

MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Annex 5.2 to the Applicants response to Hearing Action Points: ISH1 6, 8, 9, 19, 26 & 28

Deadline: Deadline ~~1~~3
Application Reference: EN020028

Document Numbers:
MRCNS-J3303-JVW-19042
MOR-FLO-CON-CAG-RPT-0052

Document Reference: S_D1_5.2/~~F01~~F02
Rev: ~~F01~~F02

~~20-May~~7 July 2025
~~F01~~

Document status					
Version	Purpose of document	Approved by	Date	Approved by	Date
F01	Deadline 1	HK	May 2025	IM	May 2025
F02	Deadline 3	HK	July 2025	PM	July 2025

Prepared by:

**CMS Cameron McKenna Nabarro
Olswang LLP,
Borges Salmon LLP,
Morgan Offshore Wind Limited,
Morecambe Offshore Windfarm Ltd**

Prepared for:

**Morgan Offshore Wind Limited,
Morecambe Offshore Windfarm Ltd**

Contents

1	INTRODUCTION	1
1.2	Meaning of Point of Interconnection (PoI).....	2
1.3	Summary Document Structure.....	2
2	CONSIDERATION AND RELEVANCE OF ALTERNATIVES (ISH1_6).....	5
3	THE PROCESS AND RESPONSIBILITIES TO IDENTIFY A POINT OF INTERCONNECTION (ISH1_6 CONTINUED AND ISH1_8).....	9
3.1	The Functions of NESO and NGET	9
3.2	Responsibility and Process for Identifying a Point of Interconnection	10
3.3	CION, the OTNR and the HND	10
3.3.1	Connection and Infrastructure Options Note (CION).....	10
3.3.2	Offshore Transmission Network Review (OTNR).....	11
3.4	The Holistic Network Design (HND).....	12
3.5	How does the Proposed Alternative Route / Point of Interconnection at Stanah, Proposed by FACTS, fit into this Process?	16
3.6	The National Policy Statements.....	18
3.6.2	What do the NPS Say about Responsibility to Identify a Point of Interconnection?.....	18
3.6.3	What do the NPS State to be the Benefits of Strategic Co-ordination?	19
3.7	The Proposed Project – Penwortham as a Point of Interconnection and the Co-ordination Proposed	20
4	IS AN ALTERNATIVE POINT OF INTERCONNECTION A MATERIAL PLANNING CONSIDERATION? (ISH1_6 CONTINUED)	21
4.1	Is the Alternative Point of Interconnection Locations a Material Planning Consideration?	21
4.2	The Assessment of Impacts Arising from the Point of Interconnection at Penwortham	24
5	ARE ALTERNATIVE CABLE ROUTING AND SUBSTATION SITING A MATERIAL PLANNING CONSIDERATION? (ISH1_6 CONTINUED)	25
6	DETAILS OF AGREEMENT WITH NATIONAL GRID FOR PENWORTHAM CONNECTION (ISH1_19)	26
7	BENEFITS OF COORDINATION (ISH1 ACTION 26)	26
7.1	The NPSs Recognise and Endorse the Benefits of Coordination.....	26
7.2	Coordination at a Strategic and Local Level	27
7.2.1	The HND's Position on The Benefits of the Strategic and Local Co-ordination Proposed.....	27
7.2.2	The Applicants' Position on the Benefits of the Strategic and Local Co-ordination Proposed.....	28
7.2.3	The Applicants' Position on Construction Coordination	29
8	NEED FOR PROJECT SEPARATION (ISH ACTION 28).....	30
8.1	Independent Competitors Working Together	30
8.2	Difficulties with Requiring Concurrent Construction.....	31
8.3	Delaying Delivery in order to Coordinate Construction is Not Supported by NPS.....	32
8.4	Further Background on the Differences to Previous Projects.....	32
1	INTRODUCTION	1
1.2	Meaning of Point of Interconnection (PoI).....	2
1.3	Summary Document Structure.....	2
2	CONSIDERATION AND RELEVANCE OF ALTERNATIVES (ISH1_6).....	5

3	<u>THE PROCESS AND RESPONSIBILITIES TO IDENTIFY A POINT OF INTERCONNECTION (ISH1 6 CONTINUED AND ISH1 8)</u>	9
3.1	The Functions of NESO and NGET	9
3.2	Responsibility and Process for Identifying a Point of Interconnection	10
3.3	CION, the OTNR and the HND	10
3.3.1	Connection and Infrastructure Options Note (CION)	10
3.3.2	Offshore Transmission Network Review (OTNR)	11
3.4	The Holistic Network Design (HND)	12
3.5	How does the Proposed Alternative Route / Point of Interconnection at Stanah, Proposed by FACTS, fit into this Process?	16
3.6	The National Policy Statements	18
3.6.2	What do the NPS Say about Responsibility to Identify a Point of Interconnection?	18
3.6.3	What do the NPS State to be the Benefits of Strategic Co-ordination?	19
3.7	The Proposed Project – Penwortham as a Point of Interconnection and the Co-ordination Proposed	20
4	<u>IS AN ALTERNATIVE POINT OF INTERCONNECTION A MATERIAL PLANNING CONSIDERATION? (ISH1 6 CONTINUED)</u>	21
4.1	Is the Alternative Point of Interconnection Locations a Material Planning Consideration?	21
4.2	The Assessment of Impacts Arising from the Point of Interconnection at Penwortham	24
5	<u>ARE ALTERNATIVE CABLE ROUTING AND SUBSTATION SITING A MATERIAL PLANNING CONSIDERATION? (ISH1 6 CONTINUED)</u>	25
6	<u>DETAILS OF AGREEMENT WITH NATIONAL GRID FOR PENWORTHAM CONNECTION (ISH1 19)</u>	26
7	<u>BENEFITS OF COORDINATION (ISH1 ACTION 26)</u>	26
7.1	The NPSs Recognise and Endorse the Benefits of Coordination	26
7.2	Coordination at a Strategic and Local Level	27
7.2.1	The HND's Position on The Benefits of the Strategic and Local Co-ordination Proposed	27
7.2.2	The Applicants' Position on the Benefits of the Strategic and Local Co-ordination Proposed	28
7.2.3	The Applicants' Position on Construction Coordination	29
8	<u>NEED FOR PROJECT SEPARATION (ISH ACTION 28)</u>	30
8.1	Independent Competitors Working Together	30
8.2	Difficulties with Requiring Concurrent Construction	31
8.3	Delaying Delivery in order to Coordinate Construction is Not Supported by NPS	32
8.4	Further Background on the Differences to Previous Projects	32

Glossary

Term	Meaning
400 kV grid connection cables	Cables that will connect the proposed onshore substations to the existing National Grid Penwortham substation.
400 kV grid connection cable corridor	The corridor within which the 400 kV grid connection cables will be located.

Term	Meaning
Applicants	Morgan Offshore Wind Limited (Morgan OWL) and Morecambe Offshore Windfarm Ltd (Morecambe OWL).
Biodiversity benefit	An approach to development that leaves biodiversity in a better state than before. Where a development has an impact on biodiversity, developers are encouraged to provide an increase in appropriate natural habitat and ecological features over and above that being affected. For the Transmission Assets, biodiversity benefit will be delivered within identified biodiversity benefit areas within the Onshore Order Limits. Further qualitative benefits to biodiversity are proposed via potential collaboration with stakeholders and local groups, contributing to existing plans and programmes, both within and outside the Order Limits.
Code of Construction Practice	A document detailing the overarching principles of construction, contractor protocols, construction-related environmental management measures, pollution prevention measures, the selection of appropriate construction techniques and monitoring processes.
Commitment	This term is used interchangeably with mitigation and enhancement measures. The purpose of commitments is to avoid, prevent, reduce or, if possible, offset significant adverse environmental effects. Primary and tertiary commitments are taken into account and embedded within the assessment set out in the ES.
Construction Traffic Management Plan	A document detailing the construction traffic routes for heavy goods vehicles and personnel travel, protocols for delivery of Abnormal Indivisible Loads to site, measures for road cleaning and sustainable site travel measures.
Design envelope	A description of the range of possible elements and parameters that make up the Transmission Assets options under consideration, as set out in detail in Volume 1, Chapter 3: Project Description. This envelope is used to define the Transmission Assets for EIA purposes when the exact engineering parameters are not yet known. This is also referred to as the Maximum Design Scenario or Rochdale Envelope approach.
Development Consent Order	An order made under the Planning Act 2008, as amended, granting development consent.
Direct pipe	A cable installation technique which involves the use of a mini (or micro) tunnel boring machine and a hydraulic (or other) thruster rig to directly install a steel pipe between two points.
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Evidence Plan Process	A voluntary consultation process with specialist stakeholders to agree the approach to, and information to support, the EIA and Habitats Regulations Assessment processes for certain topics.
Generation Assets	The generation assets associated with the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm include the offshore

Term	Meaning
	wind turbines, inter-array cables, offshore substation platforms and platform link (interconnector) cables to connect offshore substations.
Intertidal area	The area between Mean High Water Springs and Mean Low Water Springs.
Intertidal Infrastructure Area	The temporary and permanent areas between MLWS and MHWS.
Landfall	The area in which the offshore export cables make landfall (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Lytham St. Annes between Mean Low Water Springs and the transition joint bay inclusive of all construction works, including the offshore and onshore cable routes, intertidal working area and landfall compound(s).
Local Authority	A body empowered by law to exercise various statutory functions for a particular area of the United Kingdom. This includes County Councils, District Councils and County Borough Councils.
Local Highway Authority	A body responsible for the public highways in a particular area of England and Wales, as defined in the Highways Act 1980.
Main rivers	The term used to describe a watercourse designated as a Main River under the Water Resources Act 1991 and shown on the Main River Map. These are usually larger rivers or streams and are managed by the Environment Agency.
Marine licence	The Marine and Coastal Access Act 2009 requires a marine licence to be obtained for licensable marine activities. Section 149A of the Planning Act 2008 allows an applicant for to apply for 'deemed marine licences' in English waters as part of the development consent process
Maximum design scenario	The realistic worst case scenario, selected on a topic-specific and impact specific basis, from a range of potential parameters for the Transmission Assets.
Mean High Water Springs	The height of mean high water during spring tides in a year.
Mean Low Water Springs	The height of mean low water during spring tides in a year.
Micro-tunnel / micro-tunnelling	A tunnelling technique involving the use of a hydraulic (or other) jacking rig and a mini (or micro) tunnel boring machine to install a concrete tunnel between two points.
Mitigation measures	This term is used interchangeably with Commitments. The purpose of such measures is to avoid, prevent, reduce or, if possible, offset significant adverse environmental effects.
Morecambe Offshore Windfarm: Generation Assets	The offshore generation assets and associated activities for the Morecambe Offshore Windfarm.
Morecambe Offshore Windfarm: Transmission Assets	The offshore export cables, landfall, and onshore infrastructure required to connect the Morecambe Offshore Windfarm to the National Grid.
Morecambe OWL	Morecambe Offshore Windfarm Ltd is a joint venture between Zero-E Offshore Wind S.L.U. (Spain) (a Cobra group company) (Cobra) and Flotation Energy Ltd.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The offshore export cables, landfall, and onshore infrastructure for the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm. This includes the offshore export cables, landfall site, onshore export cables, onshore substations, 400 kV grid connection

