
- effects of trench cutting/HDD on traffic on the A683.

4.424 These issues are considered in turn below.

Development Consent Order (DCO)

4.425 Some introductory comments on the DCO and its evolution during the Examination are helpful in considering the issues below. Section 7 discusses the DCO in more detail and notes that in considering the initial draft of the DCO [AD-004] we had concerns about the relationships between and references to plans, with a lack of consistency in naming of plans one of the issues to be addressed. There are two key transport-related plans referred to in our discussion below:

- the Outline Construction Traffic Management Plan (OCTMP) is to be certified (Article 40), and individual stage CTMPs must be approved by the RPA and be consistent with it. This is secured by r.31 in the recommended DCO (Appx 4). This plan featured in the first draft DCO, though was not consistently referenced [AD-220 is titled Onshore CTMP]. It is an outline plan relating to onshore construction transport, and the requirement is unexceptional;
- the Port Construction Traffic Management Plan (PCTMP) relates to offshore construction traffic. It was not a requirement in the first draft DCO but has evolved in response to PPAA concerns and is the main issue discussed below. In the ExA's recommended DCO (Appx 4) this is secured through r.32.

Impacts of delivery of offshore components

4.426 The PPAA raised concerns in their LIR [LIR-001] that the potential impacts of the offshore construction and operation and maintenance base activities upon the transport network are not examined in the ES, which the PPAA suggested therefore failed to meet the requirements of the Infrastructure Planning (EIA) Regulations 2009 [LIR-001; SCG- 012; and particularly D3-001]. They argued that the ES should have identified and assessed traffic impacts which occur onshore resulting from the movement of materials to the construction port or any other port used for the onward transportation of materials to the Project site.

4.427 We addressed this by requesting submissions from both the Applicant and the PPAA to clarify their respective positions on the adequacy of the ES [P1-008]. We suggested that, if the parties could reach an agreement, then a new SoCG would be an acceptable alternative to two submissions.

4.428 This resulted in an Update to the SoCG between the Applicant and the PPAA in respect of transport [D4-014]. This recorded, at para 19.8, that the PPAA accept that it is reasonable for the Applicant not to have chosen the construction port(s) or quarries at the present time. The PPAA acknowledge that there are uncertainties and a substantial number of variables associated with the selection of quarries, ports and transport routes that make a detailed assessment challenging at this time.

4.429 The Applicant submitted a Transport Statement (TS), dated 13 March 2014 [D4A-015], with appendices, figures and plans [D4A-012 to D4A-014] which is designed to provide an assessment of potential onshore traffic impacts associated with the offshore construction of the Project. Whilst it re-iterated that confirmation of the construction port(s) is not possible at this stage, it did identify three potentially suitable ports in Cumbria and Lancashire:

- Heysham Port, Lancashire;

- Barrow Port, Cumbria;
- Fleetwood Port, Lancashire.

The Applicant undertook an initial assessment of possible routes to be used for each of these ports.

4.430 The TS confirmed that all wind turbine and substation components and cables would arrive by sea and that, therefore, there would be no Abnormal Indivisible Loads (AIL) associated with the offshore element of the Project. The issue mainly focusses, therefore, on the transportation of aggregates stated to be used in scour protection and rock armouring.

4.431 The PPAA accepted that the impacts would be capable of being fully identified and mitigated through the submission of the PCTMP, which would need to be approved by the RPA, and accompanying Transport Assessment and Air Quality Assessment [D5-001]. We examined this issue in some detail at the ISH on transport held on 26 March 2014. We considered, in particular, the mitigation of potential impacts including the scenario in which the traffic and transport impacts arising out of the use of a particular port could not be mitigated to the satisfaction of the local planning and highways authorities.

4.432 The Applicant's summary of this ISH [D5-019] stated that, given the worst case assessment and range of mitigation solutions presented in the TS, it thinks it unlikely that this risk would arise. The PPAA did not dissent from this view. Further, the Applicant stated that an alternative solution exists, namely the procurement of aggregate from outside the UK and transportation of it by sea. The overall conclusion was that there would be no significant impacts resulting, with appropriate measures in place. At the hearing the PPAA confirmed that, following the clarifications provided by the Applicant, they considered that the environmental information was adequate and compliant with EIA requirements.

Conclusion

4.433 Whilst the ExA had not concluded that the ES contained insufficient information so as to be in breach of the Infrastructure Planning (EIA) Regulations 2009, we did consider that, in addressing the impact of traffic generated by offshore construction and other activity, the PPAA did raise a relevant concern which we needed to consider. We welcomed the constructive dialogue that ensued between the Applicant and the PPAA to address that concern and, in particular, the preparation of the TS with the clarification it provided. As noted earlier in the subsection of this report on the ES and EIA, we consider that, given the understandable uncertainty about aspects of certain phases of the Project, the environmental information available to us has been adequate to allow a full and proper assessment of likely significant environmental impacts.

4.434 We recognise that, in projects of this nature, the choice of a port or ports – and of, for example, sources of aggregate – may not be able to be made before or during the Examination period for technical or commercial reasons. It is necessary, therefore, to seek to ensure that mechanisms are in place that would ensure that, when such details are available, the impacts are assessed in a robust way and that mechanisms exist to ensure that identified impacts are mitigated to the satisfaction of the local planning and highway authorities. We consider the requirement for a PCTMP, to be approved by the RPA, meets that need.

4.435 We conclude that the initial assessments contained in the TS [D4A-016] and, more particularly the safeguards and protections contained in r.32, including the definition of 'transport assessment' contained in this requirement, are sufficient to ensure both a robust assessment and the potential for adequate mitigation of assessed impacts to be put in place before the commencement of any authorised development. We consider that there is no evidence before us that would indicate that there is anything insurmountable, or would lead to such significant impacts that would weigh heavily against the grant or implementation of any consented Order subject to the drafting identified.

Assumptions behind traffic forecasts including construction worker travel scenarios

4.436 We recognise that the PPAA SoCG [SGG-012] records that, overall, the ES methodology and assessment of significance of the effects of the Project in the submitted ES, including the derived traffic model, are agreed between the parties.

4.437 We examined the basis for the estimates of the traffic generation by construction workers through our first written questions and, in particular, the assumptions on worker arrival times and the basis for the worst case scenario including assumptions about the origins of the potential labour supply raised by the HA in its Relevant Representation [RR-055]. We noted that other parties, including the PPAA through the LIR, did not raise issues surrounding these assumptions.

4.438 We were reassured that the SoCG with the HA [SCG-014] set out the factors taken into account in estimating the origins of the potential labour supply. Having done this, the SoCG recorded an agreement between the HA and the Applicant on this issue and notes that the HA agrees that the assumptions and findings presented in the ES and subsequent clarifications represent a robust assessment.

Conclusion

4.439 Having taken into account the explanations of the assumptions behind the traffic forecasts and the recorded agreements between

the Applicant and the relevant highway authority and HA, we conclude that the traffic forecasts do form a robust basis on which to assess impacts and the efficacy of possible mitigations.

The adequacy of mitigation

4.440 In assessing the adequacy of mitigation we have drawn primarily on the OCTMP [AD-219]. We have considered also the Onshore Construction Travel Plan [AD-220]. While not secured directly through a requirement in the DCO, the CoCP [AD-065] requires that the individual CEMPs that must be approved by the RPA for each stage of connection must include a range of specific management plans, one of which is for traffic management [AD-219, 2.2.2] .

4.441 We note, first, that the SoCG with the HA [SCG-014] records that the HA agrees that the Project would not have a significant impact upon the strategic road network. It concludes by recording an agreement that there are no outstanding matters between the parties other than those set out in this SoCG. The matters outstanding in this SoCG relate to the implications for traffic arising from the choice of port. This is dealt with above.

4.442 We note, secondly, that the PPAA's LIR [LIR-001] raised concerns about the cable crossing under the A683, temporary access roads and site access, abnormal loads and the use of Carr Lane, the road going south and west to the sea from Middleton Road. These are dealt with elsewhere in this part of our report.

4.443 The SoCG with the PPAA [SCG-012] records an agreement between the Applicant and the PPAA on the issue of traffic impact and states that, with the exception of concerns related to the choice of ports, Lancashire County Council, as the relevant highway authority for the works applied for, is content that the traffic associated with the Project can be accommodated on the local highway network. Also, that no further highway works, other than those proposed as part of the Project, are required to mitigate the traffic impacts of the Project.

Conclusion

4.444 In coming to our conclusion on the adequacy of mitigation in the Onshore Construction Travel Plan and OCTMP we have taken into account the agreement on onshore traffic impacts from both the HA and the relevant highway authority and the fact that both bodies conclude that the level of impact can be addressed by the improvement works already included in the DCO and via the approval of CTMPs for individual stages of the work.

4.445 The ExA concludes, therefore, that there are no issues surrounding the mitigation of impacts arising from the onshore works that would prevent the Order being made in the form recommended.

Abnormal loads – onshore construction

4.446 There is the need to consider the impact of any abnormal loads arising out of the onshore construction of the export cables and associated infrastructure (EN-1, 5.13.1). Chapter 28 of the ES [AD-095] states that AIL would be a maximum of 100 for the Project. This is evidenced in Table B19D.E of the Assumptions made to derive the construction traffic forecasts [AP-222].

4.447 The OCTMP [AD-219] states in para 3.9 that the Applicant proposes that the larger abnormal loads would arrive via Heysham Port and be transported a short distance along the A683 to the main site compound whilst some of the smaller AILs may be transported along the M6.

4.448 The AIL Access Study [AD-221] states that access for the 30 tonne cable drums becomes difficult in Carr Lane and that the provision of lay-bys and traffic management systems is strongly advised. However, the Applicant's response to our Q14.6 [D1-040] records that the Applicant and Lancashire County Council as the highway authority considered the impact of such lay-bys and agreed that temporary traffic management may be more acceptable. This issue can properly be addressed when a CTMP is approved for each stage of connection works as secured in r.31. We consider this to be a workable solution.

Effects of trench cutting/HDD on traffic on A683

4.449 The proposed export cables cross the route of the A683 in order to access the electricity connector substation to the north of that road. This is described in Work No.22.

4.450 Chapter 28 of the ES [AD-095] stated that the width of this road does offer the potential to close a single lane at a time and that cable system laying by open cut trench is considered to be an appropriate method for crossing this road, whilst raising the possibility of HDD.

4.451 Lancashire County Council, as the relevant highway authority, stated its preference for HDD to be employed. The reason given by the PPAA in the SoCG [SGG-012] is that the A683 is of strategic importance serving the Port of Heysham and should not be subject to unnecessary closure.

4.452 Following a request from the ExA made at the ISH on the DCO held on 27 January 2014, the PPAA provided further information as to potential highway impacts associated with cable installation beneath the A683 [D3-003]. The reasons given by the PPAA for preferring HDD included the speed of traffic on that stretch of the road, large traffic flows associated with ferry arrivals at Heysham Port, the presence of large numbers of HGVs and the potential effect of works on the Heysham – M6 link road on traffic on the A683.

4.453 On the latter point, the Applicant's summary of hearing for the ISH on transport issues held on 26 March 2014 [D5-019] states that the PPAAs confirmed that the M6 link should be completed by the third quarter of 2016, and the Applicant confirmed that its onshore works are programmed for late 2016/early 2017.

4.454 The Applicant stated a willingness to adopt HDD as the method in this case and proposed [D4-014] a new requirement to read:

> *"The connection works and maintenance thereof comprised in Work No. 22 shall only be undertaken by means of horizontal directional drilling, unless the detailed design of the connection works and/or the advice received from the contractors appointed by the undertaker demonstrates that horizontal directional drilling is not feasible in which case the undertaker shall be authorised to undertake the connection works and maintenance thereof by the method known as open cut trench, or such alternative method as may be agreed with the relevant planning authority in consultation with the highway authority."*

4.455 The PPAA agreed in the SoCG Update on Transport Issues [D4-014] that the proposed new requirement is an acceptable way forward. We noted this agreement between the PPAA and the Applicant in this respect but saw the need to examine the proposed requirement taking into account the six tests for conditions contained in paragraph 206 of the Framework[30] and the PPG. We considered it particularly relevant to examine whether this proposed requirement is necessary and reasonable in all other respects.

4.456 In looking at this, we had particular regard to the extent of the potential problem that HDD was meant to address. This was set out in the SoCG Update on Transport Issues [D4-014]. Trenching would take three weeks and, with alternate one-way working using temporary lights, queuing traffic could be dissipated in a 70-second cycle time in the evening peak (17:00 – 18:00) during the period of peak construction activity. The Applicant felt that, with these measures in place, residual traffic impacts related to traffic delays on the A683 are not considered to be significant [EV-011].

4.457 We examined this issue at the ISH held on 26 March 2014. The PPAA queried the basis for the estimates of traffic flows used to predict the dispersal times for queuing traffic and, in particular, that the estimates did not take into account traffic using the Isle of Man ferry, the traffic generated by the possible construction of Heysham South Wind Farm or the traffic generated by the possible choice of Heysham for the delivery of offshore components. However, the PPAA did not put forward alternative estimates and

[30] "*Planning conditions should only be imposed where they are necessary, relevant to planning and to the development to be permitted, enforceable, precise and reasonable in all other respects*."

appeared uncertain as to the timings of sailings of the Isle of Man ferry.

4.458 Consequent on this hearing, the Applicant provided a Clarification Note on Open Cut Trenching, A683 as Appendix 1 to its summary of hearing [D5-019]. This analysed traffic flows on the A683 focussing on the period before and after ferry arrivals and departures and found that flows are less in these periods than in the peak times for which the delays through the use of one-way working were assessed and that, therefore, the 70-second delay held true for flows associated with ferry movements.

4.459 This clarification note also addressed the issue of increased flows associated with the TT Races on the Isle of Man and the Applicant committed to programming its works either side of this event. Further, it proposes that this could be secured in due course by a CTMP required to be submitted to and approved by the RPA (Lancaster City Council) pursuant to r.31.

4.460 We noted the Applicant's estimate of the cost of HDD as being in the region of £300,000, probably some three times the cost associated with open cut trenching, set out in the updated SoCG between the PPAA and the Applicant [D4-014, 19.5] but this was only one amongst other determinants of our conclusion.

Conclusion

4.461 The ExA focused particularly on the six tests for the imposition of conditions set out in the Framework and PPG. We took into account the length of time that construction would take and the limited time estimated for delays to traffic on each traffic light cycle – even at peak times and related to ferry movements. We noted that the PPAA did not put forward alternative estimates for delays or the costs to motorists of such delays.

4.462 Given all this, the ExA does not consider that the proposed new requirement passes the six tests and, in particular, the tests of necessity and reasonableness. We have not, therefore, included this requirement in our recommended DCO (Appx 4).

4.463 In coming to this conclusion, we recognise that the absence of a requirement does not prevent the Applicant from undertaking HDD for Work No.22 if it so wishes.

Other issues

4.464 The ExA's recommended DCO (Appx 4) contains provisions for street works (Article 10), the temporary stopping up of streets (Article 11) and of public rights of way (Article 12), laying out access to works (Article 13) and agreements with street authorities (Article 14). Schedule 2 lists those streets subject to street works, Schedule 3 lists those streets to be temporarily

stopped up, Schedule 4 lists those public rights of way to be temporarily stopped up and Schedule 5 lists access to works.

4.465 We did not receive any evidence questioning the desirability or extent of these works, and no issues were identified in the PPAA's LIR [LIR-001] or their SoCG with the Applicant which set out areas of disagreement [SCG-012]. We consider these provisions in the DCO to be proportionate and necessary.

Overall conclusion on transport

4.466 We consider that the assessment of transport impacts are as thorough as can reasonably be expected in the absence of final decisions about the ports to be selected. We conclude that the requirements in the DCO provide suitable management arrangements to ensure the impacts can be mitigated and that the powers sought in relation to highways matters are necessary and proportionate. We therefore conclude that, in respect of traffic and transport issues, there are no barriers to the SoS making the DCO as recommended by the ExA (Appx 4).

5 FINDINGS AND CONCLUSIONS IN RELATION TO HABITATS REGULATIONS

5.1 The SoS for Energy and Climate Change is the competent authority for the purposes of the Habitats Directive and the 2010 Habitats Regulations for applications submitted under PA2008. This section of our report discusses the assembled evidence regarding likely significant effects for all European sites potentially affected by the proposed development. To assist the SoS in performing his duties under the Habitats Regulations we draw conclusions and make recommendations regarding likely significant effects on European sites and the available mitigation options where they are considered to be necessary.

Policy context

5.2 The European policy context is referred to in Section 3 of this report. European sites - SACs and SPAs - are protected under the Habitats Regulations 2010 (as amended)[31]. As a matter of policy the Government also applies the protective procedures to potential SPAs (pSPAs), a possible/proposed SAC (pSAC) and listed and proposed Ramsar sites[32].

5.3 Where assessment relates to a European offshore marine site consultation with NE and the JNCC was necessary. However, as referred to in the subsection on biodiversity and ecology above, new arrangements came into force during the course of the Examination whereby NE has taken over the sole responsibility for providing advice for offshore renewable energy projects out to 200nm.

5.4 EN-1 (section 4.3) sets out the policy context to which the decision-maker must have regard under the Habitats Regulations. It states that an applicant should provide the competent authority with the information it can reasonably require to determine whether an appropriate assessment (under Regulation 61 of the Habitats Regulations) is required; and if one is required, the information necessary to allow the competent authority to conduct the appropriate assessment, including any information on mitigation measures proposed to minimise or avoid effects. Consent can only be granted if, having assessed the effects the project would have on European sites, the competent authority considers it passes the relevant tests in the Regulations.

5.5 Planning Inspectorate Advice Note 10[33] summaries the four-stage process that should be followed to ensure sufficient information is

[31] The Conservation of Habitats and Species Regulations 2010 as amended by The Conservation of Habitats and Species Regulations (Amendment) Regulations 2012.
[32] Convention on Wetlands of International Importance Especially as Waterfowl Habitat: Ramsar 2/2/1971 as amended.
[33] Planning Inspectorate Advice Note 10: Habitat Regulations Assessment relevant to nationally significant infrastructure projects.

available to support the competent authority in satisfying the Regulations. The four stages detailed within Advice Note 10 are:

- Stage 1 - screening;
- Stage 2 - appropriate assessment;
- Stage 3 - assessment of alternative solutions;
- Stage 4 - IROPI (Imperative Reasons of Overriding Public Interest).

5.6 The screening stage is carried out to determine if significant effects alone or in combination with other plans or projects are likely to occur. If significant effects can be excluded on the basis of objective evidence, and if the competent authority agrees this is the case, then no further action is required and the project can be consented. If, on the other hand, significant effects are likely or cannot be excluded, the competent authority must undertake an appropriate assessment of the implications of the project for a European site in view of the site's conservation objectives.

5.7 The application was accompanied by a HRA Report [AD-052]. This included screening matrices for each European site within the assessment [AD-054]. These matrices were updated by the Applicant and submitted for Examination Deadline IVa [D4A-003]. In order to assist the SoS in carrying out his responsibility as competent authority we have, with the support of the Planning Inspectorate's Environmental Services Team, prepared the RIES attached (Appx 5). The RIES is based on the original HRA Report, the Applicant's updated matrices, together with Relevant Representations, Written Representations and additional information and evidence from IPs, including NE and Natural Resources Wales (NRW) as the SNCBs, produced during the course of the Examination as a response to queries raised by IPs and our questions.

5.8 The purpose of the RIES (and the consultation responses received on it) is to compile, document and signpost information provided within the DCO application, and the information submitted throughout the examination by both the Applicant and IPs. It is issued to ensure that all IPs, including the SNCBs, are consulted formally on Habitats Regulations matters. In our view this process may be relied on by the SoS for the purposes of Regulation 61(3) of the Habitats Regulations in the event that it is concluded that an appropriate assessment is required.

5.9 The screening that has taken place as part of the RIES, and which is described more fully below, suggests that the mitigated Project would not have any LSE, either alone or in combination with other projects. Our conclusions and recommendations in this regard are set out at the end of this Section.

5.10 The RIES was published on 14 April 2014 and comments were invited. The only comments made on the RIES are those of the

Applicant and NE. These largely seek to point out omissions and provide clarification and do not undermine the conclusions of the matrices that the Project, with mitigation, would have no LSE on any European site. Indeed, the comments made serve to strengthen the conclusions drawn [D6-005; D6-006].

Project location in relation to European sites

5.11 The proposed development comprises offshore works for the construction, operation and decommissioning of a wind farm covering some 149km^2 of the Irish Sea. As set out in Section 2 of this report, the wind farm would be adjacent to the existing Walney I and II Wind Farm. At its nearest points the Project would be some 19km west-south-west of the Isle of Walney and 26km south-west of the Millom coast in Cumbria. It would lie about 31km from the Isle of Man. The wind farm would be connected via underground cables to a new substation near Heysham in Lancashire.

5.12 The offshore wind farm component of the proposed development is not located within and nor does it directly affect a European or Ramsar site. However, the offshore cable corridor lies on the boundary of the Shell Flat and Lune Deep SAC and runs through the northern extent of the Liverpool Bay SPA, crossing the Morecambe Bay SAC, SPA and Ramsar sites to make landfall to the south of Heysham [AD-052, s5]. The Project is not directly connected with, or necessary for, the management of these sites or any of the other European sites, totalling 67, which were identified for assessment within the Applicant's HRA Report [PI-018 s2; AD-052]. These sites, with their description and qualifying features, are set out in Table 3.2 of the Applicant's HRA Report.