Term	Meaning
	cables and associated grid connection infrastructure such as circuit breaker compounds. Also referred to in this report as the Transmission Assets, for ease of reading.
Morgan Offshore Wind Project: Generation Assets	The offshore generation assets and associated activities for the Morgan Offshore Wind Project.
Morgan Offshore Wind Project: Transmission Assets	The offshore export cables, landfall and onshore infrastructure required to connect the Morgan Offshore Wind Project to the National Grid.
Morgan OWL	Morgan Offshore Wind Limited is a joint venture between bp Alternative Energy Investments Ltd. and Energie Baden-Württemberg AG (EnBW).
National Grid Penwortham substation	The existing National Grid substation at Penwortham, Lancashire.
National Policy Statement(s)	The current national policy statements published by the Department for Energy and Net Zero in 2023 and adopted in 2024.
Offshore booster station	A fixed structure located along the offshore export cable route, containing electrical equipment to ensure bulk wind farm capacity can be fully transmitted to the onshore substations.
Offshore substation platform(s)	A fixed structure located within the wind farm sites, containing electrical equipment to aggregate the power from the wind turbine generators and convert it into a more suitable form for export to shore.
Offshore export cables	The cables which would bring electricity from the Generation Assets to the landfall.
Offshore export cable corridor	The corridor within which the offshore export cables will be located.
Offshore Permanent Infrastructure Area	The area within the Transmission Assets Offshore Order Limits (up to MLWS) where the permanent offshore electrical infrastructure (i.e. offshore export cables) will be located.
Offshore Order Limits	See Transmission Assets Order Limits: Offshore (below).
Offshore substation platform(s)	A fixed structure located within the wind farm sites, containing electrical equipment to aggregate the power from the wind turbine generators and convert it into a more suitable form for export to shore.
Onshore export cables	The cables which would bring electricity from the landfall to the onshore substations.
Onshore export cable corridor	The corridor within which the onshore export cables will be located.
Onshore Infrastructure Area	The area within the Transmission Assets Order Limits landward of MHWS. Comprising the offshore export cable corridor from MHWS to the transition joint bay, onshore export cable corridor, onshore substations and 400 kV grid connection cable corridor, and associated temporary and permanent infrastructure including temporary and permanent compound areas and accesses. Those parts of the Transmission Assets Order Limits proposed only for ecological mitigation and/or biodiversity benefit are excluded from this area.
Onshore Order Limits	See Transmission Assets Order Limits: Onshore (below).
Onshore substations	The onshore substations will include a substation for the Morgan Offshore Wind Project: Transmission Assets and a substation for the

Term	Meaning
	Morecambe Offshore Windfarm: Transmission Assets. These will each comprise a compound containing the electrical components for transforming the power supplied from the generation assets to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid.
Preliminary Environmental Information Report	A report that provides preliminary environmental information in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. This is information that enables consultees to understand the likely significant environmental effects of a project, and which helps to inform consultation responses.
Renewable energy	Energy from a source that is not depleted when used, such as wind or solar power.
Scour protection	Protective materials to avoid sediment being eroded away from the base of the foundations due to the flow of water.
Substation	Part of an electrical transmission and distribution system. Substations transform voltage from high to low, or the reverse by means of electrical transformers.
The Secretary of State for Energy Security and Net Zero	The decision maker with regards to the application for development consent for the Transmission Assets.
Transmission Assets	See Morgan and Morecambe Offshore Wind Farms: Transmission Assets (above).
Transmission Assets Order Limits	The area within which all components of the Transmission Assets will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds).
Transmission Assets Order Limits: Offshore	The area within which all components of the Transmission Assets seaward of Mean Low Water Springs will be located, including areas required on a temporary basis during construction and/or decommissioning. Also referred to in this report as the Offshore Order Limits, for ease of reading.
Transmission Assets Order Limits: Onshore	The area within which all components of the Transmission Assets landward of Mean High Water Springs will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds). Also referred to in this report as the Onshore Order Limits, for ease of reading.

Acronyms

Acronym	Meaning
AIS	Air Insulated Switchgear
AOD	Above Ordnance Datum
BCA	Bilateral Grid Connection Agreement
CoCP	Code of Construction Practice
CoT	Project Commitment
CBRA	Cable Burial Risk Assessment
CfD	Contracts for Difference
CMS	Construction Method Statement
CSIP	Cable Specification and Installation Plan
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
Defra	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security & Net Zero
dML	Deemed Marine Licence
EnBW	Energie Baden-Württemberg AG
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPP	Evidence Plan Process
ES	Environmental Statement
EWG	Expert Working Group
GIS	Gas Insulated Switchgear
HDD	Horizontal Directional Drilling
HGV	Heavy goods vehicle
HNDR	Holistic Network Design Review
HVAC	High Voltage Alternating Current
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IAQM	Institute of Air Quality Management
LAT	Lowest Astronomical Tide
MCA	Maritime and Coastguard Agency
MCZ	Marine Conservation Zone
MDS	Maximum Design Scenario

Acronym	Meaning
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MMO	Marine Management Organisation
MPS	Marine Policy Statement
MTBM	Mini (or micro) tunnel boring machine
NGESO	National Grid Electricity System Operator
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
O&M	Operation and Maintenance
OSP	Offshore Substation Platform
OTNR	Offshore Transmission Network Review
PDE	Project Design Envelope
PEIR	Preliminary Environmental Information Report
PPP	Pollution Prevention Plan
PRoW	Public rights of way
SAC	Special Areas of Conservation
SAR	Search and Rescue
SPA	Special Protection Area
SNCBs	Statutory Nature Conservation Bodies
SSSI	Sit of Special Scientific Interest
SWMP	Site Waste Management Plan
TEP	Technical Engagement Plan
TJB	Transition Joint Bay
UK	United Kingdom
UXO	Unexploded Ordnance
WSI	Written scheme of investigation

Units

Unit	Description
%	Percentage
dB	Decibels
Kg	Kilogram
km	Kilometres
km ²	Kilometres squared
kV	Kilovolt
m	Metres
m ²	Metres squared
m ³	Metres cubed
nm	Nautical mile

The Applicants' Submission at Deadline 1 on 20 May 2025 for Issue Specific Hearing 1 Action Points 6, 8, 9, 19, 26 and 28

1 Introduction

1.1.1.1 This note is provided in response to 'Issue Specific Hearing 1, agenda item 4 and agenda item 5 for the Action Points ISH1_6, ISH1_8, ISH_9, ISH_19, ISH1_26 and ISH_28 as detailed within EV4-018 and provided in **Table 1.1**. This note is provided in response to Issue Specific Hearing 1 (ISH1), agenda item 4 and agenda item 5 for the Hearing Action Points 6, 8, 9, 19, 26 and 28 as detailed within EV4-018 and provided in Table 1.1.

Table 1.1: Issue Specific Hearing 1 Action Points 6, 8, 9, 19, 26 and 28.

No	Hearing Action	Where Addressed within Document
Agenda Item 4(a), ISH1_6	Comment on the two court cases referred to by the Examining Authority as to how to treat the assessment of alternatives and how material the alternative option of the Stanah substation is for the project. The two cases are: <i>a) R. (on the application of Save Stonehenge World Heritage Site Ltd) v Secretary of State for Transport (Permission to Appeal) [2025] 1 WLUK 637; and</i> <i>b) R. (on the application of Langley Park School for Girls Governors) v Bromley LBC.</i>	Sections 2, 4.1
Agenda Item 4(a), ISH1_8	Submit the Holistic Network Design (HND July 2022) Summary Report, emphasising any key points relevant to the Examination.	Appendix 1A Appendix 1B See also Section 3 for discussion of HND
Agenda Item 4(a), ISH1_9	Submit the parliamentary statement concerning the Hillside Technology Zone close to the grid connection at Stanah and written statement from Michael Shanks MP together with the subsequent written question.	Appendix 2
Agenda Item 5(a)(ix), ISH1_19	Provide details of the agreement with National Grid for connection at Penwortham and also the correspondence requiring one project to connect to the west, and the other to the east.	Section 6
Agenda Item 5(d), ISH1_26	Provide a high-level note setting out the benefits that will be realised through collaboration of the applications for the proposed development as required by NPS policy.	Section 7

No	Hearing Action	Where Addressed within Document
Agenda Item 5(d), ISH1_28	Provide a note explaining the consequences of separate companies promoting the two wind farms and comment on the differences between this project and other projects (including the Sheringham and Dudgeon DCO) in terms of the composition of the applicants' corporate structure.	Section 8

1.1.1.2 The Holistic Network Design Report, July 2022, is appended as Appendix 1A (the HNDR) and the Summary as Appendix 1B. The documents requested pursuant to Action ISH1_9 are included at Appendix 2.