5.13 The Applicant's HRA Report indicates that there are no onshore (terrestrial) Natura 2000 sites directly affected by or likely to be indirectly affected by the onshore cable corridor or substation site [PI-018, s2].

5.14 The study area for HRA was taken as the relevant works area (marine and terrestrial) plus a buffer area, together with a wider area whose extent reflected the spatial scope of a potential mechanism for an effect by the Project on particular receptors. These study areas differed depending on receptors. They ranged from the site plus a 500m buffer zone for direct effects on Annex I[34] habitats (or, for sub-tidal marine Annex I habitats, the approximate extent of one tidal excursion); to the eastern Irish Sea (for fish); and a wider Irish Sea zone (for marine mammals). Differing study areas were adopted for birds in terms of potential displacement by the Project, for passage and over-wintering birds,

[34] Annex I of the Habitats Directive.

and for breeding seabird colonies [AD-052, Table 3.1]. Some birds had multiple study areas depending on season and behaviour (for example to pick up spatial differences in the distribution of breeding, migrating, or wintering bird species).

5.15 In the Applicant's HRA Report the determination of LSE involved a preliminary consideration of whether a qualifying feature of a European site is likely to be directly or indirectly affected. In a case where a significant effect is likely a fuller consideration is then applied using additional analysis and information to confirm and justify the presence or absence of LSE [AD-052, 3.3.8; PI-018]. Appropriate assessment is needed only in cases where LSE is identified or cannot reasonably be excluded.

5.16 The European sites for which LSE have been identified in the Applicant's HRA Report are:

- Morecambe SAC;
- Morecambe SPA and Ramsar;
- Liverpool Bay SPA;
- Bowland Fells SPA;
- Ribble and Alt Estuaries SPA;
- Skokholm and Skomer SPA;
- Aberdaron Coast and Bardsey Island SPA;
- Copeland Islands SPA.

5.17 Descriptions of these sites and their qualifying features are provided in the Applicant's HRA Report [AD-052]. The RIES (PI-018] lists these features in the matrices. Whilst the Applicant's HRA Report treats the Morecambe Bay SPA and Ramsar sites together, for clarity the RIES has separated these out. The location of these sites and other European sites considered are shown in Charts 2.3, 4.3, 5.1-5.5, 8.3-8.6 [AD-053].

Conservation objectives

5.18 The conservation objectives for the European sites for which LSE have been identified are broad and varied. These include the avoidance of deterioration of habitats of the qualifying features and the significant disturbance of these features. This is to ensure the integrity of the site is maintained and that it makes a full contribution to achieving the aims of the Birds Directive or, in the case of a SAC, to achieving Favourable Conservation Status of each qualifying feature (Morecambe Bay SPA and Ramsar, and SAC, and Bowland Fells SPA) [AD-052, 7.3.7, 7.7.3]. For Skokholm and Skomer and the Aberdaron Coast and Bardsey Island SPAs the vision is for the Manx shearwater (*Pufinus pufinus*) feature of the SPAs to be in Favourable Conservation Status [AD-052, 7.9.2].

5.19 For Liverpool Bay SPA the conservation objectives are to maintain the population of the red-throated diver (*Gavia sellata*) and the

common scotor (*Melanitta nigra*) and their supporting habitats in favourable condition [AD-052, 7.5.9]. The Ribble and Alt Estuaries SPA objectives are to maintain in favourable condition habitats for populations of regularly occurring Annex I species, migratory bird species and those which contribute to the wintering waterfowl assemblage of European importance [AD-052, 7.6.4].

5.20 The Applicant's HRA Report states that the conservation objectives for Copeland Islands SPA have not been identified but that in their absence it is assumed the objective is to maintain the breeding population of Arctic tern (*Sterna paradisaea*) and Manx shearwater [AD-052, 7.10.3].

HRA implications of the Project

5.21 The Applicant developed a three-step approach for determining LSE. This involved defining which sites are present in the study area and which are outside but which support qualifying interest features of European sites. Existing literature and site surveys were then reviewed to determine species presence within the study area before finally determining possible mechanisms for an effect [PI-018, s2].

5.22 The potential impacts upon identified European sites, whether at construction, operational or decommissioning stages and in-combination with other projects, are set out in Table 2.1 of the RIES. For ornithological features these include disturbance, displacement and avoidance, and collision risk. For fish these include death or injury and behavioural disturbance resulting from piling noise, increased suspended sediment concentration (SSC) from foundation installation and EMF effects.

5.23 Marine mammals could potentially be affected by habitat loss, displacement and disturbance resulting from piling and other construction activities, increased vessel strike, and distribution and abundance of prey species. For Annex I habitat features impacts could result from increases in SSC, habitat loss as a result of cable installation and turbine foundations, and changes to the sediment transport regime because of the presence of turbines.

5.24 The Applicant's HRA Report provides information about which projects were considered for each in-combination assessment (for each relevant screened-in SAC or SPA). It provides the rationale for determination of the sources of impact based on the receptors affected. NE has not queried the extent of offshore wind farms included in the in-combination assessment and identified in the Applicant's HRA Report [D6-005, 2.13]

5.25 NE and other IPs were consulted on the HRA Screening and Scoping Report and a draft HRA Report. Section 10 of the Applicant's HRA Report summarises the consultation undertaken and the responses received in relation to these [AD-052].

5.26 There have been no representations to suggest that sites other than those discussed at Stage 1 (screening) within the RIES (and listed in the Applicant's HRA Report) should have been considered further for screening for LSE.

5.27 During the Examination we became aware of a consultation exercise being conducted by NRW into proposed changes to extend three SPAs at Aberdaron Coast and Bardsey Island, Skokholm and Skomer, and Grassholm. The consultation period was to run until 25 April 2014. Whilst acknowledging that no decisions about the possible extension of these SPAs would be taken until all responses had been considered, we invited NRW to comment in terms of what, if any, implications possible changes might have for HRA for the Walney Project [PI-010].

5.28 NRW responded that it was of the opinion that none of the proposed changes to the three SPAs would require a review of the HRA. We have no reason to come to a contrary view [D4A-06].

5.29 The RIES has included Martin Mere SPA in the Stage 1 matrices [PI-018, Stage 1 matrix 5]. This was not taken forward to Stage 2 as no LSE on qualifying features of the SPA were identified. The Applicant's HRA Report did assess the Whooper swan (*Cygnus cygnus*) and pink-footed goose (*Anser brachyrhynchus*) features of this SPA, with a conclusion of no LSE [AD-052, Table 6.12].

5.30 However, NE's Written Representation advised that an adverse effect conclusion could not be excluded given its understanding of information at that time. NE's position changed by the close of the Examination; following review of additional information provided in a Clarification Note on the Applicant's approach to collision risk modelling for the pink-footed goose and Whooper swan [D1-045], and discussion with the Applicant, it was able to agree that there would be no LSE on the SPA [PI-018, s3; D6-005, 2.12; D6-006].

5.31 Specific mitigation measures are discussed in relation to individual sites. However, the following general requirements of the recommended DCO, and conditions of the two DMLs, provide for wide-ranging control and mitigation of impacts.

5.32 Requirement 2 sets out the detailed offshore design parameters of the Project whilst r.16 controls the onshore connection works, and includes the need for an environmental management and monitoring plan to be approved by the RPA in consultation with NE and the MMO. Requirement 27 provides that all connection works must be undertaken in accordance with the principles set out in the certified CoCP, whilst a Construction and Environmental Management Plan (r.28), covering matters in the CoCP, also requires the approval of the RPA, in consultation with NE (Appx 4).

5.33 Conditions within the DML(G) and DML(T) similarly ensure control and mitigation. DML(G)c.11-14 provide for the need for

agreement of pre-construction plans, documentation, surveying and monitoring both during and post construction. DML(T)c.9-11 do the same in respect of the latter. Conditions 15 and 12 respectively require the submission and approval of a decommissioning plan (Appx 4).

Assessment of effects resulting from the Project, alone and in combination

5.34 Section 3 of the RIES [PI-018] sets out the matrices for screening those sites where there is potential for a LSE on qualifying features. Section 4 summarises whether there would be anticipated effects on the integrity of each site in the context of their conservation objectives, which would lead to a requirement for appropriate assessment. We report initial positions, movement during the Examination, final positions and recommend whether in our opinion LSE can be excluded.

Morecambe Bay SAC

5.35 The only identified potential significant effect on the SAC shown in the RIES is in relation to the intertidal mudflats and sandflats not covered by seawater at low tides as these would be crossed by the export power cables [PI-018, Stage 1 Matrix 7]. Clarification by the Applicant has provided further evidence that cable installation and operation (including rock armour) would not result in a LSE on either this feature, or other features of the SAC [D1-047; D6-005, 2.41].

5.36 Only 0.41% of the estimated 600ha of mudflat/sandflat habitat at Middleton Sands would be impacted (only part of a much wider extent of this habitat feature in the SAC). Because of the small area affected, coupled with rapid recovery of the physical and biological conditions, and with no change in habitat structures expected to occur, no adverse effect is predicted on this feature [D4A-003, Stage 2 matrix 6]. NE agrees with this conclusion regarding these site features [D1-019, 6.5.9; D6-006].

5.37 The export cable route does not overlap with areas of confirmed Annex 1 stony reef [AD-052, Table 5.2]. If open-cut trenching is used then reinstatement would be undertaken to backfill the trenches to aid habitat recovery, minimising disturbance to the mudflats and sandflats features of this SPA. This is secured through DML(T)c.9(1)(c)iii. NE agrees with the Applicant's assessment and the conclusion of no LSE [D1-019, s6.4; D6-005, 2.16].

5.38 The export cable could pass through possible areas of sandbank features of the SAC and thus potentially could result in habitat loss or disturbance. The Applicant's clarification note on cable installation and maintenance suggests no LSE on this feature, an assessment with which NE agrees [D1-047; D1-019].

5.39 HDD is now proposed for the installation of the export cabling across the saltmarsh within the SAC. Further mitigation is proposed in the event of drilling fluid breakout (secured through recommended DCO r.16(3) and DML(T)c.8(2)), and the Applicant and NE have concluded there would be no LSE effect on Salicornia and other annuals and Atlantic salt meadow [D5-039; D6-005, 2.36].

5.40 We consider the weight of evidence supports the conclusion of no LSE on the Morecambe Bay SAC, a view expressly supported by NE.

Morecambe SPA

5.41 The RIES at Stage 1 identifies potential impacts on the breeding lesser black-backed gull (*Larus fuscus*) and breeding herring gull (*Larus argentatus*) from operational turbine collision from the Project, both alone and in combination with other projects. Disturbance /displacement during the installation of the export cables is identified for various species of wintering and on-passage birds [PI-018, Stage 1 matrix 8].

5.42 The lesser black-backed gull is a feature of the SPA for which the Project, when operational, is not considered to act as a barrier to movement. However, as collision risk with turbines was identified as a potential impact, the Applicant undertook further collision risk analysis, together with SPA apportionment. This was in response to NE's Relevant Representations [RR-063; D4-016].

5.43 Of the 24 predicted breeding season collisions at the Project site (based on the worst case turbine scenario and using Band (2012) Option 2 model and a 98% avoidance rate), some 17 collisions are predicted and apportioned to Morecambe Bay SPA [D4-016, Table 10 Appendix 13; PI-018, Stage 2 matrix 7; D4A-003].

5.44 Additional analysis has been carried out of the likely in-combination collision risk to this species at the Project site [D4-016, Appx 13]. In combination, a total of 113 breeding season collisions are predicted for the Project in combination with nine other offshore wind farms present or proposed (Burbo Bank Extension Wind Farm) in the Irish Sea within mean-maximum foraging range of the Morecambe Bay SPA.

5.45 The Applicant's Potential Biological Removal (PBR) analysis identifies this as a sustainable impact, with a conclusion of no adverse effect from the Project in-combination with other projects in respect of this SPA feature. This was discussed with NE. As the approach followed that provided for the Burbo Bank Extension Wind Farm project NE considered it was appropriate to agree a conclusion of no adverse effect on the integrity of this feature of the SPA from predicted impacts from the Walney scheme [D4A-003; D5-039; SCG-019].

5.46 Additional analysis of the likely collision risk to herring gulls has been carried out by the Applicant. This suggests that of the in-combination 36 breeding season herring gull collisions predicted at the Project site (using the worst case turbine scenario, Band (2012) Option 2 and a 98% avoidance rate) 17 collisions can be apportioned to this SPA. This, together with the Applicant's PBR analysis, leads it to conclude no adverse impact on site integrity for the Project alone. This is the same conclusion when applied to the in-combination effect from the four additional offshore wind farms within the mean-maximum foraging range of the herring gull colony at this SPA. It is a conclusion shared by NE [D4-019, Appendix 14; AD-052, s8.9.10; D4-019, para 50 of the NE Supplementary Expert Report].

5.47 Additional mortality of 0.35% from collision with turbines for the west coast flyway population of the pink-footed goose is predicted for this feature of the Morecambe Bay, Ribble & Alt Estuaries and Martin Mere SPAs. This scale would be smaller still if shared out between the SPAs. NE suggests this would not be a discernible effect arising from the Project alone or in combination with other plans and projects and, as such, there would be no LSE on this feature [D4-036, Supplementary Expert Report].

5.48 To avoid disturbance to internationally and nationally important numbers of water birds using the intertidal zone, construction works would be conducted outside the period October to March. In addition, there would be tidal working restrictions in the first two weeks in April, to avoid disturbance to migratory birds. These restrictions are agreed by NE and are secured by DML(T)c.8(1) [PI-018, Stage 2 matrix 7; D5-039; SCG-018].

5.49 In our view, the weight of evidence supports the conclusion of no LSE on features of the SPA either alone or in combination with other plans or projects, a view supported by NE.

Morecambe Bay Ramsar

5.50 The same potential impacts to the lesser black-backed gull, herring gull and a range of water birds as detailed above for the Morecambe Bay SPA have been identified. The Applicant's assessment of collision risk to these gulls has not distinguished between these birds as SPA features and Ramsar features. However, the same analysis is applicable and the same conclusions (agreed by NE) of no adverse effect either alone or in-combination for these SPA features can be reached [D4A-003; PI-018, Stage 2 matrix 7].

5.51 The same conclusion is applicable to disturbance from intertidal construction work in respect of water birds [SCG-018].

5.52 Given the above, as with the conclusion for Morecambe Bay SPA, we consider the evidence supports the conclusion of no LSE alone

or in combination with other plans or projects, a conclusion also supported by NE.

Liverpool Bay SPA

5.53 The RIES notes the possible impact from displacement/disturbance for two features of this SPA - the red-throated diver and the common scoter. The citation data for the SPA show low numbers of both qualifying features along the route of the offshore cable corridor where it crosses the SPA's northern limit. They both occur only seasonally in the SPA [D4A-003; PI-018, Stage 1 matrix 4].

5.54 The disturbance to the SPA is temporary and of short-term duration, with an assessed worst case being 21 days per cable, for each of 5 cables. With slow-moving boat traffic the Applicant assesses the disturbance to be not beyond background levels to which the species are currently exposed. The Applicant concludes that the cable laying operation would not have an adverse effect on the integrity of this SPA from displacement of either species [PI-018, Stage 2 matrix 4]. There have been no comments from NE to suggest an alternative conclusion.

5.55 We therefore consider the evidence supports the conclusion that the Project would have no LSE in respect of the qualifying features of this SPA alone or in combination with other plans or projects.

Bowland Fells SPA

5.56 The RIES indicates that the lesser black-backed gull is the only feature of this SPA with which it is assessed the Project could have an impact. The Applicant's HRA Report considered that because of concerns over the conservation status at this SPA a LSE arising from possible turbine collision at the Project and in-combination could not be ruled out at that stage [AD-052, Table 6.11; PI-018, Stage 1 matrix 2].

5.57 The Applicant submitted a clarification note on in-combination collision risk and SPA apportioning[35] [D4-016]. This suggests two collisions per annum apportioned to this SPA. In combination with nine other offshore wind farm projects within the mean-maximum foraging range of the SPA, PBR analysis identifies this as a sustainable impact. This leads the Applicant to conclude no adverse effect for the Project alone or in combination. The clarification note was discussed with NE. As the analysis followed the same approach as that for the Burbo Bank Extension Wind Farm, NE considered it appropriate to agree with this conclusion [D4A-003, Stage 2 matrix 2; PI-018, Stage 2 matrix 2; D5-039].

[35] The same note as already referred to which analysed likely impact on Morecambe Bay SPA and Ramsar for this feature.

5.58 On the above basis we consider the evidence supports the conclusion that the Project would have no LSE in respect of the qualifying features of this SPA alone or in combination with other plans or projects, this being supported by NE's views.

Ribble and Alt Estuaries SPA

5.59 No wildfowl or wader species were recorded on the Project site. Analysis shows estimated collision risk to the assemblage of water bird species using the coastal network of SPAs, including the Ribble and Alt Estuaries, to be very low with no LSE predicted [AD-052, s6.3.6 and Tables 6.8-6.10].

5.60 A similar conclusion is reached in respect of the Whooper swan whereby any increase in mortality as a result of collisions with the Project is considered immeasurable against the level of background mortality, allowing for measurement error and variability. NE therefore agrees that it is possible to conclude no LSE for the breeding Whooper swan feature of both this and the Martin Mere SPAs [D4-036, Supplementary Expert Report].

5.61 The RIES suggests that the lesser black-backed gull is the only feature of this SPA on which the Project could have an impact. No barrier to movement is predicted. However, the Applicant's HRA Report considered that because of concerns over the conservation status at this SPA a LSE arising from possible turbine collision at the Project (and in-combination) could not be ruled out at that stage [AD-052, Table 6.11; PI-018 Stage 1 matrix 9].

5.62 The Applicant's clarification note [D4-016] suggests one collision apportioned to this SPA[36]. In combination with nine other offshore wind farm projects within the mean-maximum foraging range of the SPA, PBR analysis identifies this as a sustainable impact, leading the Applicant to conclude no adverse effect for this SPA feature. As the analysis followed the same approach as that for the Burbo Bank Extension Wind Farm, NE agrees that there would be no adverse impact on integrity [PI-018, Stage 2 matrix 9].

5.63 As noted above in relation to the Morecambe Bay SPA, there would not be a discernible effect arising from the Project alone or in combination with other plans and projects in respect of the pink-footed goose and, as such, there would be no LSE on this feature [PI-018, Stage 1 matrix 10; D4-036, Supplementary Expert Report].

5.64 On the above basis we consider the weight of evidence supports the conclusion that the Project would have no LSE in respect of the qualifying features of this SPA alone or in combination with any other plan or project.

[36] This is the same note as referred to above.

Skokholm and Skomer SPA

5.65 This SPA is some 287km from the Project site. The RIES identifies possible displacement impact on the Manx shearwater [PI-018, Stage 1 matrix 11]. These are highly mobile foragers, showing flexibility with respect to foraging area and having a varied diet. Surveys recorded in the Applicant's HRA show that numbers of this species were present at the Project site in both migratory and breeding seasons [AD-052, s7.8]. Further analysis was undertaken of both collision and displacement risk to the Manx shearwater (D32-005; D3-006; D4-018]. This suggests collision risk to be negligible (less than 0.07 birds per annum) because of the flight height of the bird.

5.66 Displacement values were apportioned to the three SPAs (Aberdaron Coast and Bardsey Island, Copeland Islands, and Skokholm and Skomer) for which the Project is in the mean-maximum foraging range. At an assessed 30% displacement level and 10% mortality rate, less than 1% of the Skokholm and Skomer SPA population would be affected. Displacement analysis for the Project in combination with the Burbo Bank Extension Wind Farm shows the projected displacement values to be also below a 1% threshold for this SPA. The Applicant concludes that there would be no adverse effect on the integrity of this SPA. There have been no expressed concerns from NRW regarding this conclusion [PI-018, Stage 1 matrix 11, and Stage 2 matrix 10; D4A-003].

5.67 In our view, the weight of evidence supports the conclusion of no LSE on this SPA alone or in combination with other plans or projects.

Aberdaron Coast and Bardsey Island SPA

5.68 This SPA is some 180km from the Project, its only qualifying feature recorded at the site being the Manx shearwater [D6-005, Ref 2.30]. Analysis of collision risk to this species has been assessed as negligible (fewer than 0.07 birds per annum) because of flight height [AD-052, s7.8].

5.69 Having regard to displacement, similar conclusions to those reached in respect of the Skokholm and Skomer SPA (above) are reached (less than 1% displacement either alone or in combination with the Burbo Bank Extension Wind Farm). The Applicant concludes that there would be no adverse effect on the integrity of this SPA. There have been no expressed concerns from NRW regarding this conclusion [PI-018, matrix 1, Stages 1 and 2].

5.70 In our view the weight of evidence supports the conclusion of no LSE alone or in combination with other plans or projects.

Copeland Islands SPA

5.71 This SPA is some 120km from the Project site and supports nationally important numbers of Arctic tern (*Sterna paradisaea*) and Manx shearwater. No LSE are suggested for the former species [PI-018, Stage 1 matrix 3]. Because of large numbers of Manx shearwater being present at the Project site during surveys, and the site being within the mean-maximum foraging range for this breeding species at Copeland Islands SPA, the Applicant's HRA report identified a potential for a LSE from displacement [AD-052, s7.10].

5.72 Additional analysis of potential collision risk and displacement was carried out (as referred to above for Skokholm and Skomer SPA and with similar results); collision risk was assessed as negligible (fewer than 0.07 birds per annum) with less than 1% displacement of the Copeland Islands SPA population either alone or in combination with the Burbo Bank Extension Wind Farm project. The Applicant concludes there would be no adverse effect on this feature of the SPA. There is no evidence from any source to suggest a contrary view [PI-018, Stage 2 matrix 3; D4A-003].

5.73 On the above basis we consider the weight of evidence supports the conclusion that the Project would have no LSE in respect of the qualifying features of this SPA alone or in combination with any other plan or project.

Conclusions and recommendations for European sites

5.74 We have considered carefully the information relating to HRA. Our final conclusions and recommendations to the SoS with regard to European sites are as follows:

- taking account of the analysis in the Applicant's HRA Report, information provided in the ES and during the Examination, the comments provided, including in response to our questions and RIES, the subsequent analyses and judgements reached, and the agreement of the main statutory bodies, we conclude that it has been shown beyond reasonable scientific doubt that there is not likely to be a significant adverse impact on any European site;
- we recommend the SoS includes the recommended DCO and DML requirements and conditions to provide the necessary mitigation at these sites to avoid likely significant effects;
- it is our considered view in light of the above conclusions on the absence of LSE that the SoS, as the competent authority, does not need to carry out appropriate assessment.

6 COMPULSORY ACQUISITION (CA)

Introduction

6.1 This section of the report deals with the request for powers to compulsorily acquire rights and/or land.

6.2 It is arranged into the following subsections:

- the request for CA powers;
- the legislative and guidance context;
- how the ExA examined the case for CA;
- the case for CA of land and rights for development and the purposes for which the land and/or rights are required;
- alternatives;
- adequacy of funding;
- specific groups of affected persons and types of land;
- the case for acquisition of land and rights for development for other plots.

The request for CA powers

6.3 The land and rights for which CA powers are sought relate to the electrical grid connection land. The request was made through the inclusion of Articles in the initial draft DCO [AD-004].

6.4 The ExA notes that Article 19 in the Applicant's final draft DCO [D6-001], which allows for the CA of land, is stated to be subject to Article 24 (acquisition of subsoil only). We consider that this reference should be to Article 21 (compulsory acquisition of rights). This latter article, through reference to Schedule 6, restricts CA related to those plots listed in that Schedule to the acquisition of new rights.

6.5 The request was accompanied by the following relevant documents:

- Book of Reference Parts 1 – 5 [AD-006 to AD-010] and Book of Reference Schedule [AD-011];
- Land Plans [AD-013];
- Crown Land Plan [AD-020];
- Statement of Reasons [AD-046];
- Statement of Funding (SoF) [AD-047];
- Grid Connection and Cable Statement [AD-060].

6.6 The land is varied in its current use and includes foreshore, saltmarsh, tracks, highway and subsoil and amenity land but is mainly agricultural land.

Permanent acquisition

6.7 The Deadline V Update of the Report of Plots within the Order Land [D5-028] lists only one plot, 61, for which the freehold is requested to be acquired.

6.8 The Update and Schedule 6 of the recommended DCO (Appx 4) lists the following plots for which new permanent rights are requested to be acquired: 1, 2, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 50, 59, 60, 63 and 64.

Temporary possession

6.9 In addition to the request for permanent CA, Schedule 8 of the ExA's recommended DCO (Appx 4) sets out the land of which temporary possession may be taken. This schedule covers plots 1, 2, 3, 4, 5, 6-10, 11, 12, 13, 14-18, 19, 20, 21, 22, 23, 24, 25, 26-28, 29-42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52-54, 55, 56, 57, 58, 59, 60, 62, 63-64. In the case of 26 of the plots, the only power sought is for temporary possession.[37] These plots are considered within this subsection of this report.

The legislative and guidance context

The requirements of PA2008

6.10 With reference to s123 of PA2008, the ExA confirms that one of the three alternative conditions is met in that the application for the Order included a request for CA of land to be authorised.

6.11 Section 122 states that:

"an order granting development consent may include provision authorising the compulsory acquisition of land only if the Secretary of State is satisfied that the conditions in subsections (2) and (3) are met.

(2) The condition is that the land—
(a) is required for the development to which the development consent relates,
(b) is required to facilitate or is incidental to that development, or
(c) is replacement land which is to be given in exchange for the order land under section 131 or 132.

(3) The condition is that there is a compelling case in the public interest for the land to be acquired compulsorily."

[37] Plots 3, 4, 5, 13, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 45, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58 and 62

In the case of this particular application condition (2)(c) does not apply.

6.12 The DCLG's Guidance related to procedures for the compulsory acquisition of land, published in September 2013, provides further guidance related to the provisions in the legislation. In respect of s122(2) these are that:

"all reasonable alternatives to compulsory acquisition (including modifications to the scheme) have been explored; the proposed interference with the rights of those with an interest in the land is for a legitimate purpose; it is necessary and proportionate; the land to be acquired is no more than is reasonably required for the purposes of the development; the land to be taken is no more than is reasonably necessary for that purpose; and that it is proportionate".

6.13 In respect of s122(3) there is the need to establish that:

"there is compelling evidence that the public benefits that would be derived from the compulsory acquisition will outweigh the private loss that would be suffered by those whose land is to be acquired and that the purposes for which an order authorises the compulsory acquisition of land are legitimate and are sufficient to justify interfering with the human rights of those with an interest in the land affected".

Human Rights Act 1998 considerations

6.14 In considering specific plots and specific parties the ExA has had particular regard to Article 1 of the First Protocol to the European Convention on Human Rights, as embodied in the Human Rights Act 1998, which states that:

"Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law.

The preceding provisions shall not, however, in any way impair the right of a State to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contributions or penalties".

6.15 The ExA has had regard to Article 6(1) which states that:

"In the determination of his civil rights and obligations …, everyone is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal established by law."

6.16 The ExA has also had regard to Article 8 dealing with the right to respect for private and family life. None of the applications for CA relate to a house or dwelling or represent any interference with Article 8 rights.

Conclusion

6.17 The ExA concludes that the process of examining this Application, including the opportunities to submit representations, a series of written questions and the opportunities to be heard at hearings means that those whose rights may be affected have been given access to a fair and public hearing within a reasonable time, by an independent and impartial tribunal established by law and that, therefore, Article 6(1) is satisfied

6.18 Subsequent parts of this Section consider each affected person and, taking into account the significant level of agreement between persons and the Applicant in respect of the powers sought, balanced with the public interest inherent in this Project, the ExA has concluded that Articles 6 and 8 are not contravened in the case of this application.

How the ExA examined the case for CA

6.19 The ExA examined the case for CA in the following ways:

- the Rule 6 letter issued on 16 October 2013 [PI-004] identified CA as one of the principal issues including whether there is a compelling case for CA and the impact on special category land;
- the ExA's first round of written questions issued on 20 November 2013 [PI-006] contained 14 questions specifically on aspects of CA (Qs. 2.1 – 2.14) and the second round of written questions issued on 11 February 2014 [PI-009] contained 21 questions specifically on aspects of CA (Qs. 2.15 – 2.35);
- the Issue Specific Hearings (ISHs) held on 27 January and 28 March 2014 contained specific elements related to CA;
- it should be noted that there were no specific requests made by any affected person requesting a CA hearing under s92(3) of PA2008.

The case for acquisition of land and rights for development and the purposes for which the land and/or rights are required

The general case

6.20 The overall case for the CA of land and/or rights is set out by the Applicant in the Statement of Reasons [AD-046]. Para 7.2 states that:

"All of the Order Land, shown on the Land Plan, is required either for the purposes of the Project, or to facilitate it, or for purposes incidental thereto. In order to deliver the Project, the Applicant is seeking the acquisition of a combination of freehold ownership, permanent rights (such as rights of cable installation and subsequent access) and temporary rights. It is also seeking, in most plots over which rights are sought, restrictive covenants to protect the installed cables from being excavated or built over."

6.21 Para 7.8(b) states that permanent rights are required to install underground cables and associated apparatus, to facilitate access for such installation, and for maintenance of the Project. Para 7.8(c) states that, in addition, restrictive covenants are required over the majority of the Order Land to prevent the erection of buildings, the provision of hardstanding, excavation and growing large shrubs or trees.

6.22 The Book of Reference Part 1 [AD-006] and the Deadline V Update of the Report on Plots within the Order Land [D5-028] both list 64 plots numbered sequentially. The Book of Reference Part 5 [AD-010] lists three plots affected by Crown rights.

6.23 The plots are considered against the tests in statute and in guidance and set out in paras 6.10 to 6.13, above, and against the provisions embedded in the Human Rights Act 1998.

6.24 The CA of the freehold is only requested on one of these plots – plot 61. This is considered below.

6.25 A request for the CA of permanent rights is requested on the remaining plots. The permanent right to be acquired is set out in full on pages 3 to 8 of the Deadline V Update of the Report of Plots within the Order Land [D5-028] categorised by letter - A[38], B[39], C[40], D[41], E[42] and F[43].

6.26 All the plots are stated to be required to implement the works applied for[44].

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[38] Plot 1
[39] Plots 2, 6, 7, 8, 9, 10 and 41
[40] Plots 11, 14, 15, 16, 17, 18, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 44, 46, 47, 50 and 64
[41] Plot 12
[42] Plots 43 and 58
[43] Plots 60 and 63
[44] Plots 1, 2, 6, 7, 8, 9, 10 and 11 are related to work 3B; plot 3 is related to works 4; plots 4 and 5 are related to works 5; plot 12 is related to works 6 and 8; plot 13 is related to works 7; plots 14, 15, 16, 17, 18 and 29 are related to works 8; plots 19, 20, 22, 23 and 24 are related to works 9; plots 25, 26, 27 and 28 are related to works 10; plot 21 is related to works 11; plots 30, 31, 32 and 33 are related to works 12; plots 34, 35, 36, 37, 38, 39 and 40 are related to works 13; plots 41, 42, 43 and 44 are related to works 14, plots 46 and 47 are related to works 15; plot 45 is related to work 16; plot 48 is related to work 17; plots 49, 50, 51, 56 and 58 are related to works 18; plot 57 is related to works 19, plot 52 is related to works 20; plots 53, 54 and 55 are related to works 21; plot 59 is related to works 22, plot 62 is related to works 24; plot 61 is related to works 25; plot 64 is related to works 27; plot 60 is related to works 23, 26 and 27, and plot 63 is related to works 26 and 27.

6.27 It will be seen, below, where individual plots and specific affected persons are examined, that all but one of the affected persons have reached agreements with the Applicant. However, there is still the need to examine the Applicant's request for CA in these cases.

6.28 The Statement of Reasons [AD-046] explains that, even where an agreement has been reached:

"The relevant land remains in the Book of Reference to enable the Applicant to override, suspend or extinguish any minor or other third party interests that may subsist in those lands."

but that:

"Where agreement has been reached with a party, their interest will not be the subject of compulsory acquisition unless at that time the relevant party is unable to fulfil their contractual obligations to grant an interest to the Applicant."

6.29 The ExA examined [D1-040, Q2.5] what these circumstances might entail and we were informed that this included such circumstances as a relevant party being unable to deduce registered title or to obtain mortgagee consent, becoming subject to insolvency proceedings or related to the disposal of land before the Applicant requires the interests.

6.30 In addition to these circumstances, it is noted below that, at the close of the Examination, there remained two plots where agreements were yet to be reached. These are plots 63 and 64 and are discussed below.

Alternatives

6.31 Para 8 of the September 2013 DCLG Guidance related to procedures for the CA of land states that:

"The applicant should be able to demonstrate to the satisfaction of the Secretary of State that all reasonable alternatives to compulsory acquisition (including modifications to the scheme) have been explored".

6.32 The issue of overall alternatives to the proposed scheme itself has been dealt with in the subsection considering the ES and EIA in Section 4 above and the ExA has concluded that the consideration of alternatives has been set out as required by the EIA Regs.

6.33 There are two aspects to alternatives to CA. The first relates to the nature, positioning or routeing of any works for which CA is required. The second relates to seeking to avoid CA through adopting other means to acquire the land or rights.

6.34 On the routeing of the electrical connector corridor, the end point is determined by the location of a new National Grid Electricity Transmission (NGET) substation to the north of the A683. The Planning Statement [AD-064, 5.3.3] states that the Applicant had considered different landfalls and routes for the cable and that the public were consulted on these with consideration being given to the environmental impact of the routeing but also to the desirability of avoiding built-up areas. This approach is set out to the satisfaction of the ExA in the Consultation Report [AD-048].

6.35 We also note that the use of overhead pylons, instead of undergrounding the cables, could have required a different approach to CA. The Applicant did not include the possible use of overhead lines in its consultation on the Project [AD-048].

6.36 With reference to alternative methods of acquisition, as is evidenced below, all but one of the affected persons, including Crown interests and statutory undertakers, have come to a commercial or other agreement with the Applicant. This outcome would appear to the ExA to justify and confirm the Applicant's statement in the SoF [AD-047] that:

"The Applicant has sought to secure the necessary interests in land by voluntary agreement. The Applicant sought to engage all those with an interest in the land required for the Project on an equal basis, offering comparable terms to those offered elsewhere along the cable corridor and in relation to other offshore wind farm projects."

Conclusion

6.37 In coming to our conclusion on alternatives, the ExA has taken into account all the evidence submitted; in particular, the facts, first, that the Applicant has undertaken a clear process of looking at alternative routes. Second, the Applicant has sought, almost entirely successfully, to acquire land and rights through negotiation and agreement and that, consequently, the majority of plots are the subject of agreement and confirmed as unopposed, including in relation to Crown and other special category land.

6.38 The ExA, therefore, conclude that the SoS should be satisfied that all reasonable alternatives to CA (including modifications to the scheme) have been explored.

Proportionality

6.39 One of the tests in DCLG Guidance that relates to procedures for the CA of land, is that:

"the land to be acquired is no more than is reasonably required for the purposes of the development; the land to be taken is no more than is reasonably necessary for that purpose; and that it is proportionate."

6.40 We consider that this test applies particularly in the case of the onshore export cables and the Project substation (Work No. 25) for which, at the time of the application, the design was yet to be finalised.

6.41 In respect of the cable corridor, the Statement of Reasons [AD-046, 7.8(d)] records that:

"the limits of land to be acquired or used will generally be in the order of 40 metres wide, and wider in certain locations."

6.42 The Grid and Cable Connection Statement [AD-060, 7.1.2] states that:

"The maximum number of cable trenches is two and the maximum width … of the cable trench is 3.6 m."

Given the width of the land corridor for which CA powers are sought in relation to the width of the cable trench the ExA explored this issue further with the Applicant.

6.43 In response to the ExA's first written questions [D1-040, Q2.13] the Applicant explained that a 40m corridor was needed to include not only two trenches of 3.6m and 2.4m with a combined width of 6m [AD-071, Figure 4.29] but also a 10m wide temporary access road, 15m for a storage zone on one side and 9m on the other side of the cable corridor. This totals 40m and this pertains for the greater part of the cable corridor.

6.44 The Applicant also made it clear in this response that, in a few locations, a wider corridor than the 40m may be required, typically next to the HDD sites:

"… in some areas where, for example, temporary working compounds are required, a width greater than 40m has been applied for. The temporary working compounds are required in order to facilitate the construction activities required along the rest of the route. They will typically contain staff facilities such as offices, canteens, toilets and parking as well as secure areas …"

6.45 The Statement of Reasons [AD-046] specifies that those sites where a corridor wider than 40m is required is limited to areas of HDD namely at Middleton Sands, the A683, Middleton Road and any other area where HDD is required with these sites being for HDD working compounds.

6.46 The response to Q2.13 also stated that the Applicant would apply temporary use powers pursuant to Articles 27 and 28 of the Order as an alternative to CA and that the extent to which the Applicant expects to rely on CA powers is limited.

6.47 In addition, the Applicant's response to Q2.6 [D1-040] stated that:

"As the electrical system design process continues the various permutations of the cable systems will be analysed to provide an optimum solution for cost, reliability and risk over the lifetime of the project. However as there are various inputs to this process that are not yet fixed, such as the turbine type and total capacity of the project, the project needs to retain the flexibility in the design envelope."

6.48 In respect of the onshore Project substation, section 4.12 of the ES [AD-071] sets out the design envelope parameters with a footprint of 170m x 170m but states that the exact configuration of the building(s) will be decided at a later stage once the electrical design has been finalised.

Conclusion

6.49 In coming to its conclusion on the issue of proportionality, the ExA notes that we have not received evidence querying the excessiveness or otherwise of the land stated to be required and, whilst the LIR discusses a range of aspects regarding the onshore connector corridor and Project substation, it does not query the land requirement suggested.

6.50 We recognise that the approach to allowing a wider corridor within the Order Limits than will be eventually required once the cables are installed is a reasonable one. We also recognise that the approach of deciding the configuration of buildings within a maximum footprint follows a 'Rochdale Envelope' approach and is necessary at this stage of development of technical design of the export cabling and connection.

6.51 We note that: the intended use of the full width of a 40m corridor is spelt out by the Applicant, both in general and in the Statement of Reasons, for each plot; that a corridor wider than this is restricted to areas where compounds are required for HDD; and that the DCO allows for temporary possession on specified plots. We also note that r.16 of the recommended DCO (Appx 4) requires that:

"no stage of the connection works shall commence until details of the layout, … of that stage have been submitted to and approved by the relevant planning authority."

6.52 Taking into account these facts and all the evidence presented, the ExA concludes that: the land to be acquired is no more than is reasonably required for the purposes of the development; the land to be taken is no more than is reasonably necessary for that purpose; and that it is proportionate.

Adequacy of funding

6.53 In considering the adequacy of funding, the ExA had regard to EN-1, in particular para 4.19, and to DCLG Guidance related to

procedures for the CA of land, published in September 2013 and, in particular, paras 9, 17 and 18.

6.54 It is first necessary to establish the financial standing of the Applicant. Para 1.2 of the SoF [AD-047] states that:

"DONG Walney Extension is a company which was specifically created for the purposes of promoting, developing and operating the proposed offshore windfarm."

6.55 Para 1.1 of the SoF [AD-047] sets out the position of the Applicant in relation to its parent companies:

"DONG Walney Extension is a wholly owned subsidiary of DONG Energy Wind Power A/S (DONG Wind Power), a company incorporated in Denmark (Company Number 31849292). DONG Wind Power is a wholly owned subsidiary of DONG Energy Wind Power Holding A/S (DONG Wind Power Holding) (Company Number 18936674), which in turn is wholly owned by DONG Energy A/S, a company also incorporated in Denmark (Company Number 36213728) and 79.96% owned by the Danish State (as at 31 December 2012)."

6.56 DONG Energy is a leading northern European business, has over 20 years' experience in offshore wind farm development and, according to its SoF, has built more offshore wind farms than any other company in the world [AD-047; D5-025]. The SoF [AD-047] provides Annual Reports for DONG Energy for 2011 and 2012. The latter shows that the Company had assets of 159,594 million DKK (21,392 million EUR) in 2012.

6.57 The ExA also considered the possible financial standing of any transferee. Article 5(7) limits any transfer of the benefit of the CA articles in respect of Works Nos. 3B to 27 to a person who holds a licence under the Electricity Act 1989, or in respect of functions under Article 10 (street works) relating to a street, a street authority, both of which the ExA has assumed to have adequate funding. Any other transfer requires the consent of the SoS who can ensure that the transferee has adequate funds. The ExA is, therefore, satisfied in this respect.

The source of the funding required for implementing the Project

6.58 The SoF [AD-047] provides a statement that no funding from third parties is required for the construction of the Project and that:

"There are no funding shortfalls associated with the construction of this Project barring an unprecedented and unforeseen situation leaving either DONG Wind Power or DONG Energy A/S unable to meet its commitments. This is a remote possibility as reflected in the good credit rating of DONG Energy."

6.59 Following ExA questions, the Applicant's Written Submission for Deadline III [D3-004] summed this up by stating that:

"The Applicant has confirmed in paragraphs 2.4 and 3.6 of its Funding Statement that it has the means to procure the necessary financial resources to fund the works to be authorised by the DCO and that it has ensured that the required funds will be available. It has also provided evidence of financial standing by the provision of parent company accounts."

6.60 We note that none of the interested parties or affected persons questioned the ability of the Applicant to fund the Project.

6.61 We note further that the Applicant has not provided details of the costings of the Project as a whole. In considering this, we have had close regard to the DCLG Guidance and, in particular, the advice that:

"It may be that … the details cannot be finalised until there is certainty about the assembly of the necessary land. In such instances, the applicant should provide an indication of how any potential shortfalls are intended to be met. This should include the degree to which other bodies (public or private sector) have agreed to make financial contributions or to underwrite the scheme, and on what basis such contributions or underwriting is to be made."

6.62 The Applicant stated that [AD-047, para 3.5]:

"The funding will be provided by one of the DONG Energy companies …, or a subsidiary of them. Funding from third parties will not be required for the purpose of land assembly for the Project."