1.2 Meaning of Point of Interconnection (PoI)

1.2.1.1 At the outset, it is important to note that references to the Point of Interconnection (PoI) means the point of interface between the Transmission Assets (which are being developed by the Applicants) and the National Electricity Transmission System (NETS). The Point of Interconnection is the existing Penwortham substation which is part of the NETS and is owned by National Grid Electricity Transmission (NGET). The Transmission Assets include the "Onshore substations", which are a substation for the Morgan Offshore Wind Project: Transmission Assets and a substation for the Morecambe Offshore Windfarm: Transmission Assets – these are required specifically for each windfarm to ensure that the power transmitted is appropriate for supply into the NETS. The Onshore substations will not become part of the NETS. As is explained below, the roles, legal duties and responsibilities are different for the Applicants' Onshore substations and for the NGET Penwortham substation which is the Point of Interconnection. It is important to understand these differences as they are fundamental to the approach that can be taken by each party to their own works and assets.

1.3 Summary Document Structure

1.3.1.1 A summary is provided below on each section of the document.

Section 22: Consideration and Relevance of Alternatives (ISH1_6)

1.3.1.2 This section summarises the legal and NPS policy position in relation to the consideration of alternatives in a DCO application, with a particular focus on the general relevance of alternatives as a material planning consideration as established by the Courts. This section notes, but does not expand on, other specific legal duties in relation to alternatives which were referenced by the Applicants at ISH 1 on 30 April 2025 and 1 May 2025 (see Applicants' Hearing Summary ISH1: Day 1 (S_D1_2) and Applicants' Hearing Summary ISH1: Day 2 (S_D1_3) but are less directly relevant in the context of the location of the Point of

Interconnection (such as Environmental Impact Assessment (EIA) and compulsory acquisition). This section concludes that clearly identified, viable and demonstrably less harmful alternatives are capable of being a material consideration in planning terms (however, for the reasons explained in Section 4 below the ‘alternative route’ incorporating the alternative Point of Interconnection proposed by IPs does not meet this test).

Section 33: The Process and Responsibilities to Identify a Point of Interconnection (ISH1_6 cont.)

- 1.3.1.3 This section sets out the relevant background to the grid connection process and NPS policy. It explains that a Point of Interconnection is offered to a developer by National Energy System Operator (NESO) following NESO’s prescribed process. In this case, the connection offers to the Projects were based on the recommendations of the Holistic Network Design (HND) (which took equal account of cost, technical, environmental, and community factors). The Applicants and NGET were engaged by NESO in the HND and the connection process but the ultimate decision on the offer was NESO’s. NESO is subject to statutory duties and is heavily regulated, as is the development, design and functioning of the national electricity transmission network (NETS) as a whole. The offer of a Point of Interconnection is made by NESO in light of these duties and regulatory requirements, and in light of NESO’s expert knowledge and plans for the transmission network as a whole. It is not something an applicant can unilaterally select or decide.

Section 4: Are Alternative Points of Interconnection a Material Planning Consideration? (ISH1_6 cont.)

- 1.3.1.4 This section applies the analysis on alternatives and the roles and responsibilities in offering a Point of Interconnection to the specific question of alternative Points of Interconnection.
- 1.3.1.5 The FACTS group propose an alternative route with the Onshore substations located at Hillhouse LEZ – this would necessarily involve an interface with the NETS either at the Stanah Substation or along the existing overhead line between Stanah and Penwortham, and so a change to the contracted NESO Point of Connection at Penwortham. This section also considers a point of discussion from ISH1 in relation to the Transmission Assets comprising two separate radial connections (which effectively requires a change to the Point of Interconnection for at least one of the Applicants).
- 1.3.1.6 In short, the Applicants consider that an alternative Point of Interconnection is not a material planning consideration because the Point of Interconnection was not selected by the Applicants – it was not a decision within the direct control, statutory function, or expertise of the Applicants (neither is it within the control or powers of the Examining Authority (ExA) or the Secretary of State for Energy Security and Net Zero (SoS)). It is determined by a separate process for which NESO is responsible. As such, it cannot be known to the examination whether the suggested (or indeed any) alternative Point of Interconnection is

viable (which clearly applies to the suggestion of Stanah and the speculation over the consequential upgrades and overhead line reinforcement required), or whether it could or would be offered by NESO to the Applicants. Also, if the consenting process for individual projects could change elements of the overall network design, then there is an obvious risk that strategic network planning through exercises like the HND would be undermined.

1.3.1.7 However, the Applicants do consider the Point of Interconnection proposed is appropriate and acceptable for the Projects. The Applicants agreed with the outputs of the NESO process and the HND, and accepted the connection offers from NESO (see further response to ISH1_19 at **Section 6** of this note). Therefore, this section also discusses the substantive consideration which underpinned Penwortham as a Point of Interconnection, including in comparison with single radial connections.

1.3.1.8 The section concludes with the Applicants' position that the ExA and the SoS must, of course, consider the impacts of the proposed Point of Interconnection as part of weighing the benefits and impacts of the Transmission Assets, but this does not extend to the identification or consideration of alternative Points of Interconnection or other projects which are not part of the Application.

Section 5: Are Alternative Cable Routing and Onshore substation Siting a Material Planning Consideration? (ISH1_6 cont.)

1.3.1.9 The cable routing and siting of the Onshore substations (i.e. the individual project substations) are not part of the recommendations of the HND (although some suggestions and assumptions were made in the HND process, such as the likely need for landfall at Blackpool), nor is this detail specified in a connection agreement. So unlike the Point of Interconnection, the decisions on landfall, cable routing and siting of the onshore substations are for the Applicants, and not NESO.

1.3.1.10 This section completes the logical analysis of consideration of alternatives by explaining that identified and viable alternative routing and onshore substation siting options could be a material planning consideration and signposts the options appraisal and alternatives analysis which underpinned the Application. This is evidence on which the ExA and SoS can rely to conclude that there are not alternative routing and siting options for these elements which should carry any significant weight in the SoS's decision.

Section 6: Details of agreement with National Grid for Penwortham Connection (ISH1_19)

1.3.1.11 This section sets out the details of the agreements between the Applicants and NGET for their respective Points of Interconnection at Penwortham.

Section 7: Benefits of coordination (ISH1_26)

- 1.3.1.12 This section explains the benefits of the proposed coordinated approach taken by the Applicants at a strategic, local and construction level.

Section 8: Need for project separation (ISH1_28)

- 1.3.1.13 This section explains the need for separation between the projects (supported by the NPSs), with reference to the Applicants' respective corporate structures and factors such as supply chain, grid connection, financing and Contracts for Difference (CfD). This section also explains how the Applicants and their respective projects differ from previous DCO projects.

2 Consideration and Relevance of Alternatives (ISH1_6)

- 2.1.1.1 As noted by the Applicants at ISH1, NPS EN-1 states:

“4.3.9 As in any planning case, the relevance or otherwise to the decision making process of the existence (or alleged existence) of alternatives to the proposed development is, in the first instance, a matter of law. This NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option from a policy perspective. Although there are specific requirements in relation to compulsory acquisition and habitats sites, the NPS does not change requirements in relation to compulsory acquisition and habitats sites.”

“4.3.17 Where there is a policy or legal requirement to consider alternatives, the applicant should describe the alternatives considered in compliance with these requirements.”

- 2.1.1.2 The Applicants summarised in oral submissions at ISH1 the various legal obligations to consider alternatives (see Applicants' Hearing Summary ISH1: Day 1 (S_D1_2) and Applicants' Hearing Summary ISH1: Day 2 (S_D1_3): the duty to assess alternatives considered as part of an EIA, part of considering the 'compelling case in the public interest' where compulsory acquisition powers are sought, as part of a Habitats Regulations 'derogation' case or Marine Conservation Zone stage 2 assessment, or as a material planning consideration in certain circumstances. The Examining Authority requested that the Applicants comment on the cases of *Save Stonehenge World Heritage Site Ltd and another -v- Secretary of State for Transport* [2021] EWHC 2161 (Admin) ("*Save Stonehenge*") (and its subsequent appeals) and *R (Langley Park School for Girls Governing Body) v Bromley London Borough Council* [2009] EWCA Civ 734 ("*Langley Park*") 'as to how to treat the assessment of alternatives and how material the alternative option of the Stanah substation is for the project' (ISH1_6).

- 2.1.1.3 The legal position on when and to what extent alternatives are a material planning consideration has been developed by the courts through common law.

- 2.1.1.4 The starting principle, as established in *Trusthouse Forte v Secretary of State for the Environment* (1987) 53 P & CR 293, is that alternatives are not typically a material planning consideration. Land may be developed in any manner that is acceptable for planning purposes and the existence of “more acceptable land” (or, framed in a different manner, “significantly less unacceptable” land) does not necessarily justify the refusal of planning permission. This principle was reaffirmed in the *Save Stonehenge* decision (paragraph. 268).
- 2.1.1.5 Alternative sites and alternative uses are therefore only relevant in “exceptional circumstances” where there may be “*significant adverse effects and where the major argument advanced in support of the application is that the need for the development outweighs the planning disadvantages inherent in it*” (*Trusthouse* at para. 300). However, even in such circumstances where alternatives might be relevant, *Save Stonehenge* reaffirms that this does not include “*vague or inchoate schemes, or [those] which have no real possibility of coming about*” as irrelevant or, if relevant, that they should be given little to no weight in the planning balance (paragraph. 270).
- 2.1.1.6 It is clear therefore that the consideration of alternatives is a spectrum rather than a binary rule, and one which is highly fact-sensitive, as supported by Sullivan LJ in *Langley Park*:
- “There is no “one size fits all” rule. The starting point must be the extent of the harm in planning terms (conflict with policy etc.) that would be caused by the application. [...] Where any particular application falls within this spectrum; whether there is a need to consider the possibility of avoiding or reducing the planning harm that would be caused by a particular proposal; and if so, how far evidence in support of that possibility, or the lack of it, should have been worked up in detail by the objectors or the applicant for permission; are all matters of planning judgment for the local planning authority.”* (paragraphs. [52-53]).
- 2.1.1.7 Neither *Save Stonehenge* nor *Langley Park* are directly comparable to the Application, in that neither case relates to alternative locations (i.e. outside of the Order limits) for the proposed development. *Save Stonehenge*, which related to a proposed dual-carriageway road tunnel at Stonehenge, a UNESCO World Heritage Site, focused on alternative methods of installation within the proposed Order Limits that were not included within the proposed works (alternative tunnelling options). *Langley Park* related to the redevelopment of a school situated on Metropolitan Open Land and focused on alternative site design and layout within the application red line boundary. The two cases can therefore be clearly distinguished from the current application, which is instead more closely comparable to *R (Substation Action Save East Suffolk Ltd) v Secretary of State for Business, Energy and Industrial Strategy* [2022] EWHC 3177 (Admin) (“SASES”), which involved the development consent orders granted for East Anglia ONE North and East Anglia TWO offshore wind farms.
- 2.1.1.8 The original expectation (before statutory consultation) was that East Anglia ONE North and East Anglia Two would connect into an existing NGET substation at Bramford. However, following design changes to

other projects, it was concluded by NGESO (the predecessor to NESO) and NGET that there was insufficient space at Bramford for these future connections. As such, NGESO undertook its Connection and Infrastructure Options Note (CION) process to review *“all realistic possible connection points”* and select the most appropriate Point of Interconnection, which was determined to be *“in the vicinity of Sizewell and Leiston”*. In that case it required the construction of a new NGET substation in addition to the two project substations (in contrast to the current case where the Point of Interconnection is the existing NGET Penwortham substation). The starting point for the applicant’s site selection assessments (as documented in the Environmental Statement submitted with the East Anglia ONE North DCO application) was therefore substation locations in the vicinity of Sizewell and Leiston (and not any alternative locations for the Point of Interconnection itself). Note that the CION process and roles of NGESO (now NESO) and NGET are discussed in **Section 3** below.