6.63 The ExA followed this up in our second written questions [PI-009] both by ascertaining what companies were referred to in the above statement (Q2.17) and by seeking assurance (Q2.18) that the statements in the SoF concerning the lack of need for third party funding remained true. The Applicant responded that:

"The Applicant confirms that the position in relation to funding remains as stated in the funding statement, … The other forms of funding referred to in the ExA's question will not be required by the Applicant for the construction of the Project"

Conclusion

6.64 In considering the adequacy and security of funding for the construction of the Project, we have taken into account the audited assets of the parent company, DONG Energy, the standing and track record of that company and the Applicant's consistent statements that third party funding will not be required for this purpose. We have neither seen nor heard anything within the

Examination to suggest that financial viability of the Project has not been properly assessed.

The funding required for CA

6.65 Para 3.3 of the SoF [AD-047] set out a broad figure for the estimate of the cost of CA.

"DONG Energy Walney has received advice that the likely level of compensation due to claimants for the compulsory acquisition of interests in their land should not exceed £4 million, and that this valuation includes a reasonable contingency."

6.66 The Applicant also stated that it:

"...does not anticipate any claims for blight. However should any arise, the cost will be met by DONG Walney Extension, drawing on the capital reserves of DONG Energy if required."

Securing the funding for CA

6.67 Paras 3.1 onwards of the SoF [AD-047] set out how the Applicant intended to provide re-assurance that the funding required for CA would be secured:

"To provide the Examining Authority and the Secretary of State with sufficient reassurance that the DONG Energy Walney will have the required financial means available if it exercises the compulsory acquisition powers provided in the Order, it proposes to enter into an agreement with the relevant landowner, and the local planning authority pursuant to Section 106 of the Town and Country Planning Act 1990 and/or Section 111 of the Local Government Act 1972 and Part 1 of the Localism Act 2011 (Statutory Agreement).

"The terms of such an agreement would require DONG Energy Walney to covenant not to exercise any powers of compulsory acquisition until an agreed form and quantum of security has been made available to the local planning authority. Such security may include a parent company guarantee, bond, bank guarantee or policy of insurance for the sum calculated as the cost of acquiring the interests in the Order and any claims for compensation properly made.

"The security shall subsist from the date when any powers of compulsory acquisition authorised by the Order are first exercised for a period of time at least equal to the statutory limitation period for making reference to the Upper Tribunal to determine compensation."

6.68 In line with the estimate quoted above, the Applicant states [AD-047] that:

"… the quantum of security to be required under the terms of the Statutory Agreement should be capped at £4 million, subject to indexation."

6.69 Para 3.6 of the SoF [AD-047] states that;

"DONG Energy has ensured that the required funds will be available and there are no potential funding shortfalls associated with the acquisition of land and other interests, barring a wholly unprecedented and unforeseen situation leaving either DONG Wind Power or DONG Energy A/S unable to meet its commitments. This is a remote possibility as reflected in the good credit rating of DONG Energy."

6.70 The ExA has seen the Undertaking under s.106 made between DONG Energy Walney Extension (UK) Ltd and Christopher John Hargreaves to Lancaster City Council, dated 13 March 2014 [D4A-009].

6.71 A key section of that document is that:

"The Developer covenants not to exercise any powers of compulsory acquisition authorised by the DCO in respect of the Order Land unless and until the security has been provided to, and approved by, the Council."

6.72 The security is defined as "… including but not limited to a Parent Company Guarantee, bond, bank guarantee or policy of insurance which shall guarantee a sum of … £4,000,000 …".

6.73 The ExA examined the status of a Parent Company Guarantee through written questions and was assured in the Applicant's response to Q2.10 [D1-044] that the Applicant:

"… confirms that under Danish law DONG Energy Wind Power A/S … is generally permitted to give a parent company guarantee in relation to the commitments of its subsidiaries, such as the Applicant, DONG Energy Walney Extension (UK) Limited…. DONG Energy Wind Power A/S has also confirmed to the Applicant that it would be willing to provide a parent company guarantee in the circumstances set out in the Funding Statement."

6.74 The Applicant also states in that response that if a parent company guarantee is entered into in relation to the sums required for CA and compensation, a legal opinion could be provided confirming that DONG Energy Wind Power A/S is entitled to enter into such a guarantee in the jurisdictions within which that company operates.

Conclusion

6.75 The ExA considers that the key factor in our conclusion on the adequacy and security of funding for CA is the existence of an

agreed Unilateral Undertaking. We considered aspects of the s106 Undertaking in the ISH held on 28 March 2014 including whether or not a further safeguard in the form of a requirement in the DCO would be of use. We consider that this would not add any further certainty to that already provided by the Unilateral Undertaking.

6.76 Taking into account all the factors, above, we conclude that the SoS can be satisfied that adequate funding is likely to be available to enable the CA within the statutory period following the Order being made, and that the resource implications of a possible acquisition resulting from a blight notice have been taken account of.

Specific groups of affected persons and types of land

6.77 This part of this Section deals with specific groups of affected persons and types of land:

- Crown Land
- Special category land
- Statutory Undertakers

Crown Land

6.78 Part 4 of the Book of Reference [AD-009] lists three plots – C1, C2 and C3 – which are subject to Crown interests. These are shown on an accompanying plan of Crown Land [AD-020]. Plot C1 comprises land off the coast owned by the Queen's Most Excellent Majesty and the Crown Estate Commissioners. Plots C2 and C3 are both foreshore and seabed (stretching eastward from Mean Low Water Mark) and are owned by the Queen's Most Excellent Majesty in Right of Her Duchy of Lancaster.

6.79 In coming to our view on Crown Land, set out in the subsequent paragraphs of this subsection, the ExA has considered the statutory position set out in s135 and s227 of PA2008 and has had regard to the guidance contained, in particular, in paras 39 and 40 and in Annex B of the DCLG Guidance related to procedures for the CA of land published in September 2013.

6.80 The relevant parts of s135 are that:

"(1) An order granting development consent may include provision authorising the compulsory acquisition of an interest in Crown land only if— (a) it is an interest which is for the time being held otherwise than by or on behalf of the Crown, and b) the appropriate Crown authority consents to the acquisition.

(2) An order granting development consent may include any other provision applying in relation to Crown land, or rights benefiting the Crown, only if the appropriate Crown authority consents to the inclusion of the provision."

6.81 Article 39 of the recommended DCO (Appx 4) prevents the undertaker from taking specified actions in relation to Crown Land without the consent of the Crown Estate, relevant Government Department or the Chancellor of the Duchy of Lancaster.

6.82 This Article was amended during the course of the Examination to include reference to the Duchy of Lancaster. In response to the ExA's Q2.24, in a letter dated 24 February 2014 [D4-008; D4-025], the Crown Estate confirmed that the revised form of Article 39 is acceptable.

6.83 The Crown Estate made a Relevant Representation [RR-002] stating that:

"Our interest in the project is that DONG Energy Walney Extension (UK) Ltd holds an Agreement for Lease from The Crown Estate for the area of seabed to be occupied by the project, and (subject to obtaining the necessary development consents) The Crown Estate will issue a lease to DONG Energy Walney Extension (UK) Ltd for construction of the project."

6.84 In respect of s135(1) The Crown Estate wrote to the Applicant in a letter dated 7 November 2013 [CR-005; D1-057] stating that:

"In relation to any rights of compulsory purchase which DONG Energy Walney Extension (UK) Limited may be seeking in relation to interests in Crown land falling within section 135(1) of the Act, The Commissioners consent to the inclusion of such rights in the draft DCO, but reserve their rights as regards the consent of The Crown Estate to the exercise of such compulsory purchase powers, as provided for in section 135(1)9b) of the Act and expressly confirmed by Article 39."

6.85 In relation to s135(1) in respect of plots C2 and C3, The Duchy of Lancaster wrote to the Applicant in a letter dated 8 November 2013 [CR-007; D1-059] stating that:

"… the Duchy and DONG are engaged in regular dialogue and negotiations in relation to the grant/acquisition of the interests required over the Duchy's land for the project, and that the Duchy i) agrees in principle to the grant of those interests to DONG, subject to agreeing acceptable commercial terms between the parties; and (ii) does not object to the DCO applied for by DONG."

6.86 In respect of s135(2), The Crown Estate wrote to the Applicant on 7 November 2013 [CR-005; D1-057] stating that:

"The Commissioners confirm in accordance with section 135(2) of the Planning Act 2008 that they are satisfied with the wording of the draft DCO."

6.87 In respect of s135(2), The Duchy of Lancaster wrote to the Applicant in a letter dated 8 November 2013 [CR-006; D1-058] stating that:

"… the Chancellor of the Duchy of Lancaster … hereby consents, in accordance with section 135(2) of the Act, to the inclusion of the Section 135(2) Provisions in the Draft DCO."

However, the Duchy noted that this consent does not constitute a consent pursuant to Article 39, subsection (1).

Conclusion

6.88 In coming to our conclusion on s135(1) and s135(2) of the PA2008, we have taken into account first that, as shown above, both the Crown Estate and the Duchy of Lancaster have confirmed in writing that they are satisfied with the inclusion of the required provisions in the DCO. Secondly, we note the existence of Article 39 in the recommended DCO (Appx 4) which affords both the Crown Estate and the Duchy of Lancaster protection.

6.89 Given the above information, the ExA concludes that there are no extant barriers under s135(1) or s135(2) to the SoS making the recommended DCO (Appx 4).

Special category land

6.90 Part 5 of the 'Book of Reference' lists plots and affected persons that fall within the definition of special category land under Regulation 7(e)(ii) of *the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009*. This part does not list any special category land under Regulations 7(e)(i) or 7(e)(iii).

6.91 The plots listed under Regulation 7(e)(ii) are 1, 2, 3, 4, 6, 7, 8, 9, 10 and 41. The plots are listed under Regulation 7(e)(ii) for two reasons:

- Plots 1, 2, 3, 4, 6, 7, 8, 9, and 10 form part of, or adjoin, the foreshore or form part of the saltmarsh and are publically accessible.
- Plot 41 is amenity land in the village of Middleton and is used as a sports and recreation area.

6.92 These fall within the category of common or open space, therefore, the tests against which the compulsory acquisition of rights over land are found in s132 of PA2008. None of the plots listed involve replacement land or the widening or drainage of a highway and, therefore, the test to be applied in relation to these plots is that at s132(3) as only rights over commons or open space is sought:

"This subsection applies if the order land, when burdened with the order right, will be no less advantageous than it was before to the following persons—

(a) the persons in whom it is vested,

(b) other persons, if any, entitled to rights of common or other rights, and

(c) the public."

6.93 It should be noted that the application for the Walney Extension Wind Farm was made on 28 June 2013 [AD-002]. Thus it was submitted three days after the provisions of the Growth and Infrastructure Act 2013 came into force which removed (in s24(3)) the requirement for Special Parliamentary Procedure to apply for applications submitted if the tests in one of the subsections in s132 are fulfilled.

6.94 Christopher John Hargreaves is an affected person in respect of plots 1, 2, 3, 4, 6 and 7[45]. He did not submit any representations nor attend any hearings during the course of the Examination. The final Report on Plots [D5-028] states that Christopher John Hargreaves gave Land Owner's Consent on 26 July 2012.

6.95 David Thomas Hargreaves is an affected person in respect of plots 8, 9 and 10. He did not submit any representations nor attend any hearings during the course of the Examination. The final Report on Plots states that David Thomas Hargreaves gave Land Owner's Consent on 26 July 2012.

6.96 Middleton Parish Council is an affected person in respect of plot 41.

6.97 In the case of plots on or adjoining the foreshore and saltmarsh and in the case of the amenity land in Middleton, an agreed response to ExA's Q2.4 [D1-040] on behalf of the Applicant and those interested parties to whom the question was addressed, namely Middleton Parish Council and Christopher John and David Hargreaves, stated in para 9.2 that the parties are satisfied that:

"the rights to be compulsorily acquired over open space to enable, amongst other things, maintenance and related access, and for the cables to remain installed underground, would leave the open space land comprised in the Order no less advantageous to the owner of the land, those with rights over the land and the public after the land has been burdened with them."

6.98 In para. 8.26 of the Statement of Reasons [AD-046] the Applicant set out why it considers that the relevant test in s132 is fulfilled:

[45] Only temporary possession is requested for plots 3 and 4.

"(a) the construction will take place over a temporary period subject to temporary use powers, the cables will be installed in the subsoil, after construction the land will be reinstated to its previous condition and use;

(b) there is no need for the Applicant to take the surface of the relevant land permanently, save for rights of access for maintenance purposes, which are likely to be used infrequently in the future;

(c) public access to the open space will be maintained under the Order;

(d) open space can revert back to its former recreational use following short periods of construction; and

(e) the Order would not result in the permanent loss of open space."

6.99 The Applicant's Outline Public Access Strategy (PAS) [AD-066, referenced as the Public Access Strategy in Article 40 of the DCO] sets out, for specific plots, users and access points, how access to the land would be maintained and/or managed during the periods of construction. It states that these measures are designed to provide reassurance that for members of the public and/or landowners/occupiers who currently have access, access would be maintained through the deployment of mitigation measures.

Conclusion

6.100 The ExA has taken into account the following factors in arriving at a recommendation regarding special category land.

6.101 First, the three owners of the land have provided an agreed statement setting out clearly that the CA of rights would leave the open space land comprised in the Order no less advantageous to the owners and the public.

6.102 Second, as stated in our Rule 8 letter [PI-005], the ExA has visited the cable landfall site and Middleton to look, inter alia, at the current access arrangements and to compare these with the proposed measures.

6.103 Third, the ExA has considered the PAS [AD-066] and, whilst recognising that the final measures to maintain and manage access are subject to final design and agreement with owners and Public Rights of Way authorities, the principles and examples of measures set out are positive and potentially feasible and show a commitment at this stage to maintaining access.

6.104 In this respect, the ExA notes that compliance with the PAS [AD-066] is secured in the DCO through r.21 and that, under this requirement all connection works must accord with the PAS. We

note the inclusion of the PAS in Article 40 as one of the documents to be submitted to the SoS for certification.

6.105 Fourth, in its second round of written questions, the ExA sought responses from other parties in relation to the special category land (Q2.30). An agreed response [D4-002] between the Applicant and the PPAA states that:

"Through the evidence submitted with the Application and during the course of this examination the Applicant has provided robust justification as to why the Secretary of State can be satisfied that one of subsections (3) to (5) of Section 132 of the Planning Act 2008 applies to the DCO. The PPA Authorities have no outstanding concerns in this regard."

6.106 Section 132(2) of PA2008 requires that one of subsections (3) to (5) applies. The ExA concludes that s132(4) and s132(5) do not apply in this case. Taking into account all the evidence before us, the ExA considers that, for the reasons set out above, in the case of the special category land identified for plots 1, 2, 3, 4, 6, 7, 8, 9, 10 and 41, the relevant test in s132(3) of the PA2008 is met. For this reason, the ExA recommends to the SoS that Special Parliamentary Procedure is not required in respect of these plots.

6.107 The preamble to the recommended DCO (Appx 4) states that an application is made pursuant to s132(2) and (3) and it records that the SoS makes the Order in the exercise of powers conferred on him by these sections. It goes on to state that:

"The Secretary of State, having considered the report and recommendation of the Panel, is satisfied that open space comprised within the Order land, when burdened with the new rights authorised for compulsory acquisition under the terms of this Order, will be no less advantageous than it was before such acquisition, to the persons in whom it is vested, other persons, if any, entitled to rights of common or other rights, and the public;"

6.108 The ExA commends this wording to the SoS.

Statutory undertakers

6.109 The part of s127 of PA2008 relevant to this application states that:

"(1) This section applies in relation to land ("statutory undertakers' land") if—

(a) the land has been acquired by statutory undertakers for the purposes of their undertaking,

(b) a representation has been made about an application for an order granting development consent before the completion of the examination of the application, and the representation has not been withdrawn, and

(c) as a result of the representation the [Secretary of State] is satisfied that—

(i) the land is used for the purposes of carrying on the statutory undertakers' undertaking, or

(ii) an interest in the land is held for those purposes."

6.110 The relevant part of s138 of the PA2008 states that:

"(1) This section applies if an order granting development consent authorises the acquisition of land (compulsorily or by agreement) and —

(a) there subsists over the land a relevant right, or

(b) there is on, under or over the land relevant apparatus."

and that:

"(4) The order may include provision for the extinguishment of the relevant right, or the removal of the relevant apparatus, only if the Secretary of State is satisfied that the extinguishment or removal is necessary for the purpose of carrying out the development to which the order relates,"

6.111 There are eight statutory undertakers listed in a schedule to the Book of Reference [AD-011]:

- British Telecommunications plc;
- Electricity North West Ltd;
- Environment Agency;
- Lancashire County Council;
- National Grid Electricity Transmission plc;
- National Grid Gas plc;
- British Pipeline Agency (acting for Shell UK);
- United Utilities.

6.112 These statutory undertakers hold rights by virtue of being occupiers, in respect of underground apparatus or in respect of being the highway authority in respect of plots 4, 5, 17, 18, 19, 20, 21, 22, 23, 25, 26, 30, 36, 40, 41, 42, 43, 46, 47, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 63, 64[46]. The overall position on all plots has been dealt with above. The position of each of these bodies is set out below.

6.113 The position of each statutory undertaker in respect of relevant protective provisions is given below. It should be noted that, in

[46] Only temporary possession is requested for plots 4, 5, 20, 21, 22, 23, 26, 49, 51, 53, 54, 55, 56, 57, and 58.

Appendix 7.1 to the Applicant's response to the ExA's Q2.3 [D1-061], the Applicant stated that:

"With the exception of NGG and NGET, the Applicant has not received any objection to, or request to amend, the protective provisions set out in Schedule 12 of the Order."

British Telecommunications plc

6.114 British Telecommunications plc is an affected person in respect of plots 4, 7, 41 and 57. It is listed in respect of underground apparatus, telecommunications cables, equipment and other apparatus. Appendix 7.2 of the DONG Energy response to the ExA's first written questions [DI-062] contains a letter from BT Openreach plc confirming its consent in principle to the Walney Extension Infrastructure being laid over, under, or in close proximity to, the BT Openreach Infrastructure. British Telecommunications plc has not made any other representations in respect of this application. The ExA does not consider, therefore, that s127 is triggered in the case of this statutory undertaker.

6.115 Operators of Electronic Communications Code Networks are protected by a protective provision (Appx 4, Schedule 12, Part 2). In Appendix 7.1 to the Applicant's response to the ExA's Q2.3 [D1-061] the Applicant stated that BT Openreach confirmed to the Applicant in a meeting on 15 May 2013 that it has no objection to the protective provisions in Schedule 12 of the Order.

Electricity North West Ltd

6.116 Electricity North West Ltd (ENWL) is an affected person in respect of plots 30, 36, 40, and 46. It is listed in respect of electricity distribution lines, equipment and other apparatus. ENWL has not made any representations in respect of this application. S127 is not, therefore, triggered in the case of this statutory undertaker.

6.117 Utility Undertakers[47] are protected by a protective provision (Appx 4, Schedule 12, Part 3). In Appendix 7.1 to the Applicant's response to the ExA's Q2.3 [D1-061] the Applicant stated that ENWL confirmed to the Applicant in a meeting on 15 May 2013 that it has no objection to the protective provisions in Schedule 12 of the Order.

[47] Part 3 defines 'Utility Undertakers' as, inter alia,
(a) any licence holder within the meaning of Part 1 of the Electricity Act 1989, save that this shall not include National Grid Electricity Transmission plc or any affiliate or successor body thereof;

Environment Agency (EA)

6.118 The EA is listed in respect of main rivers and drains. In response to our second written question [D4-027, Q2.27] the EA stated that:

"The Environment Agency is a statutory undertaker for the purposes of s127 and 138 of the Planning Act 2008. We do not consider that we have any relevant interest in land within the Order limits (s127) nor any "relevant right" or "relevant apparatus" (s138). There is therefore no need for the Order to include provision for the acquisition or extinguishment of Environment Agency interests covered by those sections."

6.119 The EA is protected by a protective provision in Part 1 of Schedule 12 of the ExA's DCO (Appx 4). In Appendix 7.1 to the Applicant's response to the ExA's Q2.3 [D1-061] the Applicant stated that the EA has noted that the content of Schedule 12 is 'largely satisfactory', as stated in their letter of 13 December 2013 (Appendix 7.4).

Lancashire County Council

6.120 Lancashire County Council, as owner, is an affected person in respect of plots 55, 57, 58, and 59.

6.121 Lancashire County Council as a highway authority is an affected person in respect of plots 5, 22, 23, 25, 26, 43, 54, 58, 59. Plots 5, 25, 42, 43, and 44 of the Order Land comprise public highway, the subsoil of which is unregistered land. The owners of the land in these plots have not been capable of identification through diligent enquiry undertaken by the Applicant and its agents.

6.122 In a letter dated 27 March 2014 [AR-010] Lancashire County Council stated that it was withdrawing its representation given in respect of s.127 and 138 of PA2008 with immediate effect. S127 is not, therefore, triggered in the case of this statutory undertaker.

6.123 Part 4 of Schedule 12 of the recommended DCO (Appx 4) states that:

"The undertaker and Lancashire County Council have entered into a commercial agreement dated 27 March 2014 containing provisions for the protection and benefit of Lancashire County Council in relation to the acquisition and exercise of new rights and interests over the Order Land owned and occupied by Lancashire County Council."

National Grid Electricity Transmission plc (NGET) and National Grid Gas plc

6.124 NGET as owner is an affected person in respect of plots 63 and 64 and is an affected person in respect of equipment in respect of

plots 50, 51, 53, 55, 56, 57. It is listed in respect of national electricity transmission network cables, equipment and other apparatus.

6.125 Part 4 of Schedule 12 of the ExA's recommended DCO (Appx 4) states that:

"The undertaker and National Grid Electricity Transmission Plc have entered into a confidential agreement dated 26 February 2014 containing provisions for the protection and benefit of National Grid Electricity Transmission Plc in relation to the acquisition and exercise of new rights and interests over the Order Land owned, operated and occupied by National Grid Electricity Transmission Plc"

6.126 However, the Applicant's update on land assembly dated 9 May 2014 prior to the close of the Examination [D8-002] states that:

"The Applicant also confirmed … that in relation to plots 63 and 64, it agreed heads of terms with National Grid Electricity Transmission plc for an option agreement on 1 April 2014, and that the Applicant also agreed heads of terms for an agreement for lease with the Duchy of Lancaster on 13 March 2014. Unfortunately, despite the best intentions of the parties concerned it has not been possible to conclude negotiations, such that those agreements will be entered into before the close of the examination.

"However, the Applicant confirms that there remain no barriers to the above agreements being entered into and expects to do so shortly."

6.127 National Grid Gas plc is an affected person in respect of plot 41 and is listed in respect of gas pipelines, service pipes, gas mains and other gas apparatus.

6.128 Utility Undertakers[48] are protected by a Protective Provision Part 3 of Schedule 12 of the ExA's recommended DCO (Appx 4).

6.129 A letter from Eversheds acting on behalf of National Grid dated 26 February 2014 [AR-008] confirmed that National Grid is satisfied that its interests in the Order Land are adequately protected and that it wished to withdraw its representations. S127 is not, therefore, triggered in the case of this Statutory Undertaker.

[48] Part 3 defines 'Utility Undertaker' as, inter alia,
(b) a gas transporter within the meaning of Part 1 of the Gas Act 1986(b);

British Pipeline Agency (acting for Shell UK)

6.130 The British Pipeline Agency (BPA) is acting in this case on behalf of Shell UK Limited, which is listed in the Schedule attached to the Book of Reference [AD-011].

6.131 BPA is an affected person in respect of plots 17, 18, 19, 20, 21. Shell UK Limited is listed in respect of gas pipelines, service pipes, gas mains and other gas apparatus.

6.132 Neither Shell UK nor the BPA has made any representations in respect of this application. S127 is not, therefore, triggered in the case of this statutory undertaker.

6.133 Utility Undertakers[49] are protected by a Protective Provision Part 3 of Schedule 12 of the ExA's recommended DCO (Appx 4). In Appendix 7.1 to the Applicant's response to the ExA's Q2.3 [D1-061] it is stated that the Applicant has not received from BPA any objection to, or request to amend, the protective provisions set out in Schedule 12 of the Order.

United Utilities

6.134 United Utilities is an affected person in respect of plots 5, 22, 23, 41, 42, 43, 47, 49, 50, 56, 57 and 59. It is listed in respect of water supply and waste water treatment pipelines, drains, mains, service conduits, sewers and other apparatus.

6.135 In an e-mail dated 5 November 2013 [AR-005] United Utilities stated that at that time it did not wish to speak or to be represented at the Examination. It has not made any other representations in respect of this application. S127 is not, therefore, triggered in the case of this statutory undertaker.

6.136 Utility Undertakers[50] are protected by a Protective Provision Part 3 of Schedule 12 of the ExA's DCO (Appx 4). In Appendix 7.1 to the Applicant's response to the ExA's Q2.3 [D1-061] it is stated that the Applicant has not received from United Utilities any objection to, or request to amend, the protective provisions set out in Schedule 12 of the Order.

Conclusion

6.137 In coming to our conclusion on s127 of the PA2008, we have taken into account first that, as shown above, we do not consider the tests under s127 have been triggered in respect of this application. Second, we note that Schedule 12 of the ExA's

[49] Part 3 defines 'Utility Undertaker' as, inter alia,
(b) a gas transporter within the meaning of Part 1 of the Gas Act 1986(b);
[50] Part 3 defines 'Utility Undertaker' as, inter alia,
(c) a water undertaker within the meaning of the Water Industry Act 1991; and
(d) a sewerage undertaker within the meaning of Part 1 of the Water Industry Act 1991,

recommended DCO (Appx 4) either contains Protective Provisions in respect of statutory undertakers or records that agreement has been reached with them.

6.138 S138 of PA2008 applies where there subsists over the land a relevant right, or there is on, under or over the land relevant apparatus. In coming to our conclusion on s138 of PA2008, we have taken into account first that, as shown above, all the statutory undertakers listed in the Book of Reference are listed in respect of specific apparatus. Secondly, taking into account all the evidence before us, the ExA concludes that the SoS can be satisfied that the extinguishment or removal of rights is necessary for the purpose of carrying out the development to which the Order relates. In concluding this, we note that Schedule 12 of the recommended DCO (Appx 4) either contains Protective Provisions in respect of statutory undertakers or records that agreement has been reached with them.

6.139 Given the above information, the ExA concludes that there are no extant barriers under s127 or s138 to the SoS making the recommended DCO.

6.140 As stated above, three plots, 59, 63 and 64, are owned by statutory undertakers with plot 59 being owned by Lancashire County Council and plots 63 and 64 being owned by NGET. In respect of these plots the ExA concludes that the CA of rights fulfils the tests in statute. In summary, there is a compelling case in the public interest for the rights to be acquired compulsorily, acquisition is required to facilitate or is incidental to that development, and all reasonable alternatives have been explored; the land to be acquired is no more than is reasonably required and is proportionate.

The case for acquisition of land and rights for development for other affected persons and plots

6.141 The position of Crown Land is considered above. The position of affected persons in relation to special category land and of statutory undertakers is also considered above.

6.142 This subsection deals with the remaining plots and affected persons.

6.143 The affected persons not already covered previously in this Section of the report are:

- Banks Renewables;
- Alan John, Kathlyn Eva, and Samuel Mark Bargh;
- Clive Richard Baxter;
- Hazel Maria Diviny Day;
- JM and B Gorry;
- Christopher John Hargreaves;
- David Thomas Hargreaves;

- Edward Ernest Thornton;
- Bryan David and James William Wannop and ME Wannop & Sons;
- David George and Annette Barbara Wannop, and ME Wannop & Sons;
- ME Wannop & Sons.

These are dealt with individually below.

Banks Renewables

6.144 Banks Renewables is an affected person in respect of plots 49, 50, 51, 52, 53, 54 and 56[51]. It made a Relevant Representation [RR-039] raising two concerns:

"There is no compelling case in the public interest for the use of compulsory acquisition powers at the Heysham Site or at any other plot that might prevent or hinder development or maintenance of the wind turbine scheme under Banks Renewables existing planning permission. Other means of access for maintenance purposes can be considered.

"The proposed compulsory acquisition for temporary occupation is unnecessary. Banks Renewables is willing to reach agreement with the Applicant which would avoid the need for powers of compulsory acquisition to be granted and used. To date, the Applicant has not sought to consult with Banks Renewables in order to reach an agreement for temporary occupation of the Heysham Site."

6.145 These concerns were reinforced in a Written Representation [D1-022] and were considered in the ExA's first written questions [D1-040, Q2.12]. In its response to the ExA's second written questions [D4-026, Q2.19, 2.20, 2.23] Bond Dickinson LLP on behalf of Banks Renewables set out the agreements that had been reached and which were expected to be reached in respect of the relevant plots. These included a 'tripartite agreement' between itself, the Applicant and Mr Thornton (see below) in respect of how the Project's export cables would cross Banks' export cables south of the A683.

6.146 Subsequent to this, in a letter dated 19 March 2014 [AR-009] Bond Dickinson LLP on behalf Banks Renewals stated that a commercial agreement had been entered into and that, therefore they:

"… can confirm that Banks Renewables are satisfied that their interests in the Order Land are adequately protected and that they wish to withdraw their representations …"

[51] Only temporary possession is requested for plots 49, 51, 52, 53, 54 and 56.

6.147 In a final update on the position on land assembly contained in an e-mail dated 12 May 2014 [D8-003], received before the close of the Examination, the Applicant stated that:

"The "tripartite agreement" relating to plots 49, 50, 51, 52, 53, 54, and 56 has been entered into by the Applicant, Banks Renewables and Mr Thornton today, 12 May 2014."

Alan John, Kathlyn Eva, and Samuel Mark Bargh

6.148 Alan John, Kathlyn Eva, and Samuel Mark Bargh are affected persons in respect of plots 60, 61 and 62[52]. They did not submit representations nor attend any hearings during the course of the Examination.

6.149 The CA of the freehold is only requested on one of these plots – plot 61. The Statement of Reasons [AD-046] states that:

"the freehold interest in land is required for the purpose of constructing and maintaining the onshore substation compound. The area of land required for this is approximately 170m x 170m …"

6.150 The substation is described in Chapter 4 of the ES [AD-071].

6.151 The freehold owner of this land is Alan John Bargh with the occupiers as tenants being Kathlyn Eva and Samuel Mark Bargh.

6.152 The ExA examined the need for the CA of land rather than of rights through its first written questions [D1-040, Q2.14].

6.153 In response, the Applicant explained that:

"By reason of this built development, the land could not be put to alternative use whilst the substation is in operation. Therefore, the Applicant has taken the view that it would not be appropriate to seek to acquire, privately or through compulsion, an interest limited to rights and/or restrictive covenants. To do so might unfairly reduce the compensation available to the owner under the compulsory purchase compensation code."

6.154 The Applicant's response [D4-002] to the ExA's request for a joint statement in respect of plot 61 states in Q2.21 that:

"The Applicant and relevant landowner, Mr Bargh, entered into an option agreement dated 8 November 2012, which contains contractual provisions pursuant to which the Applicant may acquire plot 61 of the Order land. There are no outstanding problems or barriers to agreement, or further negotiations required, in this regard."

[52] Only temporary possession is requested for plot 62.

Conclusion

6.155 In coming to its conclusions on plot 61 the ExA has taken into account the purpose to which the land is to be put and considers that this justifies the CA of land. We have taken into account the fact that the owner has come to a commercial agreement.

6.156 We, therefore, conclude that the acquisition of plot 61 is required for the development to which the development consent relates; that it meets the tests of legitimacy, necessity, proportionality and reasonableness and that there is a compelling case in the public interest for the land to be acquired compulsorily.

6.157 In respect of plots 60 and 62, in the final Report on Plots within the Order Lands [D5-028] the Applicant states that Alan John, Kathlyn Eva, and Samuel Mark Bargh agreed an option deed dated 8 November 2012. As stated above, the owner and tenants did not submit representations nor attend any hearings during the Examination.

Clive Richard Baxter

6.158 Clive Richard Baxter is an affected person in respect of plots 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32 and 64 (as tenant for plot 64)[53]. He did not submit any representations nor give evidence at any of the hearings during this Examination.

6.159 The final Report on Plots states that, in respect of plots 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, he has given Land Owner's Consent dated 12 July 2012 and that, in respect of plot 64, he:

"has entered into an agreement dated 6 June 2013 to surrender his interest pursuant to which his occupation is expected to be terminated before the implementation of the project."

Hazel Maria Diviny Day

6.160 Hazel Maria Diviny Day is an affected person in respect of plot 40. She did not submit evidence nor attend any hearings during the course of the Examination. The final Report on Plots states that Hazel Maria Diviny Day gave Land Owner's and Tenant's Consent on 26 July 2012.

6.161 We note that the Final Report on Plots lists twenty tenants on this plot apart from Electricity North West Ltd. The Report states that these tenancies are in respect of Liveries in respect of Diviny Livery Ltd, also listed as a tenant, and are on *"an informal 'pay as you go' basis and have no formal legal interest in the land."*

[53] Only temporary possession is requested for plots 13, 19, 20, 21, 22, 23, 24, 26, 27 and 28.

John Michael and Barbara Gorry

6.162 John Michael and Barbara Gorry are affected persons in respect of plots 43 and 44 (*ad medium filum*[54]) and 45 and 46[55]. They did not submit evidence nor attend any hearings during the course of the Examination. The final Report on Plots states that JM and B Gorry gave Land Owner's Consent dated 12 September 2012.

Middleton Parish Council

6.163 Middleton Parish Council is an affected person in respect of plots 41, 42 and 43. Plot 41 has been considered in relation to Special Category Land, above. Plots 42 and 43 are included solely as *ad medium filum*.

Edward Ernest Thornton

6.164 Edward Ernest Thornton is an affected person in respect of plots 47, 48, 49, 50, 51, 52, 53, 54 and 56[56]. Mr Thornton submitted a Relevant Representation [RR-048].

6.165 We examined the concerns expressed by Mr Thornton in our first round of written questions [D1-040, Q2.12]. In response, the Applicant stated that:

"Mr Thornton's representation does not raise any points in relation to the powers of compulsory purchase sought by the Applicant nor the Applicant's justification for doing so. Mr Thornton's representation does express concerns more generally about anticipated impacts of the project on his farmland."

and that

"The Applicant will phase construction such that timescales during which any land is being disturbed will be kept to the minimum. This will be secured through Requirement 24 of the Order. Further, pursuant to Requirement 47 of Order, the Applicant must ensure that any land used temporarily during construction is reinstated within 6 months after completion of the onshore works."

6.166 In respect of the extract above, the ExA notes that the numbering in the recommended DCO (Appx 4) has changed. Requirement 28 deals with the CEMP and r.39 deals with the restoration of land used temporarily for construction.

6.167 The final Report on Plots states that Edward Ernest Thornton gave Land Owner's Consent dated 26 November 2013. The ExA has

[54] In relation to the soil of a roadway, the owner of land abutting on a road is also the owner of the adjoining section of the road up to the middle line (ad medium filum).
[55] Only temporary possession is requested for plot 45.
[56] Only temporary possession is requested for plots 48, 49, 51, 52, 53, 54 and 56.

seen the letter dated 27 November 2013 confirming the withdrawal of objection [D4-011].

Bryan David and James William Wannop, David George and Annette Barbara Wannop and ME Wannop & Sons

6.168 Bryan David and James William Wannop and ME Wannop & Sons are affected persons in respect of plots 38 and 39. They did not submit representations nor attend any hearings during the Examination. The final Report on Plots states that Bryan David and James William Wannop and ME Wannop & Sons gave Land Owner's Consent dated 24 January 2013.

6.169 David George and Annette Barbara Wannop, and ME Wannop & Sons are affected persons in respect of plots 33 and 34. They did not submit representations nor attend any hearings during the Examination. The final Report on Plots states that David George and Annette Barbara Wannop, and ME Wannop & Sons gave Land Owner's Consent dated 7 February 2013.

6.170 ME Wannop & Sons are affected persons in respect of plots 35, 36 and 37. They did not submit representations nor attend any hearings during the course of the Examination. The final Report on Plots states that ME Wannop & Sons gave Land Owner's Consent dated 7 February 2013.

6.171 It can be seen that the Applicant has stated that all individual, or groups of, affected persons in this subsection have already given Land Owner's Consent.

Conclusion

6.172 In respect of plots 1, 2, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 43, 44, 46, 47, 50, 60, and 61, for the reasons set out above the ExA concludes that the CA of land or rights in respect of these plots fulfils the tests in statute. In summary, there is a compelling case in the public interest for the land to be acquired compulsorily, it is required to facilitate or is incidental to that development, and all reasonable alternatives have been explored; the land to be acquired is no more than is reasonably required and is proportionate.

6.173 In respect of plots 3, 4, 13, 19, 20, 21, 22, 23, 24, 26, 27, 28, 45, 48, 49, 51, 52, 53, 54, 56, and 62, for which only temporary rights have been sought, the grant of temporary possession powers, which is akin to a CA power, also meets the tests.

6.174 There are no extant objections from affected persons in respect of these plots and we note that all have reached agreement. We conclude that the public benefits that would be derived from CA would outweigh the private loss that would be suffered sufficient to justify interfering with the human rights of those with an interest in the land affected.

6.175 The ExA, therefore, recommends to the SoS that the request for CA and request for temporary possession powers be granted in respect of plots 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17,18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 56, 60, 61, and 62.

7 DEVELOPMENT CONSENT ORDER

7.1 The initial draft DCO [AD-004] had been subject to consideration between the Applicant and a range of IPs, including the PPAA, prior to submission. It was accompanied by an Explanatory Memorandum [AD-005].

7.2 At the Preliminary Meeting we proposed that an early ISH be held on the draft DCO. The Applicant provided an update prior to the hearing, reflecting discussions between parties. Comments from IPs, and queries from us as the ExA, set out the main issues considered at the hearing [PI-019]. The iterative process continued throughout the Examination and was generally constructive in refining the DCO, including the DML(G) at Schedule 9 and DML(T) at Schedule 10.

7.3 Following a second ISH [D5-002] the Applicant provided a fifth draft reflecting comments and we issued an ExA draft with a brief schedule of comments [PI-019; PI-020]. Responses were supportive [D6-004 to D6-006] and the Applicant provided a revised text [D6-001] reflecting the ExA's comments with some minor drafting amendments. Where there remain issues between parties these have been discussed above (Section 4) or are addressed below.

7.4 In this Section we limit our consideration to the more significant issues which have been considered in relation to the examination of the DCO. We do not discuss every change made to the DCO where there has been a general consensus between parties and which is shared by the ExA. Our focus is on, first, the main issues that have arisen during the Examination and, secondly, on issues where there remains a degree of disagreement. We consider these issues and make recommendations.

7.5 We do not duplicate discussion above where DCO considerations have been addressed in relation to, in particular:

- horizontal directional drilling beneath the saltmarsh;
- road transport impacts;
- aviation radar issues;
- fisheries monitoring.

7.6 The main focus of our consideration has been on the main articles of the DCO, Schedule 1 which covers the relevant works and requirements, and Schedules 9 and 10 which contain the two DMLs.

7.7 The two DMLs have been drafted to be free-standing, with consequent repetition of certain provisions. This is favoured by the parties and we see merit in this. The rationale for the splitting of the DMLs is set out below and is a relevant and important matter in a number of the issues we address. We have sought to ensure that the drafting in the main articles and requirements is

replicated in the DMLs where appropriate, reducing the risk of potential conflict in interpreting the documents.

Relationship between plans etc

7.8 The initial drafts of the DCO contain a considerable number of references to plans, statements, strategies, codes of practice, schemes etc relating to, for example, transport, public access, rights of way, noise, emergency planning, and landscaping. The status of these plans etc, the principles underlying their relationship with each other, some inconsistencies in titles and cross-references and the rationale for which plans were to be certified, or indeed approved, were not always clear to us. We identified this as a significant issue requiring clarification prior to the first ISH on the DCO [PI-011].

7.9 The Applicant recognised the need for greater consistency and clarity as reflected in its schedule of responses following the ISH [D3-004]. Subsequent exchanges have in the main focused on improving this consistency and clarity, rather than reflecting areas of disagreement (though see the related subsection on tailpiece provisions below).

7.10 In our recommended DCO (Appx 4) the more significant plans etc are registered in the list of documents to be certified. Within the DCO (including the DMLs) are a range of requirements for other plans. Some of these are free-standing (for example, the emergency response plan, r.29) while others are required to be consistent with certified plans (for example, construction and environmental management plan, r.28).

7.11 We consider the schedule of plans etc which need to be certified to be appropriate. Those plans which it is not required be certified are in general either derived from certified plans and constrained by them, or are less significant in terms of their likely environmental impact. A potential exception is the Port Construction Traffic Management Plan (r.32) for reasons considered in Section 4.

7.12 A minor issue in relation to certification has arisen in relation to Article 40(1)(q) in the draft of the DCO circulated by the ExA [PI-019]. This refers to the need for any other plan referred to in the DCO to be certified by the SoS. While no comments were received on this, which reflected previous drafting by the Applicant, we consider this to be a minor point that was not subject to comment. It would require the SoS to certify plans of relatively lesser significance, plans already constrained by the parameters of plans which have been certified and plans not yet written for which the DCO sets out a clear approval process not requiring SoS engagement (for example, Port CTMP, r.32). We have in consequence deleted this provision in our recommended DCO (Appx 4).

Tailpiece provisions

7.13 The original and subsequent drafts of the DCO contained a number of tailpiece provisions. Such provisions allow subsequent changes to a condition or requirement subject to approval by (often) a RPA. These can be an appropriate and proportionate method of enabling a degree of flexibility in constructing and operating major infrastructure projects where circumstances may change over the life of a project. If disproportionate they have the potential to circumvent the planning process.

7.14 The tailpiece provisions in the various drafts of the DCO, including the recommended DCO (Appx 4) allow (mainly) either the MMO or the RPA to approve amendments to works or plans. In not all cases was there a constraint on the nature or extent of the amendments that might be approved.

7.15 We challenged the appropriateness of this prior to the second ISH. The Applicant's schedule of comments prior to the hearing sets out the issues [D4A-002] with some disagreement between us and the Applicant about the principle of tailpiece provisions and about the interpretation of this issue by SoSs in making some recent DCOs [D5-026].

7.16 Notwithstanding this, the Applicant has accepted that it would not be appropriate to permit discharging authorities to approve material changes to the Project or associated plans. Changes which are immaterial where it has been demonstrated that they are unlikely to give rise to materially new or materially different environmental effects from those assessed in the ES can, where identified in the DCO, be approved. This is secured by DCO r.42(2) which draws on drafting proposed by the Applicant following the hearing. The MMO and PPAA indicated they too were content, and the text in our recommended DCO (Appx 4) is as circulated by us in the ExA's draft of the DCO [PI-019]. The language is replicated in DML(G)c.20 and DML(T)c.17.