- 2.1.1.9 This Point of Interconnection was a specific ground of challenge in the *SASES* case, where the claimant sought to argue that using the Point of Connection as the ‘starting point’ for the projects was a failure to consider alternative sites, as there should have been an assessment specifically in relation to the proposed Point of Interconnection location (“the vicinity of Sizewell and Leiston”), and consequential siting of transmission infrastructure.
- 2.1.1.10 The claimant in *SASES* sought to argue, following *Save Stonehenge*, that this omission was an error in law. However, Lang J, in dismissing the claim, reaffirmed that the legal framework, as set out in *Save Stonehenge*, makes it clear that the consideration of additional alternatives will only be relevant in truly “exceptional circumstances”. In *Save Stonehenge*, these circumstances centred around significantly adverse effects to a “wholly exceptional” heritage asset which, as a UNESCO World Heritage Site, had “outstanding universal value” for not just the UK’s cultural heritage but the world. In *SASES*, Lang J concluded that the circumstances at the proposed grid connection site at Friston could not be characterised as “wholly exceptional” and therefore the exceptional circumstances test required to consider additional alternatives was not met. Additionally, Lang J confirmed that *Save Stonehenge* does **not** establish a principle of law that *“in any case where a proposed development would cause adverse effects, but these are held to be outweighed by its beneficial effects, the existence of alternative sites inevitably becomes a mandatory material consideration”* as this would be an “over-simplification” of the *Save Stonehenge* decision and the subsequent body of case law on alternatives.
- 2.1.1.11 NPS EN-1 is clear that it does not override the legal requirements to assess alternatives (paragraph 4.3.9 of EN-1 noted above at paragraph 2.1.1.1). But it does contain policy and guidance on assessment of alternatives, some of this is in the context of specific legal duties (for example paragraphs 4.2.21 and 4.2.22 in the context of HRA), and some is of more general application to decisions in particular section 4.3. The Applicants consider that the policy and guidance on

alternatives in section 4.3 of NPS EN-1 aligns with, and in some cases echoes the language of, the common law position. The sections on ‘Secretary of State Decision Making’ in relation to alternatives in section 4.3 are as follows (emphasis added):

“4.3.22 Given the level and urgency of need for new energy infrastructure, the Secretary of State should, subject to any relevant legal requirements (e.g. under the Habitats Regulations) which indicate otherwise, be guided by the following principles when deciding what weight should be given to alternatives:

- *the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner; and Overarching National Policy Statement for Energy (EN-1) 62*
- ***only alternatives that can meet the objectives of the proposed development need to be considered.***

4.3.23 *The Secretary of State should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development.*

4.3.24 *The Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and **should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals.***

4.3.25 *Alternatives not among the main alternatives studied by the applicant (as reflected in the ES) should only be considered to the extent that the Secretary of State thinks they are both important and relevant to the decision.*

4.3.26 *As the Secretary of State must assess an application in accordance with the relevant NPS (subject to the exceptions set out in section 104 of the Planning Act 2008), if the Secretary of State concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the relevant NPS, the existence of that alternative is unlikely to be important and relevant to the Secretary of State’s decision.*

4.3.27 ***Alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded*** on the grounds that they are not important and relevant to the Secretary of State’s decision.

4.3.28 ***Alternative proposals which are vague or immature can be excluded*** on the grounds that they are not important and relevant to the Secretary of State’s decision.

4.3.29 *It is intended that potential alternatives to a proposed development should, wherever possible, be identified before an application is made to the Secretary of State (so as to allow appropriate consultation and the development of a suitable evidence base in relation to any alternatives which are particularly relevant). **Therefore, where an alternative is first put forward by a third party after an application has been made, the Secretary of State may place the onus on the person proposing the alternative to provide the evidence for its suitability as such and the Secretary of State should not necessarily expect the applicant to have assessed it.***

3 The Process and Responsibilities to Identify a Point of Interconnection (ISH1_6 continued and ISH1_8)

3.1 The Functions of NESO and NGET

- 3.1.1.1 The electricity industry in the UK is heavily regulated. This includes strict rules on ‘unbundling’ where it is a legal requirement that different parts of the network must be in separate ownerships to avoid vertically integrated companies and facilitate competition (ultimately to ensure affordability of energy for the UK consumer).
- 3.1.1.2 NGET holds a Transmission Licence under section 6 of the Electricity Act 1989, which allows it to participate in the transmission of electricity and imposes a variety of duties, powers and rights. The National Electricity Transmission System (NETS) in England and Wales is owned and maintained by NGET. The Applicants are holders of respective Generation Licences under the same section, which will allow them to generate electricity for supply from the Generation Assets (Morgan and Morecambe offshore windfarms respectively).
- 3.1.1.3 The Application is for consent for the Transmission Assets to connect the Generation Assets to the NETS. Because the Applicants will respectively own and operate each of the Generation Assets, they are prevented from owning the Transmission Assets on an enduring basis. The UK regulatory regime does, however, permit generators to develop and build offshore transmission assets. Once operational the Transmission Assets will be transferred to a separate company known as an Offshore Transmission Owner (OFTO), who will also hold a licence under section 6 of the Electricity Act 1989. This is the approach taken for all offshore windfarms in the UK. Such assets are often referred to as ‘OFTO Assets’.
- 3.1.1.4 NESO has a separate role to NGET and the Applicants. It was established by the Energy Act 2023 as an independent system planner and operator. NESO also holds a licence under section 6 of the Electricity Act 1989 known as an electricity system operator licence. Previously this role was undertaken by National Grid Electricity System Operation (NG-ESO).
- 3.1.1.5 The Penwortham substation (and the transmission infrastructure from this point onwards) is, and will remain, within the ownership and control of NGET as part of its undertaking. The two project substations which

form part of the Transmission Assets (referred to in the Application as the ‘Onshore substations’) are required exclusively for the Transmission Assets (one for each windfarm) to adjust the power quality and power factor from AC (alternating current), as required to meet the UK Grid Code for supply to the NETS. The Onshore substations will remain part of the offshore transmission (OFTO) assets associated with each Project, they will never be part of the NETS owned by NGET (in contrast to the Penwortham substation which is part of the NETS and owned by NGET). This is the same arrangement for all DCO applications for a connection to an offshore wind farm (whether the application includes both generation and transmission or just transmission).

- 3.1.1.6 For the Projects, the Point of Interconnection is at NGET’s existing Penwortham substation. This is the downstream end point or termination point of the Transmission Assets, and beyond this is the wider NETS owned by NGET and planned and operated by NESO.

3.2 Responsibility and Process for Identifying a Point of Interconnection

- 3.2.1.1 Part of NESO’s statutory functions is to manage connection agreements, i.e. contracts to connection to the NETS which will identify the Point of Interconnection.
- 3.2.1.2 In carrying out its statutory functions, NESO is subject to a range of duties set out in Part 5 of the Energy Act 2023. These include duties in relation to net zero, security of supply, and efficiency and economy. The efficiency and economy objective includes promoting “*efficient co-ordinated and economical systems for the distribution and transmission of electricity*” (section 163(4)(a) of the Energy Act 2023). It is noted that NGET as a transmission licence holder is also subject to statutory duties including to “*develop and maintain an efficient, co-ordinated and economical system of electricity transmission*” (section 9(2) of the Electricity Act 1989). The NETS is also governed by established technical standards, including the Security and Quality of Supply Standard (SQSS), which sets out criteria for system reliability, voltage and thermal limits, and other parameters. These matters are principally within the technical expertise of NESO and the relevant Transmission Owners (in this case NGET).
- 3.2.1.3 The process NESO undertakes prior to making a connection offer is set out in the following section.

3.3 CION, the OTNR and the HND

3.3.1 Connection and Infrastructure Options Note (CION)

- 3.3.1.1 Prior to the Offshore Transmission Network Review (OTNR) and subsequent Holistic Network Design (HND), when a developer requested a connection offer NESO (or previously NGESO) followed the Connection and Infrastructure Options Note (CION) Process. This process was instigated by receipt by NESO of an application for a

connection agreement from a customer (i.e. a developer) and the payment of an application fee. Once a valid application was submitted, NESO had three months to issue a connection offer, during which time it worked with the Transmission Owner (TO) (in England and Wales this is NGET) to carry out detailed system studies – such as thermal loading, voltage compliance, fault level analysis, and stability assessments – to identify a suitable Point of Interconnection to the NETS. An applicant then had three months to review and accept the offer. Once accepted, the project is registered on the Transmission Entry Capacity (TEC) register, and NESO assigns a dedicated Connections Contract Manager to support the project through delivery.