7.17 Following the Examination we have considered further DCO r.(17)(1) which requires the connection works to be carried out in accordance with the certified plans with no flexibility for approval of minor changes. We consider this to be inconsistent with the general principles we propose which are designed to allow flexibility within the parameters set in r.42 relating to material effects. Permitting flexibility to amend within the constraints of r.42 would not result in amendments which go to the heart of the consent and could provide minor necessary flexibility. We have, therefore, added *"unless otherwise approved by the relevant planning authority"* to r.17(1) of the recommended DCO (Appx 4).

Maintenance

7.18 Maintenance is discussed in Section 4 above. While there have been no major issues of principle between the parties there has been significant consideration of how to draft the DCO so as to permit maintenance while ensuring works are not permitted that have not been adequately assessed. This has influenced both the definition of "maintain" and the clarification of what maintenance activities are permissible.

7.19 The main consideration has been in relation to offshore activities and the need for the MMO to be clear what works had been assessed in the ES and would be permitted by the DCO. The considerations have led to a number of amendments to the DCO. The recommended DCO (Appx 4) reflects agreement between the Applicant, the MMO and the PPAA for offshore and onshore works respectively, and is endorsed by us, having been the subject of significant consideration.

7.20 The key features are:

- a very broad definition of "maintain" (Article 2) which has been subject to simplification;
- maintenance activity is limited to works assessed in the ES unless otherwise approved by the MMO or RPA, secured by Article 4 in the DCO and identical drafting in each DML;
- the ability of the MMO or RPA to approve works not set out in the ES is limited by requirement 42(2), as discussed above in relation to tailpiece considerations;
- significant additional clarity is provided by the Schedule of Offshore Maintenance Activities [D4A-005]. This includes identification of certain works not assessed in the ES and identified as not permitted under the DCO (for example, the removal or replacement of turbine foundations). More substantively it includes a schedule of maintenance activities that have been assessed in the ES including information on the frequency, method and scope of operations. This schedule has been a material consideration in the MMO's judgement that the definition of maintenance is appropriate, and the Schedule is seen as providing a useful plan of reference during the long life of the Project. At our suggestion this has been added to the list of documents to be certified by the SoS (Article 40).

7.21 The language used in the articles and requirements of the DCO on this issue is replicated in the DMLs.

Benefit of the Order

7.22 Following the construction of the Project the Applicant would be required, under provisions designed to separate the ownership of the generation from the transmission of electricity, to dispose of

the transmission assets to an independent Offshore Transmission Owner (OFTO). Given this obligation the Applicant has sought to include two DMLs within the DCO, one covering generator assets and one covering transmission assets. The MMO is comfortable with this splitting of the marine licences [SCG-001].

7.23 The Applicant's intention is that the transmission assets and liabilities should be sold to an OFTO with no residual liability remaining with the Applicant i.e. the OFTO would be responsible for all the assets and liabilities relating to transmission following the purchase. The Applicant thus proposed a provision in the DCO at Article 5(4)(b) as shown in Appendix 4.

7.24 The provision would mean that the MMO could not, for example, take action against the Applicant (as the named Undertaker in the DCO) for any breach of the transmission licence after the transmission assets were sold to an OFTO. The Applicant has argued that there are practical benefits to the provision as above, and that there are in practice no disadvantages to the MMO.

7.25 The MMO initially raised two objections to this provision, including suggesting that it contravenes the tests for conditions set out in Planning Circular 11/95, now within the Framework and PPG. The Applicant noted that this has not been explained by the MMO, and queried the relevance of the tests to a DCO article of this nature [D2-005, page 65]. There has been no response from the MMO and we see no obvious relevance of the tests for conditions.

7.26 The substantive concern of the MMO, sustained throughout the Examination, is that this provision could limit the MMO's ability to take enforcement action. The issues are set out most fully in the SoCGs between the Applicant and the MMO [SCG-001; SCG-002]. We explored these in the first ISH on the DCO [EV-003] and briefly during the third ISH [EV-017]. The main considerations are outlined below with our conclusions and recommendations.

7.27 The issues were addressed by the parties on the implicit assumption that the Applicant would remain as the owner/operator of the generating assets and it was just the transmission assets that were to be transferred. Article 5 does, subject to SoS consent, permit the transfer of the generating assets to a new owner. We address the issue of the transfer of transmission assets initially below, assuming the Applicant retains the generating assets, and then assess more briefly the issues that arise if the generating assets are transferred.

Transfer of transmission assets to an OFTO

7.28 The Applicant argues that if the transmission assets are sold without all liabilities being transferred then this would require contractual indemnities and warranties between the seller and the purchaser of the transmission assets relating to enforcement

action. This would have adverse impacts on credit worthiness and ability to raise finance, thus impacting on the cost of providing renewable energy and the achievability of renewable energy targets [SCG-001, Appx 1]. (The provision would limit, but would be unlikely to remove, the need for contractual warranties and indemnities [SCG-001, Appx 1.1, para 13]). This has not been challenged by the MMO and we accept the logic of the Applicant's analysis. It is not, however, clear that the adverse consequences would be substantial.

7.29 The concern of the MMO is that this provision in the DCO could limit the MMO's ability to take enforcement action, and it would prefer the provision be removed from the DCO. It has also argued that the proposed wording is contrary to the Marine and Coastal Access Act (MCAA) 2009 [SCG-001, ref 7.5]. We do not share this view on legality. The extract from the Act (s.71(5)) cited by the MMO provides that *"A licence...may provide that the conditions ...bind any other person who ...enjoys any use of the works in question"*. It can be argued that the owner of the generating assets enjoys the use of the works, but the term "may" in the legislation does not require that the licence conditions embrace those who may enjoy some benefit from the works in question.

7.30 On the more fundamental issue of the ability to take enforcement action, the MMO has argued consistently [for example, D1-027; D2-003; D3-010; D4-001; D4-029] throughout the Examination that it should retain the discretion as the enforcing body to determine what action should be taken and against what body.

7.31 The Applicant has further noted [SCG-001, Appx 1] that following the transfer of the assets to an OFTO:

- the Applicant would have no control over the use of transmission assets, and would not be able to take any remedial action the MMO might require;
- there is little risk of an OFTO not being able to fulfil its obligations to remediate any breach of conditions. There is a rigorous Ofgem-managed tendering process, with due diligence procedures, to ensure that the successful bidder is of sound financial standing and has the means to own and operate the transmission assets, with the successful bidder receiving a 20-year regulated revenue stream;
- should there be an event which precludes an OFTO fulfilling its obligations then an 'OFTO of last resort' mechanism exists whereby Ofgem can appoint an OFTO outside the tendering process;
- the MMO has not been able to identify circumstances in which it might judge it appropriate to take action against the Applicant once the licence has been transferred should there be a breach of conditions requiring remediation in relation to transmission.

7.32 The SoCG also included correspondence between the Applicant and the MMO raising the issue of the consistency of MMO's stance with good practice regulatory principles. MMO noted that its procedures were based on the principles of proportionality and accountability [SCG-001, Appx 1). We asked at the DCO hearing [EV-003] whether the MMO's preference to preserve powers to take action against more than the one party was in line with good regulatory principles, with the MMO responding that it wished to preserve the ability to consider appropriate action at the time.

7.33 We explored these issues via written questions and at the ISHs, particularly the first ISH. In particular, we sought to identify at the hearings the circumstances under which the MMO might find its regulatory role to be fettered if Article 5(4)(b) were included. The MMO had confirmed that it had not identified any examples of breaches where it would be appropriate to take action against the owner of the generating assets for a breach of the transmission licence; in response to questions it noted that it saw limited benefit in identifying "hypothetical scenarios given the multitude of potential scenarios that could occur" [EV-017, 9 mins].

7.34 We note that the Applicant's analysis has a coherence in relation to the requirement to establish an OFTO and the consequent rationale for splitting the DMLs. There would be greater clarity as to where responsibility lay after the OFTO took over ownership and responsibility, with the OFTO having the financial and operational ability to manage any breaches.

7.35 We also note the importance of not fettering the MMO's ability to take enforcement action, but consider there to be an onus on the MMO to explain how this would arise, and why a clear split of responsibilities, which the proposed Article would deliver, should not be the preferred option.

7.36 In reaching a conclusion and recommendation we attach particular weight to the following:

(i) the requirement to separate generation from transmission reflects Government policy, and that it would be reasonable for the separation to include assets and liabilities unless there are good reasons to the contrary;
(ii) the adverse impact of the additional contractual warranties and indemnities and the (potentially small) consequent impact on the cost of capital and renewable energy if the Applicant's proposed text were excluded;
(iii) the Applicant's argument that it could not in practice undertake remedial action in relation to breaches of the transmission assets as it would have no ownership of, and rights over, the relevant assets;
(iv) the Applicant's assessment that in practice the MMO's ability to take remedial action would not be fettered, alongside the inability or reluctance of the MMO to identify circumstances

under which it would be appropriate to take action against the undertaker in the circumstances of the proposed Walney Extension;

(v) the increased clarity of regulatory responsibilities of third parties with the Applicant's proposed provision seeming to be more compatible with good-practice regulatory principles.

7.37 We attach considerable weight to the need to maintain MMO enforcement powers, but the MMO has not challenged the Applicant's analysis that these would not in practice be fettered and has not been able to exemplify when it may take action against the undertaker. On the basis of the evidence presented to us our conclusion is that the provision sought by the Applicant (Article 5(4)(b)) does not in practice fetter these powers. It provides increased clarity with no substantiated disadvantages for enforcement.

Transfer of generation assets

7.38 The discussion above has focussed on the transfer of transmission assets with the expectation that the Applicant would retain and operate the generation assets. Article 5 does permit the transfer of generation assets, and Article 5(4)(b), in whatever form (see below), applies equally to the circumstances where the ownership of generation assets changes.

7.39 Considerations (ii) to (v) in paragraph 7.35 above are as relevant to a transfer of generation assets as to a transfer of transmission assets and we reach a similar conclusion for the transfer of generation assets to that we have reached for transmission assets.

Leasing

7.40 Article 5 permits, with the agreement of the SoS, the granting of a lease for any or all of the benefits of the Order. We explored this at the first DCO hearing. The Applicant has noted that OFTO transfers have not historically involved leases and that if leasing were to be an option then any such leases would be long-term. It further argues that the substance of the arguments remain unchanged [D3-004]. Our assessment is summarised in paragraph 7.35 above and we concur with the Applicant's reasoning.

A compromise?

7.41 The 2 parties have considered wording from the Examination of other offshore wind farms to see if agreement would be possible. The MMO has proposed [SCG-002] that Article 5(4)(b) might be expanded as below by the text in square brackets, with this drawn from a (then) draft DCO for the proposed Rampion Wind Farm:

(b) the transferred benefit shall reside exclusively with the transferee or, as the case may be, the lessee and the transferred

benefit shall not be enforceable against the undertaker [,save in the case of a deemed marine licence transferred or granted in respect of any breach of an obligation by the undertaker which occurs prior to such transfer or grantor, or which occurs as a result of any activity carried out by the undertaker on behalf of the transferee].

7.42 The Applicant has noted that while this clarifies the position with respect to post-transfer breaches, it provides no clarification for pre-transfer breaches where there would continue to be ambiguity as to the party against whom MMO may seek to take action. The same disadvantages occur; in particular, once either of the licences is transferred the undertaker would no longer be in a position to take the remedial action in respect of the transferred or leased licence as they would not control the land or assets.

7.43 The Applicant has further noted that the final clause ("*or which occurs...*") is not necessary as it seems to envisage circumstances in which the Applicant is a sub-contractor. It appears to us that there is no compelling reason for distinguishing between the Applicant and any other sub-contractor. We recommend against its inclusion should the SoS be minded to include the rest of the compromise text in parentheses.

7.44 The ability of the MMO to take action against the undertaker for breaches of the transmission licence which arise prior to transfer has an intuitive appeal. And each of the parties would prefer a compromise to the preferred wish of the other party. We note and agree with the Applicant that the compromise has the same disadvantages as identified above in our initial consideration in the context of an OFTO.

Conclusion

7.45 This is an issue where the Applicant has argued that there are a number of advantages to the inclusion of Article 5(4)(b) with which we concur. The key consideration in our conclusion is that no evidence has been provided that the proposed Article 5(4)(b) would constrain the ability of the MMO to take appropriate action; any action to remediate concerns would need to be taken against the relevant owner or operator of assets at the time remedial action was required. The MMO has not identified circumstances where the restrictions of Article 5(4)(b) would impact on its ability to take enforcement action. While the various compromise options have an intuitive appeal they do not change the fundamental issues. Our conclusion is that the Applicant's proposed text at Article 5(4)(b) has merit with no identified disadvantages, and we include it in our recommended DCO.

The Works

7.46 Schedule 1 Part 1 to the DCO sets out the works which would be authorised if the DCO is made, with ancillary works set out in Part 2. A number of factual clarifications and corrections have been agreed to these works during the Examination. Parts 1 and 2 of Schedule 1 are identical to the draft distributed by us as the ExA [PI-019] save for a minor but important change of wording we propose in the minor changes subsection below. No comments were received taking issue with this draft.

7.47 Part 1 distinguishes between development of a generating station (the principal development) and associated development. The principal development identified by the Applicant is limited to the wind turbines themselves and the cables linking these turbines (Work No.1), with these identified as generator assets and included in DML(G). All other offshore and onshore works (Work No.2 to Work No.27), from the offshore substation(s) to the connection to a new National Grid substation onshore, are classed as associated development, with the offshore works included within DML(T). We explored the rationale for this split via written questions and at the first ISH relating to the DCOs. In particular, we explored the classification of the offshore substation(s) as transmission rather than generator assets.

7.48 The Applicant highlighted three main arguments [D3-004] in support of its classification:

- precedent, in the form of existing offshore wind farm decisions under PA2008;
- consistency with legislation and guidance (*Guidance on associated development applications for major infrastructure projects*, DCLG April 2013);
- consistency with OFTO processes, where normal practice is to include offshore substations in the suite of assets put to tender.

7.49 We note on these issues that there are precedents for substations relating to onshore wind farms being categorised as integral to development under PA2008, and it is not clear that different considerations would necessarily apply to offshore substations; that the guidance is open to interpretation but the Applicant's classification is not inconsistent with it; and that OFTO custom and practice is not enshrined in law but appears to have emerged in response to proposals put forward by companies.

7.50 We recognise that there could be a case for including some transmission assets as generation assets (and thus not associated development) on planning grounds. This is an issue of judgement and the DCLG guidance is clear that the judgement on what constitutes associated development is to be considered on a case-by-case basis.

Conclusion

7.51 In the circumstances of this case the distinction between principal and associated development has a degree of logic given the requirements to establish an OFTO and the splitting of the DMLs. The Applicant's assessment seems reasonable - the works identified as associated development are necessary for the development and effective operation of the generating station - and we endorse it in the case of this Project.

7.52 We further note that it would have no impact on our assessment of the merits of the case if we had reached a different conclusion on the distinction between principal and associated development. The nature of the Project and its impacts would not be affected. It is reasonable in relation to this Project for all the works identified to be brought within the DCO.

Fees and charges for monitoring

7.53 The MMO has argued [D3-010] for the inclusion of a condition in the two DMLs that would allow it to charge for the review of monitoring reports submitted in response to conditions in the DML. Such powers exist, and are exercised, for works subject to the Marine Works (Environmental Impact Assessment) Regulations 2007 as amended in 2011 (the amended 2011 regulations). In essence, the MMO's argument is that a DML, granted as part of a DCO, should take effect as if it had been made directly by the appropriate licensing authority.

7.54 We have considered this via written questions [PI-009] and tabled it for discussion at the third ISH, focussing on three separate dimensions: merits, legality and the drafting of a condition.

7.55 We have considered carefully the merits of this issue. The MMO's current practice is to charge for such monitoring under licences it approves directly, in line with policy. We can see no good reason why practice should be different under a DML if the powers are sufficiently wide to permit this. More generally, the costs of such monitoring would be a direct consequence of the Project. It appears to us that it is more appropriate that they are borne by the Applicant and/or the user of electricity rather than the general taxpayer.

7.56 The Applicant has argued that the MMO does not have the powers to charge, noting that the ability to charge under the amended (2011) regulations relates to an EIA consent, and thus to a marine licence granted in accordance with those regulations [EV-018, 8 minutes et seq]. It argued that the DCO is not made under such provisions and thus there is no power available for the MMO to make a charge for such monitoring. The MMO takes a different view on the breadth of the powers available as a result of the regulations.

7.57 Our judgement on this issue is that the powers in the regulations are sufficiently wide to be applied to a DCO. PA2008, s120(5)(a), permits an Order granting development consent to apply and modify a statutory provision which relates to any matter for which provision is made in the Order. To enable a charging condition to be included within the DMLs an amendment will need to be made to DCO Article 7, application and modification of legislative provisions, to apply and modify the relevant provisions in the amended (2011) regulations. We recommend expanding Article 7 to include new provisions 7(2) and 7(3) as shown in our recommended DCO (Appx 4) with consequent drafting changes to the previous content of Article 7 dealing with Hedgerows Regulations.

7.58 This amendment is intended to give effect to the DML conditions relating to MMO charging and is designed to ensure that the conditions are robust and enforceable.

7.59 The drafting of a condition was discussed at the second ISH, with the Applicant contributing on a without prejudice basis; DML(G)c.21 and DML(T)c.18 were included in the ExA's draft of the DCO circulated for comment and no changes were proposed. Subsequent to the close of the Examination it has come to our attention that *Marine Licensing Guidance 12: Fees and Charges (November 2013)* referred to in the two DMLs circulated as the ExA draft [PI-019] has been retracted. It is therefore no longer appropriate to refer to this in the conditions and we have removed the reference.

Conclusion

7.60 Our overall conclusion is that it is appropriate to include conditions which permit the charging of reasonable expenses, and the drafting of the recommended DCO and DMLs would permit this.

Public Bodies (Marine Management Organisation) (Fees) Order 2014

7.61 We reached this conclusion on the evidence put to us during the Examination, and our consideration of the relevant statutes. It has subsequently come to our attention that the above draft Public Bodies (MMO)(Fees) Order has been laid before Parliament, although it is not yet in force. This Order would permit the MMO to charge a fee for monitoring in connection with a DML issued within a DCO. This is not an issue we have examined. If the Order comes into force before a decision is issued the SoS, should he agree with our conclusion on charging, may consider it unnecessary to incorporate the provisions added at Article 7 of the DCO and DML(G)c.21 and DML(T)c.18.

Other issues

7.62 There have been many changes to the detail of the text through the various iterations of the DCO which can be viewed via the series of schedules the Applicant has produced following the production of the various drafts. These changes have reflected the direct engagement of us as the ExA, and considerable and constructive engagement between the Applicant and other parties, notably PPAA, NE and the MMO. Other areas where changes have been made or understanding clarified include:

- modifications to surveying and monitoring conditions under the DMLs;
- the definition of "commence" in Article 2 and in the DMLs;
- modifications to restrictions on timings of works in relation to, for example, herring spawning;
- clarification of offshore disposal arrangements;
- some restructuring of the DMLs to improve the relationship between conditions;
- the removal of gravity-based foundations as an option for the base of the turbines.

7.63 In addition to the changes above, we have made a small number of presentational changes of a proof-reading nature since the closure of the Examination. The only two we feel it necessary to note are:

- Article 19 relating to the CA of land has, in the drafts considered during the Examination, been subject to Article 24 (acquisition of subsoil) and Article 27 (temporary use of land). The reference to Article 24 is erroneous and should read Article 21 (compulsory acquisition of rights). Article 21 (2) limits the power of acquisition to new rights in the land listed at Schedule 6. The recommended DCO makes this change;
- within Part 1 Schedule 1 we have changed "north easterly" to "north westerly" in the description of Work No.26 to ensure the description of connection works is consistent with the location of the works.

Secretary of State's powers to make the DCO

7.64 In considering changes to the DCO we have been conscious of the need to consider whether the changes made to the application had the effect of creating a different application from that originally applied for. If so, this would raise questions about the SoS's power under s114 of PA2008 to make the DCO.

7.65 We conclude, as the ExA, that the revisions and refinements made during the Examination have no such effect, and that the SoS can make the DCO in the form recommended at Appendix 4.

Overall conclusion and recommendation

7.66 The DCO at Appendix 4 reflects a broad measure of agreement between the parties and has been subject to considerable scrutiny and refinement, with the main issues identified above. We conclude that the recommended DCO (Appx 4) provides the appropriate balance between the need to facilitate the development with requirements and conditions necessary to mitigate potentially adverse consequences. We recommend it to the SoS.

8 SUMMARY OF CONCLUSIONS AND RECOMMENDATION

8.1 S104 of PA2008 sets out the issues to which the SoS must have regard in taking a decision if a NPS has effect. We addressed these issues in Sections 4 and 5 above where appropriate.

8.2 The Project is a NSIP, and the works items identified as associated development are necessary for the effective operation of the wind farm and can be considered as part of the consent sought. The Project contributes to meeting the need for additional renewable energy capacity as set out in EN-1 and EN-3.

8.3 We have concluded that the Project has been assessed in accordance with statutory environmental requirements, in accord with the expectations set out in the NPSs and those within the UK's MPS.

8.4 We consider that if the SoS were to approve the Project he would not be in breach of any duty or any international obligation. The HRA has concluded that there is not likely to be a significant adverse impact on any European site and that it is not necessary to carry out appropriate assessment. This is a view shared by the statutory nature conservation organisations. We conclude that implementation of the Project would not breach the Habitats Directive or compromise the coherence of the Natura 2000 network.

8.5 Our Examination has considered trans-boundary impacts and included consultation with the Republic of Ireland, Iceland and Belgium as potentially affected states. Our conclusion is that the Project is not likely to have significant effects on the environment in any other European Economic Area state.

8.6 Our assessment above has taken account of the LIR submitted by the PPAA, and this has influenced proposals for mitigation on a range of issues, notably in relation to potential transport impacts.

8.7 There are a wide range of impacts from the Project, including minor socio-economic benefits and adverse impacts including marine and terrestrial biodiversity, traffic and noise. We consider that the articles and requirements of the proposed DCO, together with the conditions in the two DMLs, contain sufficient measures to mitigate most of those adverse impacts. The few impacts that cannot be adequately mitigated – such as visual impact – are not substantial. We conclude that the benefits of the Project outweigh any adverse impacts.

8.8 We conclude that the requests for CA powers meet the relevant tests for approving such powers, with a compelling case which is in the public interest.

8.9 In reaching our overall conclusions above we have taken account of all matters raised with us, both written and oral, during the Examination.

Recommendation

8.10 The Examining Authority recommends that the Secretary of State for Energy and Climate Change makes the Walney Extension Offshore Wind Farm Order 2014 in the form attached at Appendix 4.

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APPENDICES

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1 EXAMINATION LIBRARY

The following list of documents has been used during the course of the Examination. The documents are grouped together by examination deadline.

Each document has been given an identification number (i.e. AD-001), and all documents are available to view on the Planning Inspectorate's National Infrastructure Planning website at the Walney Extension Offshore Wind Farm Scheme page:

http://infrastructure.planningportal.gov.uk/walney

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Application Documents

Application Form

AD-001	1.1 Cover Letter to the Planning Inspectorate
AD-002	1.2 Application Form
AD-003	1.3 Copies of Newspaper Notices

Draft Development Consent Order

AD-004	3.1 Draft Proposed Development Consent Order
AD-005	3.2 Explanatory Memorandum

APPENDIX 1

Compulsory Acquisition Documents

AD-006	4.1.1 Book of Reference Part 1
AD-007	4.1.2 Book of Reference Part 2
AD-008	4.1.3 Book of Reference Part 3
AD-009	4.1.4 Book of Reference Part 4
AD-010	4.1.5 Book of Reference Part 5
AD-011	4.1.6 Book of Reference Schedule

Plans

AD-012	2.1 Location Plan
AD-013	2.2 Land Plans
AD-014	2.3.1 Order Limits and Grid Coordinates Plan - Key Plan
AD-015	2.3.2 Order Limits and Grid Coordinates Plan - Offshore - Sheets 1-4
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AD-017	2.4.1 Works Plan - Key Plan
AD-018	2.4.2 Offshore Works Plan
AD-019	2.4.3 Onshore Works Plan
AD-020	2.5 Crown Land Plan
AD-021	2.6A Public Rights of Way Plan
AD-022	2.6B Street Works Plan
AD-023	2.7 Plan showing extinguishment of public rights of navigation
AD-024	2.8 Statutory nature conservation sites (onshore) plan
AD-025	2.9 Statutory nature conservation sites (offshore) plan
AD-026	2.10 Water bodies plan
AD-027	2.11 Heritage Sites Plan (onshore)
AD-028	2.12 Heritage Sites Plan (offshore)
AD-029	2.13 Special Category Land Plan
AD-030	2.14 Hedgerows Plan
AD-031	2.15 Onshore Substation General Arrangement Plan
AD-032	2.16 Onshore Substation Indicative Layout
AD-033	2.17 Onshore Substation Height Restriction Plan and Cross Sections
AD-034	2.18 Onshore Substation Illustrative Landscaping Plan
AD-035	2.19 Onshore Substation Permanent Access - General Arrangement Plan
AD-036	2.20 Onshore Substation Access Cross Section Plan
AD-037	2.21 Landfall General Arrangement Plan
AD-038	2.22 A683 Temporary Access - General Arrangement Plan
AD-039	2.23 Imperial Road Temporary Access - General Arrangement Plan
AD-040	2.24 Middleton Road Temporary Access - General Arrangement Plan
AD-041	2.25 Carr Lane North Temporary Access - General Arrangement Plan

AD-042	2.26 Carr Lane South Temporary Access - General Arrangement Plan
AD-043	2.27 Beach Temporary Access - General Arrangement Plan
AD-044	2.28 Indicative Turbine and Offshore Substation Diagram
AD-045	2.29 Noise monitoring locations

Reports/Statements

AD-046	4.2 Statement of Reasons
AD-047	4.3 Statement of Funding
AD-048	5.0 Consultation Report
AD-049	5.1 Consultation Report Appendices 1 - 7
AD-050	5.2 Consultation Report Appendices 8 - 19
AD-051	6.0 Statement of consents and licences required under other legislation
AD-052	7.0 Habitats Regulations Assessment Report
AD-053	7.1 Habitat Regulations Assessment Report Charts
AD-054	7.2 Habitat Regulations Assessment Report Annexes
AD-055	8.0 Flood Risk Assessment
AD-056	9.0 Environmental Protection Act - Statement of Engagement
AD-057	10.3 Non-Technical Summary
AD-058	10.4 IPC Scoping Report
AD-059	10.5 IPC Scoping Opinion
AD-060	11.1 Grid Connection and Cable Statement
AD-061	11.2 Safety Zone Statement
AD-062	12.1 Design and Access Statement
AD-063	12.2 EMF Human Health Effects Briefing Note
AD-064	12.3 Planning Statement
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AD-066	12.5 Outline Public Access Strategy
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Environmental Statement

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AD-069	10.1.2 ES Ch 2 Policy Legislative and Consenting Framework
AD-070	10.1.3 ES Ch 3 The EIA Process
AD-071	10.1.4 ES Ch 4 Project Description
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AD-154	10.2.10 ES Annex B.4.B Raw Particle Size Analysis (PSA) data
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AD-156	10.2.12 ES Annex B.4.D Raw grab faunal data
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AD-184	10.2.39 ES Annex B.10.A Archaeology and Cultural Heritage (Marine) Technical Report
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AD-215	10.2.58 ES Annex B.15.B Protected species Technical Report

AD-216	10.2.59 ES Annex B16 Radar Aviation and Telecommunications
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AD-219	10.2.62 ES Annex B19.A Onshore Construction Traffic Management Plan
AD-220	10.2.63 ES Annex B19.B Onshore Construction Travel Plan
AD-221	10.2.64 ES Annex B19.C Abnormal Indivisible Loads Access Study
AD-222	10.2.65 ES Annex B19.D Assumptions made to derive the construction traffic forecasts

Scoping Documents

SD-001	IPC Walney Scoping Opinion
SD-002	Walney Extension Scoping Report
SD-003	Late Responses to Scoping
SD-004	Transboundary Notice published in the London Gazette
SD-005	Flemish Fishing Administration

Adequacy of Consultation Responses

AC-001	Calderdale MBC
AC-002	Wyre BC
AC-003	Sefton MBC holding letter
AC-004	Craven DC
AC-005	Blackpool UA
AC-006	PPA Cumbria CC

Correspondence

CR-001	Section 56 Notice
CR-002	Certificate of Compliance S59 of the Planning Act and Reg 13 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009
CR-003	Revised s59 certificates
CR-004	Land rights assembly, applicant update
CR-005	Crown Estate s135 Consent
CR-006	Duchy of Lancaster s135 Consent
CR-007	Duchy of Lancaster grant of land rights
CR-008	DONG Energy - Rule 6 response
CR-009	John Pennington
CR-010	Transboundary consultation with Republic of Ireland
CR-011	Walney Extension Stage 2 Consultation with Republic of Ireland
CR-012	Letter to applicant confirming states notified subsequent consultation
CR-013	Walney Extension Stage 2 Consultation with Republic of Ireland
CR-014	SLVIA location map

APPENDIX 1

Relevant Representations

RR-001	10019351	Pat Riley
RR-002	10019361	The Crown Estate
RR-003	10019362	Marine Management Organisation
RR-004	10019438	Maritime and Coastguard Agency
RR-005	10019457	Royal Yachting Association
RR-006	10019473	NATS Ltd
RR-007	10019509	S Palmer
RR-008	10019514	Richard Charles
RR-009	10019515	Graham Dixon
RR-010	10019516	Stephen Paul Millard
RR-011	10019520	Maritime and Coastguard Agency
RR-012	10019521	Sea Alliance (IOM) Ltd
RR-013	10019525	Trevor Davenport
RR-014	10019526	Jonathan Wallace
RR-015	10019531	Jonathan P Tyler
RR-016	10019537	Steven Vandenborre
RR-017	10019568	Lesley-Jane Powell
RR-018	10019595	Nicola Foote
RR-019	10019600	Carl Taylor
RR-020	10019624	Peter Riley
RR-021	10019625	British Entomological & Natural History Society
RR-022	10019642	Trinity House
RR-023	10019731	Denis Lambert
RR-024	10019736	Whale and Dolphin Conservation
RR-025	10019745	Joyce Clerk
RR-026	10019746	Mike Clerk
RR-027	10019925	Roy W Rhodes
RR-028	10020101	Bootle Parish Council
RR-029	10020174	John Pennington
RR-030	10020242	Karen Lawson
RR-031	10020355	John Pennington on behalf of TravelWatch Isle of Man
RR-032	10020453	Butterfly Conservation
RR-033	10020459	Civil Aviation Authority
RR-034	10021143	Mary Dean
RR-035	10021179	The Wildlife Trust for Lancashire, Manchester and North Merseyside
RR-036	10021180	Isle of Man Chamber of Commerce
RR-037	10021183	Isle of Man Steam Packet Co
RR-038	10021184	Lower Holker Parish Council
RR-039	10021185	Anthony McNamee on behalf of Banks Group

RR-040	10021186	Isle of Man Government, Department of Infrastructure
RR-041	10021187	UK Chamber of Shipping
RR-042	10021189	Seatruck Ferries
RR-043	10021190	Public Health England
RR-044	10021191	Lancashire County Council
RR-045	10021192	Copeland Borough Council
RR-046	10021193	Rod Hill
RR-047	10021194	South Lakeland District Council
RR-048	10021195	Richard Furnival BSc Hons MRICS FAAV on behalf of Edward Ernest Thornton
RR-049	10021196	Manx Cable Company
RR-050	10021197	Royal Society for the Protection of Birds
RR-051	10021198	Lancaster City Council
RR-052	10021200	Cumbria County Council
RR-053	10021202	Lake District National Park Authority
RR-054	10021203	National Trust
RR-055	10021204	Highways Agency
RR-056	10021205	Environment Agency
RR-057	10021206	National Grid Electricity Transmission Plc and National Grid Gas Plc
RR-058	10021208	North Western Inshore Fisheries and Conservation Organisation
RR-059	10021209	Defence Infrastructure Organisation
RR-060	10021210	National Federation of Fisherman's Organisations
RR-061	10021211	Port Millom Plc
RR-062	10021212	English Heritage
RR-063	10021213	Natural England and Joint Nature Conservation Committee
RR-064	WALN-006	Mr Frances Arrowsmith

Notifications from the Planning Inspectorate

PI-001	Transboundary Screening
PI-002	Notification of Decision to Accept Application
PI-003	Section 55 Checklist Final
PI-004	Rule 4 & 6 Letter
PI-005	Rule 8 Letter
PI-006	The Examining Authority's first written questions and requests for information
PI-007	Notification of Hearings
PI-008	Notification of Hearings and call for evidence
PI-009	The Examining Authority's second written questions and requests for information
PI-010	Request for further information

PI-011	Deadline 2 DCO comments
PI-012	The Examining Authority's comments on DCO3
PI-013	DCO Hearing agenda and comments from ExA
PI-014	IoM Aviation Hearing agenda
PI-015	Isle of Man open floor hearing agenda
PI-016	Transport, Biodiversity and DCO hearing agenda
PI-017	Request for further information aviation
PI-018	Report on the Implications for European Sites
PI-019	The Examining Authority's draft DCO for 14 April 2014
PI-020	The Examining Authority's schedule of comments on the DCO for 14 April 2014
PI-021	Request for further information on outstanding aviation issues
PI-022	Notification of Completion of ExA Examination

Local Impact Reports & Statements of Common Ground

LIR-001	PPA Authorities - Local Impact Report
SCG-001	DONG Energy - Appendix 4.1 SOCG with Marine Management Organisation
SCG-002	DONG Energy - Appendix Updated SOCG with Marine Management Organisation
SCG-003	DONG Energy - Appendix 4.2 SOCG with Marine & Coastguard Agency
SCG-004	DONG Energy - Appendix 4.3 SOCG with Royal Yachting Association
SCG-005	DONG Energy - Appendix 4.4 SOCG with Trinity House
SCG-006	DONG Energy - Appendix 4.5 SOCG with Whale & Dolphin Conservation
SCG-007	DONG Energy - Appendix 4.6 SOCG with Isle of Man Steampacket Company
SCG-008	DONG Energy - Appendix 4.7 SOCG with Travelwatch Isle of Man
SCG-009	DONG Energy - Appendix 4.8 SOCG with UK Chamber of Shipping
SCG-010	DONG Energy - Appendix 4.9 SOCG with Butterfly Conservation and Lancashire Moth Group
SCG-011	DONG Energy - Update 1 to SOCG Butterfly Conservation and Lancashire Moth Group
SCG-012	DONG Energy - Appendix 4.10 SOCG with PPA authorities
SCG-013	DONG Energy - Appendix 4.11 SOCG with National Trust
SCG-014	DONG Energy - Appendix 4.12 SOCG with Highways Agency
SCG-015	DONG Energy - Appendix 4.13 SOCG with Environment Agency
SCG-016	DONG Energy - Appendix 4.14 SOCG with Stena Line
SCG-017	DONG Energy - Appendix 4.15 SOCG with English Heritage
SCG-018	DONG Energy - Appendix 4.16 SOCG with Natural England

	and Joint Nature Conservation Committee
SCG-019	DONG Energy - Updated SoCG with Natural England
SCG-020	DONG Energy - Appendix 4.17 SOCG with North West Inshore Fisheries Conservation Authority
SCG-021	DONG Energy - Appendix SOCG with MoD and BAE Systems
SCG-022	DONG Energy - Appendix 12 SOCG with NFFO and ANIFPO
SCG-023	DONG Energy - Appendix 13 SOCG with Lancashire Wildlife Trust
SCG-024	DONG Energy - Appendix SOCG with Seatruck
SCG-025	DONG Energy - SOCG with the Isle of Man Government

Deadlines

Deadline I

D1-001	Graham Dixon - Written Representation
D1-002	Morecambe & Heysham Fisherman's Association - Written Representation
D1-003	John Pennington Hearings and Site Visits Request
D1-004	Richard Furnival - Withdrawal of objection
D1-005	Butterfly Conservation and Lancashire Moth Group - Written Representation
D1-006	John Pennington - Written Representation
D1-007	TravelWatch Isle of Man - Written Representation
D1-008	The Wildlife Trust for Lancashire Manchester and North Merseyside - Written Representation
D1-009	Belgian Fishing Fleet - Written Representation
D1-010	Lancashire County Council - Written Representation
D1-011	Whale & Dolphin Conservation - Written Representation
D1-012	Environment Agency - Written Representation
D1-013	Isle of Man Steam Packet Company - Written Representation
D1-014	NATS - Written Representation
D1-015	North West Inshore Fisheries Conservation Authority - Written Representation
D1-016	Port Millom - Written Representation
D1-017	PPA Authorities - Written Representation
D1-018	Ministry of Defence - Written Representation
D1-019	Natural England - Written Representation
D1-020	National Federation of Fisherman's Organisation - Written Representation
D1-021	Carl Taylor - Written Representation
D1-022	BANKS Renewables - Written Representation
D1-023	National Grid - Written Representation
D1-024	DONG Energy - Appendix 11 Matrices to inform Report on Implications for European Site (version 2 December 2013)
D1-025	Northern Ireland Environment Agency Response to ExA first Written Questions
D1-026	TravelWatch Isle of Man Response to ExA first Written

	Questions
D1-027	Marine Management Organisation Response to ExA first Written Questions
D1-028	Isle of Man Chamber of Commerce Response to ExA first Written Questions
D1-029	Isle of Man Steam Packet Company Response to ExA first Written Questions
D1-030	UK Chamber of Shipping Response to ExA first Written Questions
D1-031	PPA Authorities Response to ExA first Written Questions
D1-032	Heron Marine: Stena Line Response to ExA first Written Questions
D1-033	Manx Natural Heritage Response to ExA first Written Questions
D1-034	English Heritage Response to ExA first Written Questions
D1-035	Isle of Man Government Response to ExA first Written Questions
D1-036	Ministry of Defence Response to ExA first Written Questions
D1-037	Natural England Response to ExA first Written Questions
D1-038	Natural Resources Wales Response to ExA first Written Questions
D1-039	Marine & Coastguard Agency Response to ExA first Written Questions
D1-040	DONG Energy Response to ExA first Written Questions
D1-041	DONG Energy - Appendix 5.1 Partitioning of unidentified birds recorded during project-specific surveys
D1-042	DONG Energy - Appendix 5.2 Aerial and boat-based survey data statistical comparison
D1-043	DONG Energy - Appendix 5.3 Definition of regional populations
D1-044	DONG Energy - Appendix 5.4 Underwater noise impacts on migratory fish and associated rivers
D1-045	DONG Energy - Appendix 5.5 Approach to collision risk modelling for pink-footed geese and whooper swan
D1-046	DONG Energy - Appendix 5.6 Collision risk modelling and potential collision height
D1-047	DONG Energy - Appendix 5.7 Export cable installation and maintenance within Morecambe Bay SAC and SPA
D1-048	DONG Energy - Appendix 5.8 Cumulative impact assessment source data
D1-049	DONG Energy - Appendix 5.9 Comparison of the precision of boat-based and aerial surveys
D1-050	DONG Energy - Appendix 5.10 High tide construction restrictions
D1-051	DONG Energy - Appendix 5.11 GLVIA Comparison note
D1-052	DONG Energy - Appendix 5.12 Shipping and Navigation issues raised by maritime stakeholders
D1-053	DONG Energy - Appendix 5.13 Construction traffic flows and traffic management
D1-054	DONG Energy - Appendix 5.14 Scope of cumulative impact assessment
D1-055	DONG Energy - Appendix 5.15 Summary of EIA of offshore maintenance activities

D1-056	DONG Energy - Appendix 6.1b An updated version of the report on Plots within the order (comparite)
D1-057	DONG Energy - Appendix 6.2 Crown Estate consent under section 135(2)
D1-058	DONG Energy - Appendix 6.3 Duchy of Lancaster agreement granting consent under Section 135(2)
D1-059	DONG Energy - Appendix 6.4 Duchy of Lancaster agreement in principle to grant of land interests
D1-060	DONG Energy - Appendix 6.5 NGET letter dated 8 October 2013
D1-061	DONG Energy - Appendix 7.1 Table setting out progress of discussions with Statutory Undertakers
D1-062	DONG Energy - Appendix 7.2 Letter from BT Openreach AiP dated 05 November 2013
D1-063	DONG Energy - Appendix 7.3 Letter from ENWL AiP dated 31 October 2013
D1-064	DONG Energy - Appendix 7.4 Letter from EA dated 13 December 2013
D1-065	DONG Energy - Appendix 7.5 Letter from BPA (Shell) AiP dated 16 April 2013
D1-066	DONG Energy - Appendix 8 schedule of commercial agreements with affected parties
D1-067	DONG Energy - Appendix 9 Consents and licences required under other legislation (version 2 December 2013)
D1-068	DONG Energy - Appendix 10.1 Revised Code of Construction Practice
D1-069	DONG Energy - Appendix 10.2 Email from Manx National Heritage dated 5th December 2013
D1-070	DONG Energy - Appendix 10.3 Saltmarsh extent within order limits
D1-071	DONG Energy - Appendix 10.4 Email from Public Health England dated 11th December 2013
D1-072	DONG Energy - Appendix 10.5 Email from NIEA dated 12th December 2013
D1-073	DONG Energy - Appendix 10.6 Email from NRW dated 12th December 2013
D1-074	DONG Energy - Appendix 10.7 Summary of onshore mitigation measures in response to ExA Q1.27
D1-075	DONG Energy - Appendix 1a Revised draft Development Consent Order
D1-076	DONG Energy - Appendix 1b Revised draft Development Consent Order (comparite)
D1-077	DONG Energy - Appendix 2 0 Schedule of changes to the Development Consent Order and Deemed Marine Licence
D1-078	DONG Energy - Appendix 3 0 Schedule of Errata

Deadline II

D2-001	TravelWatch Isle of Man - Comments on Written Representations
D2-002	Isle of Man Steam Packet Company - Comments on Written