- 3.3.1.2 The CION process was reactive in response to individual connection requests. There was no ability to ‘hold off’ making an offer to wait for other applications and make a co-ordinated set of offers, and there was not an overall plan for the making of offers and the location of Points of Interconnection. The CION process was followed for all offshore wind projects prior to the Round 4 process.

3.3.2 Offshore Transmission Network Review (OTNR)

- 3.3.2.1 In alignment with the Round 4 leasing process the Department for Energy Security and Net Zero launched the Offshore Transmission Network Review (OTNR) in 2020 to develop a Holistic Network Design (HND).
- 3.3.2.2 The Department for Business, Energy & Industrial Strategy’s (BEIS) (as it then was) ‘Background’ statement prior to setting out the Terms of Reference for OTNR states¹: “However, in the context of increasingly ambitious targets for offshore wind, constructing individual point to point connections for each offshore wind farm may not provide the most efficient approach and could become a major barrier to delivery given the considerable environmental and local impacts, particularly from the associated onshore infrastructure required to connect to the national transmission network.”
- 3.3.2.3 The main Objective of the OTNR as set out in the Terms of Reference² is:
- “To ensure that the transmission connections for offshore wind generation are delivered in the most appropriate way, considering the increased ambition for offshore wind to achieve net zero. This will be done with a view to finding the appropriate balance between environmental, social and economic costs.”*
- 3.3.2.4 Subsequently, in July 2022, the UK Government published the Pathway to 2030 Holistic Network Design documents, which set out the approach to connecting 50GW of offshore wind to the UK electricity network (NG-

¹ [Offshore Transmission Network Review: terms of reference - GOV.UK](#)

² [Offshore Transmission Network Review: terms of reference - GOV.UK](#)

ESO, 2022) (the HND)³. Both the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm were included in this process.

3.4 The Holistic Network Design (HND)

- 3.4.1.1 The HND was devised to provide an avenue for the transmission connections for offshore wind generation to be delivered in the most appropriate way, and where applicable, in a co-ordinated way. The HND's approach was to consider cost, deliverability and operability, environmental impacts, and community impacts on an equal footing (Section 2.1 of the HND Report attached at Appendix 1A ("HNDR") and sections II(A)(2) and E of the OTNR Pathway to 2030 Central Design Group and Network Design Terms of Reference⁴).
- 3.4.1.2 The important difference from the previous CION process is that the HND considered holistically all the connections for projects in Round 4. Under the CION process, this would not have been possible because (as described above) each request to a connection offer was determined individually within tight timescales. The HND was carried out separately from, and was not triggered by, individual requests for a connection.
- 3.4.1.3 The HND also carried out a comparison exercise between co-ordinated and radial options (which is relevant to points raised at ISH 1 regarding an alternative Point of Interconnection at Stanah). Section 6.1 of the HNDR explains:
- "We developed a counterfactual design which uses individual radial connections for each project. We compared the recommended design with the radial counterfactual in order to validate the value of a coordinated approach."
- 3.4.1.4 Several radial and coordinated options were considered within each region against the four network design objectives (see section 3.6 of the HNDR), and the preferred radial and coordinated options were then compared to reach a conclusion. The overall recommended HND design is a combination of co-ordinated and radial elements (for reasons summarised in **paragraph 3.4.1.113.4.1.11** onwards below.
- 3.4.1.5 The 'counterfactual' optimised radial solution for the Projects was 1.5GW connecting at Penwortham (for Morgan) and 480MW connecting at Middleton (for Morecambe). A comparison with the radial design is summarised in the HNDR (see section 4.7 of the HNDR), and it is clear that an overall UK-wide view is being taken. In relation to community impact (see section 4.7.4 of the HDNR), the HNDR concludes:
- "While the HND has tried to reduce community impacts and reduce the number of cable routes to shore, it is not possible to fully eliminate community impacts. [...] However, the recommended design provides community benefits by reducing the number of connection locations in*

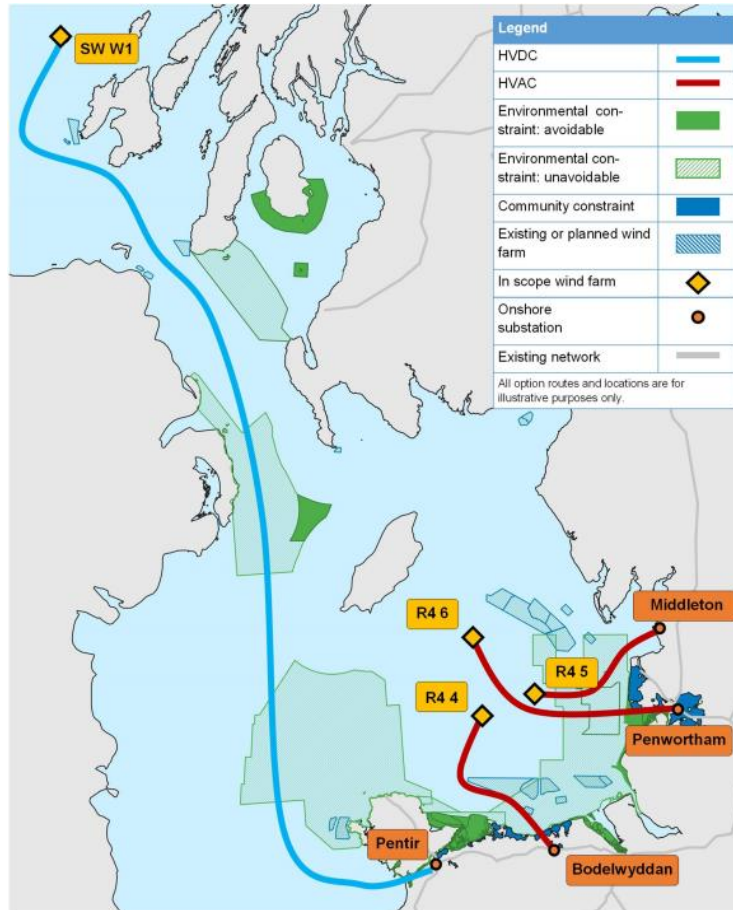
³ [download](#)

⁴ [OTNR Pathway to 2030 Central Design Group and Network Design: terms of reference](#)

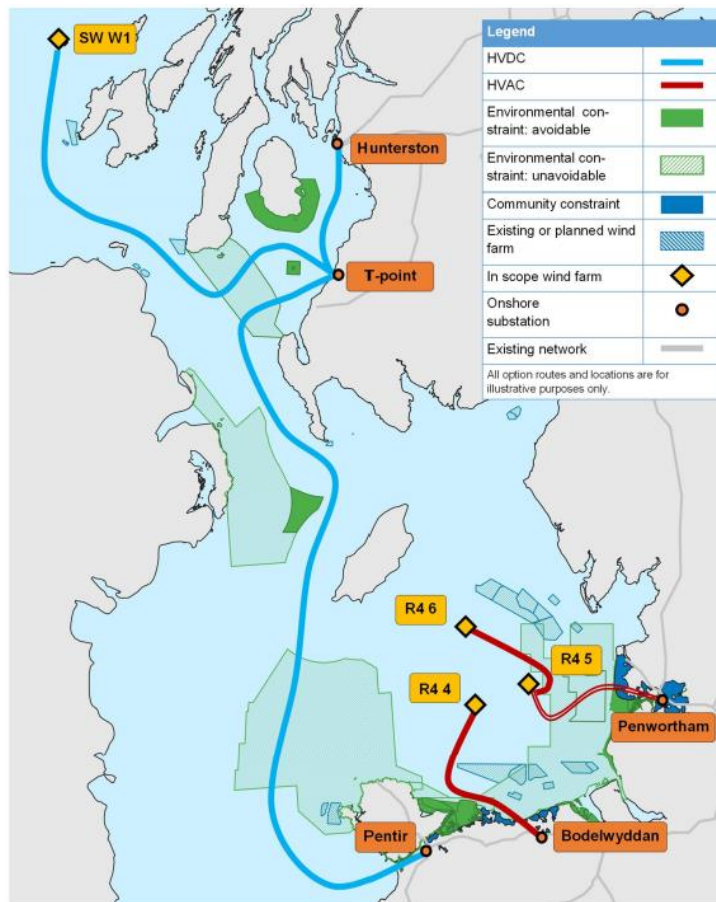
North West England (due to the shared cable corridor to Penwortham) [...]”.

3.4.1.6

Viewed holistically avoiding proliferation of infrastructure is considered a key benefit of co-ordinated options. The optimised radial design for the North West region is shown in Figure 14 of the HNDR, which is reproduced below:



3.4.1.7 The HND recommended offshore design for the North West region is shown on Figure 11 of the HNDR, which is reproduced below.



3.4.1.8 The recommended design for the Project is described in the HNDR as “radial connections with a shared cable corridor”, recognising the necessary independent connections following the same route. The recommended design is referred to and considered to be a ‘co-ordinated’ approach by the Applicants reflecting the level of co-ordination needed for the shared cable corridor and the fact it forms part of NESO’s recommended HND design and not the counterfactual optimised radial design.

3.4.1.9 Alternative co-ordinated designs were also explored in the HND, including a single shared export cable between the Applicants which the HNDR explains is a variant to the recommended design because the recommended option has a shared corridor but no electrical connection (see the “R4 5 to R4 6 Coordination” part of section 5.1.11.3 of the HND). This option did not perform as well as the preferred design from an economic perspective. The HNDR notes the proposed change from the shared cable solution was jointly proposed by the Applicants as they considered that a wholly integrated shared cable solution would be more expensive due to offshore platform design, but also would not be practically deliverable because it would not be viable for either project to deliver a fully shared export cable for the other on an anticipatory basis when there is no legal basis for the recovery of such costs.

- 3.4.1.10 Although the HND process was led by NESO, the Applicants were engaged in the process (as was NGET). The Applicants expressly raised Stanah, Middleton, Kirkby and Penwortham as possible connections for consideration. The HNDR explains⁵ the process it went through (including engagement with NGET) to identify a long list and then short list for Points of Interconnection (referred to in the HNDR as interface points) – there is an example in the HNDR of the process for the North West of England which clearly shows the Stanah substation was considered, although it was not selected for further consideration for either the co-ordinated or optimised radial designs.⁶
- 3.4.1.11 The overall justification for the recommended design for the North West (i.e. for the Project) is set out at Section 5.1.17 of the HNDR. This section concludes that the recommended design has a saving of over £1bn compared to the alternative coordinated design (discussed in [\[paragraph 3.3.34.1.9\]](#) above) and is more economic and efficient than the optimised radial design, and in terms of environmental and community impacts:
- “The design minimises the impact on the environment. It is expected to be possible to define route corridors which avoid many important environmental constraints. Whilst it is not expected to be possible to avoid all environmental constraints, this design performs better than the alternative radial design by introducing a shared cable corridor to Penwortham and avoiding the Morecambe Bay SAC.*
- The design minimises local community impact. The community sensitivities in the region can either be avoided or mitigated successfully. It is expected to be possible to define route corridors that avoid key community sensitivities in the region. The recommended design for the Irish Sea provides community benefits over the radial design by reducing the number of cable corridors, which will reduce community impact from construction activities.”*
- 3.4.1.12 The HNDR was published by NG-ESO in July 2022 as part of the OTNR. The HND remains subject to ongoing development and implementation, including as part of the Holistic Network Design Follow Up Exercise, and has subsequently been referred to in the revised National Policy Statements (see further **Section 3.53.6** below). The outputs of the HND are described as ‘recommendations’ because the HND was an overarching process to inform NESO’s connection agreement process – see **Section 6** of this document below responding to ISH_19.
- 3.4.1.13 In terms of the assumptions on which the HND recommended design was based, it is also the case that a number of key issues raised by the IPs were known constraints in producing the HND recommendations, so these considerations were already being factored in when the decisions were made. In particular:

⁵ A.2.2.3 of Appendix 2 to the HND

⁶ Figure 32 of Appendix B to Appendix 2 to the HND

- It is noted that the need for an extension of the existing Penwortham 400kV substation to establish bays for connection to the offshore network was identified as part of the HND and was a known factor in reaching the recommendation to connect at that point. See e.g. Table 9 of the HNDR which identifies the need for extension of the existing Penwortham 400 kV substation to establish bays for connection to the offshore network and section 5.5 of the HNDR which contains a system-wide view of the wider works required as a consequence of the recommended design. Indeed, the holistic system-wide view taken by the HNDR is clear from the Executive Summary: *“For the first time, the HND enables delivery of a network that simultaneously handles the connection of offshore windfarms to shore as well as transporting the power to where it will be used.”* (see section 1.1 of the HND).
- The HNDR also identified that a potential landfall at Blackpool Airport could minimise impacts on both the Ribble and Alt Estuary Special Protection Area and the urban areas around Blackpool (see Section 5.1.6 and Table 12 of the HNDR). The Applicants have set out their approach to route planning and site selection for the landfall, offshore and onshore export cable corridor and onshore substations within Volume 1, Chapter 4: Site Selection and Consideration of Alternatives (AS-026) and its supporting annexes (which was carried out independently of the HND).

3.5 How does the Proposed Alternative Route / Point of Interconnection at Stanah, Proposed by FACTS, fit into this Process?

- 3.5.1.1 An ‘alternative route’ (in practice involving an alternative Point of Interconnection at or near Stanah) has been suggested by some Interested Parties (IPs) (including Freckleton Parish Council (RR-703), Fylde Against Cable Transmission and Substations (FACTS) (RR-704), Lancashire Association of Local Councils Fylde Area Committee Energy Working Group (RR-1261), Newton Residents Association (RR-1615), Newton with Clifton Parish Council (RR-1616)), as raised in their respective Relevant Representations, and at OFH1 on 29 April 2025 and ISH1 on 30 April 2025, including by reference to the relevant background on the grid connection process and sections of the NPSs.
- 3.5.1.2 These Relevant Representations include a suggestion that the onshore substations should be located at Hillhouse Technology Local Enterprise Zone, adjacent to the NGET Stanah substation. The Relevant Representations by some IPs (detailed at **paragraph 3.5.1.1**), including those who are part of the FACTS group, and as discussed at OFH1 on 29 April 2025 and ISH1 on 30 April 2025, include a submission on “Alternative – Hillhouse Technology Local Enterprise Zone”⁷, adjacent to the NGET Stanah substation.

⁷

- 3.5.1.3 The Stanah substation is, like the Penwortham substation, part of the NETS (i.e. the transmission network owned by NGET) as are the existing overhead line connecting the two. All are part of NGET's undertaking and subject to its transmission licence.
- 3.5.1.4 Importantly, any form of alternative Point of Interconnection into the NETS which is proposed, whether directly into the Stanah substation or somehow into the NGET overhead line between Stanah and Penwortham, would be a change to the Point of Interconnection for the projects (identified by NESO in the HND and secured in connection agreements with NESO). In other words, a physical connection which amounts to a new 'Tee-in'⁸ to NGET's existing overhead line between Stanah and Penwortham, or adding new conductors to it (if that were possible), would be a new and different Point of Interconnection to the identified and now contracted connection directly into the Penwortham substation itself.
- 3.5.1.5 It is noted that NGET was engaged in the preparation of the HNDR by NESO (and also in the subsequent connection offer process). NGET was part of the HND Central Design Group (CDG) which also included BEIS (now DESNZ) – the HND is delivered by NESO in consultation with the CDG.⁹ The upgrade works between Stanah and Penwortham referred to in FACTS' submissions are reinforcement works to the NETS (i.e. the transmission network) which would be the responsibility of NGET, in accordance with their licence and other regulations (including of course the detailed safety standards which apply to design and capacity of the NETS), so there was a full understanding of a potential connection at or near Stanah when the HNDR was prepared.
- 3.5.1.6 As such, it the Applicants' position that the suggestion by FACTS and other IPs that the Point of Interconnection for the Transmission Assets should have been at or around Stanah, instead of at the Penwortham substation, is primarily a matter for NESO (in consultation with NGET) as part of the HND and subsequent connection offer process.
- 3.5.1.7 The only option or 'alternative route' that does not involve a change in Point of Interconnection (and that would allow the onshore substations to be located at Hillhouse Technology LEZ), would be to construct the onshore substations near the current Stanah substation and bypass the current NGET substation at Stanah. The new onshore substations would not be owned by NGET, and this approach would involve the

⁸ Although a question for NESO and NGET, the Applicants note that as set out in NGET's "User connection configurations" guidance (21 June 2024), NGET generally no longer supports individual, tee-in [or LILO] connections into its overhead transmission lines. These bespoke connections would involve diverting an existing overhead line to serve a new connection point or substation and are unsupported by NGET on the basis that (1) they are neither economically nor operationally efficient, (2) they can increase the complexity and vulnerability of the network (creating potential single points of failure or faults on the exiting circuit), (3) they require bespoke engineering, outages and disproportionate resources, and (4) they do not meet the standards of reliability and resilience required for new transmission infrastructure. Therefore, any suggestion of a new Point of Interconnection via a tee-in [or LILO] to the overhead line between Stanah and Penwortham would be inconsistent with current transmission network guidance. It is also unclear whether the Stanah substation has capacity for 2GW of additional generation, without upgrade or replacement.

⁹ See section 4.2 [download](#)

construction of underground cables or a new overhead line from such new onshore substations at Stanah to the Penwortham substation (the Point of Interconnection). This was not an option which emerged from the Applicants' siting and routing work. It would involve significant additional construction work including a significant length of additional 400KV underground cabling or overhead lines, which does not accord with the adopted site selection principles.

- 3.5.1.8 The "Alternative – Hillhouse Technology Local Enterprise Zone" suggestion from FACTS and other IPs appears to rely on the (incorrect) assumption that no new cabling or infrastructure would be required, when in fact the only technically possible option would be far more complex, costly and disruptive than the cable route proposed.

3.6 The National Policy Statements

- 3.6.1.1 The Energy NPSs recognise the position set out above, in terms of: (i) responsibilities to identify a connection point; and (ii) that strategic co-ordination is expected to reduce the overall environmental and community impacts associated with bringing offshore transmission onshore compared to an uncoordinated, radial approach. These points are considered below.

3.6.2 What do the NPS Say about Responsibility to Identify a Point of Interconnection?

- 3.6.2.1 Paragraph 2.2.1 of NPS EN-5 states (emphasis added): *"The Secretary of State should bear in mind that the initiating and terminating points – or development zone – of new electricity networks infrastructure is not substantially within the control of the applicant⁶. [FN6 The exception to this is where the applicant is also responsible for the development of associated generation where the initiating point is substantially within the control of the applicant but the terminating point is not.]"*
- 3.6.2.2 The reference to a terminating point in this paragraph of the NPS is a reference to the Point of Interconnection to the NETS. As explained above, the Point of Interconnection is the terminating point where the responsibility (i.e. rights and duties) passes to another licensee – NGET.
- 3.6.2.3 Paragraph 2.2.2 of EN-5 recognises that the siting of the terminating point (i.e. the Point of Interconnection) is determined by *"system capacity and resilience requirements determined by the Electricity System Operator"*. The Electricity System Operator is NESO. Paragraph 2.2.3 notes that achieving net zero will require very significant amounts of new electricity networks infrastructure, *"including in areas with comparatively little build-out to date"* - if there is considered to be comparatively little build-out to date in the Blackpool area, then the NPS does recognise that the status quo may need to change. Paragraph 2.2.4 refers to strategic and holistic network planning as the way to ensure connections are efficient and overall amounts of network infrastructure reduced. Paragraph 2.2.5 explains

that applicants retain control in managing the identification of routing and site selection between the generation site and the Point of Interconnection (and as set out at length in the Application and discussed elsewhere, the Applicants' have carried out extensive routing and siting work of the cables and substations required for the Projects).

- 3.6.2.4 In short, the NPSs recognise that the Point of Interconnection is identified by NESO and is not within the Applicants' control. The NPSs also endorse the approach to strategic planning such as the HND led by NESO to identify Points of Interconnection.