	Representations
D2-003	Marine Management Organisation - Comments on, and suggested changes to, the revised draft DCO
D2-004	PPA Authorities - Comments on responses to the ExA first Written Questions
D2-005	DONG Energy - written submission for deadline II
D2-006	DONG Energy - Appendix 3,4,9,10 & 11. Other comments submitted to the Examining Authority in relation to Deadline II
D2-007	DONG Energy - Appendix 1: response to WDC's Written Representation
D2-008	DONG Energy - Appendix 2: response to Natural England's expert report on ornithology
D2-009	DONG Energy - Appendix 5 Report from VSH confirming Horizontal Directional Drilling feasibility at the landfall
D2-010	DONG Energy - Appendix 6 update on environmental effects associated with Horizontal Directional Drilling at the landfall
D2-011	DONG Energy - Appendix 8: Position on Fisheries Monitoring

Deadline III

D3-001	PPA Authorities - Further Written Representation
D3-002	PPA Authorities - Comments on the Applicant's feasibility study into the use of HDD under salt marsh
D3-003	PPA Authorities - Comments on highways impact associated with cable instillation beneath the A683
D3-004	DONG Energy - written submission for deadline III
D3-005	DONG Energy - Clarification Note Regional populations, collision risk modelling for kittiwake, common gull and great black-backed gull
D3-006	DONG Energy - Collision risk modelling and potential collision height (Update to deadline I Appendix 5.6)
D3-007	DONG Energy - Deadline III submission Appendix
D3-008	Butterfly Conservation & Lancashire Moth Group - update on environmental effects associated with HDD at the landall
D3-009	Natural England - Written summary on oral case
D3-010	Marine Management Organisation - Written summary on oral case

Deadline IIIa

D3A-001	DONG Energy - Draft DCO: Examination Deadline III(a) Schedule of amendments
D3A-002	DONG Energy - Draft DCO: Examination Deadline III(a)
D3A-003	DONG Energy - Draft DCO: Examination Deadline III(a) comparite version

Deadline IV

D4-001	Marine Management Organisation - Comments on the revised draft DCO
D4-002	DONG Energy - Written Submission for Deadline IV

D4-003	DONG Energy - Appendix 1 Horizontal Directional Drilling feasibility review
D4-004	DONG Energy - Appendix 2 Clarification note on HDD impact on Morecambe Bay SAC and belted beauty moth
D4-005	DONG Energy - Appendix 3 Clarification of hydrological and hydrogeological connectivity between substation and Heysham Moss SSSI
D4-006	DONG Energy - Appendix 4 Updated Report on Plots within the Order Lands (Clean Version)
D4-007	DONG Energy - Appendix 4 Updated Report on Plots within the Order Lands (Comparite Version)
D4-008	DONG Energy - Appendix 5 Letter confirming the Crown Estate's response to ExA Q2.25 dated 27 February 2014
D4-009	DONG Energy - Appendix 6 Letter confirming the Duchy of Lancaster's response to ExA Q2.25 dated 28 February 2014
D4-010	DONG Energy - Appendix 7 Letter confirming withdrawal of objection by National Grid dated 26 February 2014
D4-011	DONG Energy - Appendix 8 Letter confirming withdrawal of objection by Mr Thornton dated 27 November 2013
D4-012	DONG Energy - Appendix 9 Email from Public Health England dated 28th February 2014
D4-013	DONG Energy - Appendix 10 minutes of meeting with PPA Authorities relating to heritage issues 20th November 2013
D4-014	DONG Energy - Appendix 11 SOCG Update 1 PPA Authorities Transport Issues
D4-015	DONG Energy - Appendix 12 Paper providing background on Multilateration (MLAT) system
D4-016	DONG Energy - Appendix 13 Updated Lesser black backed gull in-combination assessment
D4-017	DONG Energy - Appendix 14 Herring gull collision risk apportioning
D4-018	DONG Energy - Appendix 15 HRA clarification note - screening of breeding birds outside of the breeding season
D4-019	Civil Aviation Authority Response to ExA second Written Questions
D4-020	Whale & Dolphin Conservation Response to ExA second Written Questions
D4-021	Butterfly Conservation Response to ExA second Written Questions
D4-022	NATS Response to ExA second Written Questions
D4-023	North Western Inshore Fisheries & Conservation Authority Response to ExA second Written Questions
D4-024	The Duchy of Lancaster Response to ExA second Written Questions
D4-025	The Crown Estate Response to ExA second Written Questions
D4-026	Banks Renewables Response to ExA second Written Questions
D4-027	Environment Agency Response to ExA second Written Questions
D4-028	Isle of Man Steam Packet Company Response to ExA second Written Questions
D4-029	Marine Management Organisation Response to ExA second

	Written Questions
D4-030	Ministry of Defence Response to ExA second Written Questions
D4-031	PPA Authorities Response to ExA second Written Questions
D4-032	The Wildlife Trust for Lancashire Manchester and north Merseyside Response to ExA second Written Questions
D4-033	UK Chamber of Shipping Response to ExA second Written Questions
D4-034	Maritime Coastguard Agency Response to ExA second Written Questions
D4-035	Isle of Man Government Response to ExA second Written Questions
D4-036	Natural England Response to ExA second Written Questions
D4-037	Republic of Ireland representation on Transboundary

Deadline IVa

D4A-001	Draft DCO Examination Deadline IV(a)
D4A-002	DONG Energyt - Revised draft DCO - Schedule of responses to issues and comments
D4A-003	DONG Energy - HRA matrices updated 14th March 2014
D4A-004	DONG Energy - Draft DCO - Comparite - Deadline III(a) to Deadline IV(a)
D4A-005	DONG Energy - Schedule of offshore maintenance activities
D4A-006	Natural Resources Wales response to ExA request for further information
D4A-007	MOD response to ExA request for further information
D4A-008	DONG Energy - Agreed Statement with MOD BAE and Walney Extension March 2014
D4A-009	DONG Energy - S.106 Unilateral Undertaking dated 13 March 2014 (Certified Copy)
D4A-010	DONG Energy - response to request for evidence on Welsh SPAs
D4A-011	DONG Energy - response to the request for evidence on air navigation
D4A-012	DONG Energy - Transport Statement Appendices
D4A-013	DONG Energy - Transport Statement figures
D4A-014	DONG Energy - Transport Statement plans
D4A-015	DONG Energy - Transport Statement
D4A-016	DONG Energy - comments on fish monitoring

Deadline V

D5-001	DONG Energy Walney Extension (UK) Ltd
D5-002	Appendix 13a revised Draft DCO - Comparite - Deadline IV(a) to V
D5-003	DONG Biographies of Expert Witnesses
D5-004	DONG speaker profiles
D5-005	DONG Walney aviation navigation chart
D5-006	Isle of Man Civil Aviation Administration presentation
D5-007	Isle of Man aviation navigation chart
D5-008	Steam Packet Company foul weather route

D5-009	TravelWatch Isle of Man representation
D5-010	TravelWatch wind farm chart
D5-011	PPA Authorities response to transport statement and proposed revisions to Requirement 32
D5-012	DONG Energy - Appendix 1 ISH 18-03-14 Air Navigation - summary of hearing
D5-013	Isle of Man Airport Scheduled Services 2014
D5-014	IoMG submission on Air Navigation for OFH on 18 March 2014
D5-015	Appendix 2 OFH 18-03-14 and 20-03-14 Applicant's summary of case
D5-016	DONG Energy - Letter re Herring SOCG
D5-017	Walney Extension Wind Farm - IOM Govt submission on Shipping _ Navigation for Open for hearings on 18 March 2014 v1
D5-018	Environment Agency - ISH 27 March 2014 Post hearing submission
D5-019	DONG Energy - Appendix 3 ISH 26-03-14 - Transport - summary of hearing
D5-020	DONG Energy - Appendix 4 ISH 27-03-14 Biodiversity - summary of hearing - HDD, saltmarsh and belted beauty moth
D5-021	DONG Energy - Appendix 5 ISH 27-03-14 Biodiversity - summary of case - cetaceans
D5-022	DONG Energy - Appendix 6 ISH 27-03-14 Biodiversity - summary of case - salmonid smolt
D5-023	DONG Energy - Appendix 7 ISH 27-03-14 Biodiversity - summary of case - fisheries monitoring
D5-024	DONG Energy - Appendix 8 ISH 27-03-14 Biodiversity - summary of case - collision risk for birds
D5-025	DONG Energy - Appendix 9 ISH 27-03-14 Biodiversity - summary of hearing - impact of the onshore substation
D5-026	DONG Energy - Appendix 10 ISH 28-03-14 DCO summary of hearing
D5-027	DONG Energy - Appendix 11a Deadline V Update - Report on Plots within the Order Lands (Comparite Version)
D5-028	DONG Energy - Appendix 11b Deadline V Update - Report on Plots within the Order Lands (Clean Version)
D5-029	DONG Energy - Appendix 12 Update to Applicant's Response to ExA Q2.3
D5-030	DONG Energy - Appendix 14 Email from IOM Government dated 27-03-14 re Manx Shearwater monitoring
D5-031	DONG Energy - Appendix 15 Agreed Statement between the Applicant and IoM Government re herring dated 02-04-14 spawning restriction
D5-032	DONG Energy - Appendix 16a 2.3.2 Order Limits and Grid Coordinates Plan - offshore - sheet 1
D5-033	DONG Energy - Appendix 16b 2.3.2 Order Limits and Grid Coordinates Plan - offshore - sheet 2
D5-034	DONG Energy - Appendix 16c 2.3.2 Order Limits and Grid Coordinates Plan - offshore - sheet 3
D5-035	DONG Energy - Appendix 16d 2.3.2 Order Limits and Grid Coordinates Plan - offshore - sheet 4

D5-036	DONG Energy - Appendix 17 Agreed statement between the Applicant and NATS dated 27-03-14 re Requirement 13
D5-037	DONG Energy - Appendix 18 Applicant's HRA matrices updated - Erratum
D5-038	Butterfly Conservation & Lancashire Moth Group- important additional note
D5-039	Natural England's Written Summary of hearings 3 April 2014
D5-040	MMO Comments on DCO V5
D5-041	PPA Authorities - Summary of Case - ISH on the DCO 28 Mar 2014
D5-042	PPA Authorities - Summary of Case - Transport & Biodiversity Hearings 26 & 27 Mar 2014
D5-043	DONG Energy - Submission for Deadline V
D5-044	MMO - Hearing Summary
D5-045	DONG Energy - Appendix 7 Details of consultation on cumulative impact assessment scoping document
D5-046	DONG Energy - comments on aviation
D5-047	DONG Energy - response to concerns raised by Port Millom
D5-048	Isle of Man Government - aviation DCO requests
D5-049	Isle of Man Steampacket Company - Hearing 18-3-14 Submission

Deadline Va

D5A-001	DONG Energy - Response to further request for evidence on air navigation
D5A-002	Civil Aviation Authority - Response to Request for Further Information
D5A-003	Isle of Man Airport - Response to Request for Further Information

Deadline VI

D6-001	DONG Energy - DCO - SI Template Validated Final Version
D6-002	DONG Energy - submission on air navigation
D6-003	DONG Energy - Appendix 1 to air navigation submission - CAA consultation report April 2014 - replacement of class F airspace
D6-004	DONG Energy - Applicant and MMO comment on ExA draft DCO
D6-005	DONG Energy - comments on ExA RIES
D6-006	Natural England - Comments on DCO and RIES
D6-007	Isle of Man Airport - Comments on Further Responses to Request for Further Information
D6-008	Isle of Man Airport - Suggested amendments on DCO
D6-009	MMO - Comments on ExA's draft DCO
D6-010	PPAA - Comments on ExA's draft DCO

Deadline VII

D7-001	Civil Aviation Authority

D7-002	Isle of Man Airport
D7-003	NATS

Deadline VIII

D8-001	Applicant's deadline VIII submission on air navigation
D8-002	Update on land assembly prior to close of examination - 12 May 2014
D8-003	Update on land assembly prior to close of examination - 12 May 2014
D8-004	Applicant's comments on IOMA 9th May submission
D8-005	NATS representation - comments on responses
D8-006	MOD update to Examining Authority

Additional Representations

AR-001	Sonia Allen
AR-002	Isle of Man Government, Department of Infrastructure
AR-003	Heron Marine
AR-004	EDF Energy (Nuclear Generation) Ltd
AR-005	United Utilities
AR-006	Port Millom
AR-007	Port Millom
AR-008	National Grid - Withdrawal of representation
AR-009	Banks Renewables Withdrawal of Objection
AR-010	Lancashire County Council - Withdrawal of representation

Events

EV-001	Preliminary Meeting Audio
EV-002	Note of the Preliminary Meeting
EV-003	ISH on DCO part 1 audio
EV-004	ISH on DCO part 2 audio
EV-005	DONG Energy Hearing Notice
EV-006	Issue Specific Hearing Part 1 audio
EV-007	Issue Specific Hearing Part 2 audio
EV-008	Open Floor Hearing audio
EV-009	Open Floor Hearing Millom audio
EV-010	DONG Energy - Rule 13 notification March 2014
EV-011	Issue Specific Hearing regarding Transport Part 1 audio
EV-012	Issue Specific Hearing Regarding Transport Part 2 audio
EV-013	Issue Specific Hearing regarding Biodiversity and Nature Conservation Part 1 audio
EV-014	Issue Specific Hearing Regarding Biodiversity and Nature Conservation Part 2 audio
EV-015	Issue Specific Hearing Regarding Biodiversity and Nature Conservation Part 3 audio
EV-016	Issue Specific Hearing Regarding the Draft DCO Part 1 audio
EV-017	Issue Specific Hearing Regarding the Draft DCO Part 2 audio
EV-018	Issue Specific Hearing Regarding the Draft DCO Part 3 audio

2 EVENTS IN THE EXAMINATION AND PROCEDURAL DECISIONS

Application

The application, dated 28 June 2013, was made under s.37 of the Planning Act 2008 and was received in full by the Planning Inspectorate on 28 June 2013.

The application was accepted for Examination on 22 July 2013.

Examining Authority

On 16 October 2013 [PI-004] a Panel of 3 persons was appointed as Examining Authority (ExA) to conduct the examination under s61 of the Planning Act 2008 as amended.

Rule 4 and 6 Letter

The ExA issued a letter under Rules 4 and 6 of the Infrastructure Planning (Examination Procedure Rules 2010 (as amended) on 16 October 2013 [PI-004].

Preliminary Meeting

The ExA held the Preliminary Meeting on 12 November 2013.

Period of Examination

The Examination started on 12 November 2013 and ended on 12 May 2014.

Rule 8 Letter

The ExA issued a letter under Rule 8 of the Infrastructure Planning (Examination Procedure Rules 2010 (as amended) on 20 November 2013 [PI-005].

Examining Authority's Written Questions

The ExA issued its first round of written questions on 20 November 2013 [PI-006] with a deadline for responses of noon 16 December 2013.

The ExA issued its second round of written questions on 11 February 2014 [PI-009] with a deadline for responses of noon 4 March 2014.

Procedural Decisions

The ExA issued procedural decisions under Rules 8, 9 and/or 17 of the Infrastructure Planning (Examination Procedure Rules 2010 (as amended) on:

- 20 November 2013 [PI-005] - Rule 8 Letter
- 20 December 2013 [PI-007] - Rules 8(3) & 13 Notification of hearings and notification of variation to timetable
- 11 February 2014 [PI-008] - Rules 8(3) & 13 Notification of hearings, call for evidence and notification of variation to timetable
- 27 February 2014 [PI-010] - Rules 8(3) & 17 Request for further information and notification of variation to timetable
- 09 April 2014 [PI-017] - Rules 8(3) & 17 Request for further information and notification of variation to timetable
- 29 April 2014 [PI-021] - Rules 8(3) & 17 Request for further information and notification of variation to timetable

Hearings

The ExA held the following Hearings:

- Issue Specific Hearing on the draft DCO 27 January 2014
- Open Floor Hearing – Isle of Man 18 March 2014
- Issue Specific Hearing on Air Navigation 18 March 2014
- Open Floor Hearing – Cumbria 20 March 2014
- Issue Specific Hearing on Transport 26 March 2014
- Issue Specific Hearing on Biodiversity &
- Nature Conservation 27 March 2014
- Issue Specific Hearing on the draft DCO 28 March 2014

3 LIST OF ABBREVIATIONS

AIL	Abnormal Indivisible Load
ACE	Agreement of Coexistence
AEZ	Archaeological Exclusion Zone
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AP	Affected Person
AQMP	Air Quality Management Plan
ATC	Air Traffic Control
ATM	Air Traffic Management
ATS	Air Traffic Service
BAP	Biodiversity Action Plan
BC	Butterfly Conservation
BHS	Biological Heritage Site
BPA	British Pipeline Agency
c	Condition
CA	Compulsory Acquisition
CAA	Civil Aviation Authority
CAS	Controlled Airspace
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CEMP	Construction and Environmental Management Plan
CNMP	Construction Noise Management Plan
CoCP	Code of Construction Practice
CRM	Collision Risk Modelling
CTMP	Construction Traffic Management Plan
dB	Decibels
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DML	Deemed Marine Licence
DML(G)	Generator Assets Deemed Marine Licence
DML(T)	Transmission Assets Deemed Marine Licence
DMRB	Design Manual for Roads and Bridges
DPD	Development Plan Documents
EA	Environment Agency
EC	European Commission
EEA	European Economic Area
EMF	Electromagnetic Fields
EMMP	Environmental Management and Monitoring Plan
EN-1	Overarching National Policy Statement for Energy
EN-3	National Policy Statement for Renewable Energy
EN-5	National Policy Statement for Electricity Networks
EPR	Examination Procedure Rules
ErCOP	Emergency Response Cooperation Plan
ES	Environmental Statement
EIA	Environmental Impact Assessment
EPS	European Protected Species
ES	Environmental Statement
ExA	Examining Authority

FCS	Favourable Conservation Status
FRA	Flood Risk Assessment
GLVIA	Guidelines for Landscape and Visual Impact Assessment
ha	Hectare
HA	Highways Agency
HAT	Highest Astronomical Tide
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
HRA	Habitats Regulations Assessment
HSE	Health and Safety Executive
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IoM	Isle of Man
IoMA	Isle of Man Airport
IoMG	Isle of Man Government
IoMSPC	Isle of Man Steam Packet Company
IP	Interested Party
ISH	Issue Specific Hearing
JNCC	Joint Nature Conservation Committee
Kv	Kilovolt
LAT	Lowest Astronomical Tide
LDF	Local Development Framework
LIR	Local Impact Report
LMG	Lancashire Moth Group
LNR	Local Nature Reserve
LPA	Local Planning Authority
LSE	Likely Significant Effect
LVIA	Landscape and Visual Impact Assessment
LWT	Wildlife Trust for Lancashire, Manchester and North Merseyside
m	metres
MAS	Maximum Adverse Scenario
MMMP	Marine Mammal Mitigation Protocol
MCA	Maritime and Coastguard Agency
MCAA	Marine and Coastal Access Act 2009
MCZ	Marine Conservation Zone
MHWS	Mean High Water Springs
MLW	Mean Low Water
MMO	Marine Management Organisation
MoD	Ministry of Defence
MPS	UK Marine Policy Statement
MW	Megawatts
NATS	NATS (En Route) plc
NE	Natural England
NEPDA	North East Potential Development Area
NERC	Natural Environment and Rural Communities Act 2006
NERL	NATS En Route Limited
NGET	National Grid Transmission plc
Nm	Nautical Mile
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NRA	Navigational Risk Assessment

NSIP	Nationally Significant Infrastructure Project
NT	National Trust
OFH	Open Floor Hearing
OFTO	Offshore Transmission Operator
OSP	Offshore Substation Platform
OWF	Offshore Wind Farm
PA2008	the Planning Act 2008, as amended
PAS	Outline Public Access Strategy
PBR	Potential Biological Removal
PDA	Potential Development Area
PINS	Planning Inspectorate
PPAA	Planning Performance Agreement Authorities (Lancashire County Council, Lancaster City Council, Cumbria County Council, South Lakeland District Council, Copeland Borough Council and the Lake District National Park Authority)
PPG	Planning Practice Guidance
PRoW	Public Right of Way
pSAC	possible/proposed Special Area of Conservation
pSPA	potential Special Protection Area
PSR	Primary Surveillance Radar
r	Requirement
rMCZ	Recommended Marine Conservation Zone
Ramsar	The Ramsar Convention on Wetlands
RIES	Report on the Implications for European Sites
RPA	Relevant Planning Authority
RR	Relevant Representation
RSPB	The Royal Society for the Protection of Birds
RYA	Royal Yachting Association
S	Section, as in, eg, a reference to a library document
SAC	Special Area of Conservation
SEL	Sound Exposure Level
SLVIA	Seascape, Landscape and Visual Impact Assessment
SNCB	Statutory Nature Conservation Bodies
SoCG	Statement of Common Ground
SoF	Statement of Funding
SoS	Secretary of State
SPA	Special Protection Area
SSC	Suspended Sediment Concentration
SSR	Secondary Surveillance Radar
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
TCE	The Crown Estate
THLS	Trinity House Lighthouse Services
TMZ	Transponder Mandatory Zone
TPO	Tree Preservation Order
TS	Transport Statement
UKIAIP	UK Integrated Aeronautical Information Package
WoDS	West of Duddon Sands Offshore Wind Farm
WTG(s)	Wind Turbine Generator(s)
ZTV	Zone of Theoretical Visibility

4 RECOMMENDED DEVELOPMENT CONSENT ORDER AND DEEMED MARINE LICENCES

This document is provided separately.

5 REPORT ON IMPACT ON EUROPEAN SITES

This document is provided separately.