3.6.3 What do the NPS State to be the Benefits of Strategic Co-ordination?

- 3.6.3.1 It is important to note that the NPSs accept and endorse the benefits of co-ordination. For example paragraph 3.3.71 of EN-1 sets out the need for new energy infrastructure and states (emphasis added):

"3.3.71 The historical approach to connecting offshore wind resulted in individual radial connections developed project-by-project. This may continue to be the most appropriate approach for some areas with single offshore wind projects that are not located in the vicinity of other offshore wind and / or offshore infrastructure that is planned or foreseen in the near future. For regions with multiple windfarms or offshore transmission projects it is expected that a more coordinated approach will be delivered. For these areas, this approach is likely to reduce the network infrastructure costs as well as the cumulative environmental impacts and impacts on coastal communities by installing a smaller number of larger connections, each taking power from multiple windfarms instead of individual point-to-point connections for each windfarm."

- 3.6.3.2 Similar statements are made in NPS EN-5:

"2.12.6 In addition, a more co-ordinated approach to designing offshore transmission is expected to be adopted compared with the previous standard approach of radial routes to shore." See also paragraph 2.13.14: "Co-ordinated transmission proposals, including multi-purpose interconnectors and other types of offshore transmission (see Glossary), are expected to reduce the overall environmental and community impacts associated with bringing offshore transmission onshore compared to an uncoordinated, radial approach."

- 3.6.3.3 The evidence which the Government has relied upon in setting out its policy position in the NPS that co-ordination is likely to reduce impacts is rooted in the OTNR and the HND. Paragraph 3.3.74 of EN-1 notes that the HND includes up front consideration of environmental and community impacts and states that *"Government recognises the work undertaken in these strategic network planning exercises and these should be an important and relevant consideration in the consenting process."* Similarly EN-5 states that through the work of the HND *"steps have already been taken to reduce avoidable cumulative impacts."* (paragraph 2.13.3).

- 3.6.3.4 The NPSs do not impose additional policy tests that co-ordinated proposals must comply with, in fact the opposite is true. Specific justification is required if a project is proposing a single radial connection or not following the recommendation of a strategic network planning exercise such as the HND (emphasis added):

“2.13.6 In the case of infrastructure identified through the HND, and subsequent network design exercises applicants should identify any variations to or developments from that work and justify these in accordance with the same objectives or criteria above, i.e. economic and efficient, deliverable and operable, minimise impact on the environment and minimise the impact on the local communities, giving these four criteria equal weight.”

“2.13.9 Radial offshore transmission options to single windfarms should only be proposed where options assessment work identifies that a co-ordinated solution is not feasible.”

- 3.6.3.5 The Applicants consider that the co-ordinated solution recommended by the HND is both feasible and deliverable (and consider this is demonstrated through the Transmission Assets application). The Applicants are not proposing two separate and uncoordinated connections from their individual windfarms to the Penwortham Point of Interconnection.

3.7 The Proposed Project – Penwortham as a Point of Interconnection and the Co-ordination Proposed

- 3.7.1.1 The Applicants carefully considered the outputs from the HND (having been engaged during the process) and agreed with its findings. As a result the Applicants both accepted connection offers at Penwortham – see response to ISH1_19 at **Section 6** of this note.

- 3.7.1.2 The Applicants also agreed with the recommendations of the HND on the approach to co-ordination – a joint but electrically separate connection corridor to the Point of Interconnection at Penwortham.

- 3.7.1.3 The application is therefore for the HNDR recommended solution of a Point of Interconnection at Penwortham and an electrically separate connection in a co-ordinated corridor.

- 3.7.1.4 The Applicants’ approach is strongly supported by the NPS, for the reasons set out above in **Section 3.6**, and additional paragraphs such as 2.13.4 of EN-5:

“It is recognised that proposed projects which have progressed through strategic network design exercises have been considered for strategic co-ordination through those exercises.”

- 3.7.1.5 The HND was a strategic network design exercise and as also noted above, the NPS’ only require applicants to justify variations to the outputs of the HND using the same criteria (i.e. economic and efficient, deliverable and operable, minimise impact on the environment and minimise the impact on the local communities, giving these four criteria equal weight) (paragraph 2.13.6). The Applicants have not sought

variations to the output of the HND so policy does not require such further justification.

- 3.7.1.6 NPS EN-5 confirms that Applicants are expected to be able to indicate how co-ordination, including reduction in impacts, have been considered drawing on the work of others, including that led or enabled by NESO (paragraph 2.13.17). The Applicants have set out above how the HND carried out by NESO recommended the co-ordinated solution¹⁰ proposed in the Application. See also the Applicants' response to ISH1_25 in the Applicants' Response to Hearing Action Points (S_D1_5), ISH1_26 in **Section 7** of this note and ISH1_28 in **Section 8** of this note on the benefits of the co-ordination proposed.
- 3.7.1.7 It is also the case that the NPSs recognise that reduced impacts as a result of co-ordination may include impacts on communities more broadly, for example, paragraph 2.13.14 of NPS EN-5 recognises that the benefits of co-ordinated transmission proposals are expected to reduce impacts and that *"These reduced impacts could, for example, relate to: fewer landing sites and reduced landfall impacts; reduced overall cable length; and fewer cable corridors and reduced impacts from these"*. This is the case for the Project, and (as noted above) is also a clear conclusion in the HND, appended at Appendix 1A of this note. Reducing the proliferation of infrastructure is a core benefit of the approach proposed by the Projects. Again, see further the Applicants' response to ISH1_25 in the Applicants' Response to Hearing Action Points (S_D1_5), ISH1_26 in **Section 7** of this note and ISH1_28 in **Section 8** of this note.
- 3.7.1.8 This is also consistent with the NPS position on alternatives that: *"The Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals."* (paragraph 4.3.24 of NPS EN-1).

4 Is an Alternative Point of Interconnection a Material Planning Consideration? (ISH1_6 continued)

4.1 Is the Alternative Point of Interconnection Locations a Material Planning Consideration?

- 4.1.1.1 As explained in **Section 3**, the identification of a Point of Interconnection is a separate process undertaken by NESO which has already been completed for the Morgan and Morecambe Offshore Wind Farms. The Energy Act 2023 prescribes that the process is controlled by NESO in coordination with the relevant Transmission Owner, as required under their respective statutory and licence obligations. The

¹⁰ As described at paragraph [X], the recommended design for the Project is perhaps best described as a hybrid but is the recommendation of the HND, which also considered a wholly radial and more co-ordinated solution.

selection of the Point of Interconnection involves considerations beyond impacts and land use, including costs to the consumer, technical criteria which ensure reliance and safety, and the implications for the overall network.

- 4.1.1.2 It is also noted that the HND itself was adopted and published in July 2022 and incorporated into the NPSs which were laid before Parliament and then designated in March 2024. There has been no challenge to either the outcome of the HND process or the revised NPS.
- 4.1.1.3 The Applicants were engaged in the HND process. This included raising the possibility of other Points of Interconnection which appeared based on their location to be potential options, including Stanah (as noted in **paragraph 3.4.1.10**), an alternative Point of Interconnection suggested by the IPs. But ultimately it is not for an applicant to select an alternative Point of Interconnection. As noted above, the NPSs accept that the connection is *“not substantially within the control of the applicant”* (paragraph 2.2.1 of EN-5).¹¹ For the Projects, the Point of Interconnection was one of early matters decided, along with the location of the generation, which provide the definition of the start and end points of the Application, and within which the routing and siting analysis was carried out.
- 4.1.1.4 Given that the selection of the Point of Interconnection is not within the control of the Applicants and is the subject of a separate regulated process, there can be no common law or other duty to consider alternatives to the Point of Interconnection identified by NESO as part of the subsequent planning process. In the language of the *Save Stonehenge* case, an alternative Point of Interconnection could never be an *“obviously material consideration”* because this would engage matters which are not obvious or knowable to the Applicants, the public, the Examining Authority and the SoS - including the technical requirements and capacity of a proposed alternative as well as the implications for the wider transmission network and strategic plans such as the HND. The practicality of this was obvious when FACTS sought to discuss network reinforcements between the proposed alternative Point of Interconnection and Penwortham – it became clear that there is no information or evidence on the uprated or new overhead line works which would be required (and the knock-on consequences for the HND were not even considered). The alternative Point of Interconnection and the consequences of the change could never be confirmed to be *“viable”* and will always be *“vague”* in terms of paragraphs 4.3.27 and 4.3.28 of EN-1. Therefore, it is not an *“important and relevant”* consideration for the Secretary of State.
- 4.1.1.5 It is noted that changes to the Point of Interconnection have been made to the recommendations of the HND, but through a formal process led by NESO and ratified by the OTNR Transmission Networks Review

¹¹ The word “substantially” recognises that the decision to accept a grid connection offer is up to a developer, that they may be engaged in the process, and that an appeal mechanism exists to Ofgem. However, it is clear from the process explained in this note that the limited level of input an applicant for a grid connection has falls far short of site selection for a Point of Interconnection being within the control of the applicant.

Board. An example is the South Cluster Impact Assessment,¹² which notes: *“Deviations from the recommendations may have wider implications for the transmission network and other industry processes. It is important that we understand the full impact of any design changes, as there may be consequences that are not immediately obvious, and the ESO is best placed to conduct this holistic assessment.”*

- 4.1.1.6 The difficulties in any unilateral consideration of changes to a Point of Interconnection not involving NESO or NGET are apparent from the submissions of FACTS and other IPs (set out in paragraph 1.1.1.4 above). The representations (including RR-703, RR-704, RR-1261, RR-1615, RR-1616) indicate that an *“informal examination”* of the Stanah substation has revealed that the existing overhead power lines and substation would need to be upgraded. The representations suggest that a connection at Stanah would provide connectivity into Penwortham substation and proposes a technical solution for the assumed consequential grid upgrade works: *“This option offers a shorter land route whose connection could be upgraded comparatively easily, if the existing overhead pylons are re-strung to increase power carrying capacity with an increased number of conductors attached, potentially with reinforcement of the pylons.”* However, there is no evidence that NESO or NGET would agree, or that NGET would be prepared to make these upgrades to its network. The representation does not consider the extent to which there is sufficient spare capacity at the Stanah substation for the (very substantial) 2GW of renewable energy from the Projects, or the works required at the Stanah substation itself (which may need to be replaced). Nor does the representation consider the implications for NESO’s holistic design recommended by the HND.
- 4.1.1.7 For completeness, it is also noted that a project with an alternative Point of Interconnection is not an alternative considered by the Applicants in terms of the EIA regulations¹³ because the Point of Interconnection is a fundamental part of the Morgan and Morecambe Offshore Wind Farms (along with the Round 4 lease areas), and not an alternative way of delivering the Projects which was considered by the Applicants as part of the planning or EIA process. For similar reasons it is also not an “other means” in terms of a Stage 2 MCZ assessment (section 126(7)(a) of the Marine and Coastal Access Act 2010) nor could it be an alternative in terms of the seeking compulsory purchase powers for the Project.
- 4.1.1.8 A project connecting at an alternative Point of Interconnection is a purely hypothetical project which does not require further consideration by the Applicants. However, this is an unusual situation as there has been analysis of an alternative project with an alternative grid connection location – as noted in **paragraph 3.3.34.1.5** above, the HND expressly considered an optimised radial (with Morecambe connecting

¹² ESO (February 2024) HND Impact Assessment –South Cluster outcome summary [download](#)

¹³ The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

to Middleton and Morgan to Penwortham) (among other options) for comparative purposes. This ‘counterfactual’ comparison considered cost, technical, environmental and community with equal weight in reaching the conclusion to recommend the co-ordinated Penwortham Point of Interconnection which forms the basis for the Project.

- 4.1.1.9 The approach outlined in this **Section 4.1**, this also aligns with the approach taken by other ExA’s and endorsed by the Courts. In SASES, the Court stated:

“220. At ER 25.5.8, the ExA recognised that it was not its role to second-guess the judgment of the Applicants or the NGET in the siting of transmission infrastructure and that equally, their choices were at their own risk. It went on to say, at ER 25.5.9:

"It is clear that the ExA is not 'at large' in the territory of alternatives. The ExA must consider the merits of the application before it, including the consideration of alternatives with respect to the matters where they were relevant. It is sufficient in this respect to consider whether alternatives have as a matter of fact been appraised (and they have been)....."

4.2 The Assessment of Impacts Arising from the Point of Interconnection at Penwortham

- 4.2.1.1 For the reasons set out in **Section 4.1** above, it is the Applicants’ clear position that there is no legal or NPS policy requirement to consider alternatives which result in a change to the Point of Interconnection for the Project and that the alternatives proposed by the IPs are not a material consideration and are not matters which are important or relevant to the SoS’s decision. Alternative projects connecting elsewhere are not relevant to this decision and need not be hypothetically developed and assessed.
- 4.2.1.2 Importantly, the Applicants are not suggesting that the Point of Interconnection and its impacts can be ignored or must just be ‘accepted’ by the ExA and the SoS. The full impacts of the Project and the consequences of the full routing and siting as a whole (i.e right up to the connection at the Point of Interconnection) are material considerations and must be weighed against the need and benefits of the Project taking account of the mitigation secured in the DCO.
- 4.2.1.3 The Applicants’ position is that the ExA and the SoS must consider the impacts of the proposed Point of Interconnection as part of weighing the benefits and impacts of the Application, but they are not required to identify or consider alternative Points of Interconnection or other projects which are not part of the application before them.
- 4.2.1.4 The ExA and SoS can also be assured from the evidence before the Examination that the Point of Interconnection was carefully considered by NESO including a full appraisal of alternatives through the HND, with input from NGET and the Applicants, prior to identifying the Point of Interconnection and making the connection offer. As set out above, the HND process is a substantially more detailed process than the CION

process which was used to identify the Point of Interconnection for previous offshore windfarms.

- 4.2.1.5 The Applicants have made clear in the Application that they agreed with the outputs of the HND (having been consulted during its production) and accepted the recommendation and Point of Interconnection for both projects at Penwortham (see section 3.3 of ES Volume 1, Chapter 3: Project description (AS-024). The Application with the proposed Point of Interconnection has been fully assessed in the ES, fully consulted on and appropriate mitigation is secured through the draft DCO.
- 4.2.1.6 Having completed the detailed routing and site selection between the generation sites and the Point of Interconnection at Penwortham, the Applicants remain confident that the Project represents a well-designed and appropriate solution to deliver almost 2GW of renewable energy to the national grid for supply to UK consumers. The Applicants are confident that the benefits delivered and established need (indeed critical national priority) for the Proposed Development clearly outweigh the residual impacts.
- 4.2.1.7 This conclusion is reinforced when taking account of the benefits of the co-ordinated route corridor and aligned substation siting (see the Applicants' response to ISH1_25 in the Applicants' Response to Hearing Action Points (S_D1_5), ISH1_26 in **Section 7** of this note and ISH1_28 in **Section 8** of this note) – viewed from the broader perspective of coastal communities, as FACTS' representative said at ISH1, *'it is better to put infrastructure in close to existing infrastructure than plough new furrows'*.

5 **Are Alternative Cable Routing and Substation Siting a Material Planning Consideration? (ISH1_6 continued)**

- 5.1.1.1 The Applicants accept that their role and level of control over the cable routing and siting of the new onshore substations is quite different to the Point of Interconnection. In relation to cable routing and onshore substation siting it is the Applicants and future OFTO who have and will have the statutory functions and duties, and not NESO or NGET.
- 5.1.1.2 This is made clear in the HND, which states: *"The HND specifies the interface sites [i.e. Point of Interconnection], onshore works, and offshore network interconnection, but does not mandate a particular choice of route, use of particular technology or exact locations of required substations [i.e. the Onshore substations]."* (section 3.6 of the HND) (wording in square brackets added to align with the terminology used in this note.
- 5.1.1.3 The Applicants have carried out a full routing and siting appraisal, as set out in ES Volume 1, Chapter 4: Site selection and consideration of alternatives (AS-026).
- 5.1.1.4 See also response to the following action points which relate to site selection, in particular ISH1_10, ISH1_12 and ISH1_25.

6 Details of agreement with National Grid for Penwortham Connection (ISH1_19)

- 6.1.1.1 Morecambe OWL and Morgan OWL (the Applicants) both have separate connection agreements with the NESO. The summaries of these connection agreements are publicly available on the NESO website within the Transmission Entry Capacity (TEC) register. The connection contracts are commercially sensitive so only summary information is available on the TEC register which confirms a Point of Interconnection at the existing Penwortham substation.
- 6.1.1.2 The Applicants have continued separate bi-lateral meetings with NGET and NESO as each of the Applicants have their own offer and different technical requirements. Discussions with NGET, who are responsible for the design and build of the connection bays within the Penwortham substation have confirmed that one of the projects will have to connect to the West and one project will have to connect to the East. NGET and NESO will confirm where each project goes in due time. Typically, the reasons for this are space constraints for the associated bays required with the connections and thermal limitations with respect to the MW that can be connected to any part of the substation. The NESO Security and Quality of Supply Standard (SQSS) requires that no more than cumulatively 1800MW can be lost for a single infeed fault within a substation and into the wider network which will also influence the final design and connection bay locations.

7 Benefits of Coordination (ISH1 Action 26)

7.1 The NPSs Recognise and Endorse the Benefits of Coordination

- 7.1.1.1 As explained in **Section 3.6** above and in the response to ISH1_25 in the Applicants' Response to Hearing Action Points (S_D1_5), the NPSs set out the Government's view that coordination will have environmental and community benefits and do not require those proposing co-ordinated schemes to justify the reasons why they are following policy and adopting this approach (such justification is only required for those proposing single radial connections).
- 7.1.1.2 However, the Applicants' consider there will be clear benefits to the co-ordination proposed. In relation to the substations specifically these are set out in ISH1_25, and more generally in relation to the Application these are set out below.
- 7.1.1.3 It is noted that Paragraph 2.13.4 of NPS EN-5 states: *"It is recognised that proposed projects which have progressed through strategic network design exercises have been considered for strategic co-ordination through those exercises. However, any opportunities for subsequent local co-ordination between projects, irrespective of whether they have been through those exercise, should be considered in project development. This is in addition to considerations on co-ordinating delivery in construction, see section 2.14.2."* The HND

considered co-ordination at a strategic level and also includes some consideration at a more local level (albeit it makes clear that it does not make recommendations on routing).

7.2 Coordination at a Strategic and Local Level

7.2.1 The HND's Position on The Benefits of the Strategic and Local Co-ordination Proposed

7.2.1.1 Paragraph 2.13.14 of EN-5 gives examples of how projects could achieve reduced environmental and community impacts including providing for fewer landing sites, reduced overall cable length and fewer cable corridors. The Transmission Assets application therefore seeks to deliver two projects through a single application with a single landfall location, aligned onshore cable corridor routes within an overall cable corridor area for almost the entirety of the route, with two onshore substations which are located in close proximity to one another.

7.2.1.2 Viewed first at a strategic level, the benefits are felt from a wider community and environmental perspective. In relation to the optimised radial design which was not progressed (with separate Points of Interconnection for each of the Applicants) the HNDR states (Section 4.7.4):

“While the HND has tried to reduce community impacts and reduce the number of cable routes to shore, it is not possible to fully eliminate community impacts. [...] However, the recommended design provides community benefits by reducing the number of connection locations in North West England (due to the shared cable corridor to Penwortham) [...]”

7.2.1.3 The HND (see Section 5.1.17 of the HNDR and **Section 3.3** above) concludes that the recommended design (adopted by the Transmission Assets) has economic benefits (as compared to the alternative coordinated design) and minimises both environmental and community impacts. The HNDR conclusions in relation to environment and community respectively for the recommended design state that:

“Whilst it is not expected to be possible to avoid all environmental constraints, this design performs better than the alternative radial design by introducing a shared cable corridor to Penwortham and avoiding the Morecambe Bay SAC.”

“The recommended design for the Irish Sea provides community benefits over the radial design by reducing the number of cable corridors, which will reduce community impact from construction activities.”

7.2.1.4 As noted above and explained in **Section 3.7** above, given the Applicants considered and agreed with recommendations of the HNDR, they accepted the connection offers from NESO with a Point of Interconnection at the existing Penwortham substation and a co-located cable corridor.

7.2.2 The Applicants' Position on the Benefits of the Strategic and Local Co-ordination Proposed

- 7.2.2.1 The Applicants also consider that rationalising down the number of landfall locations minimises geographic spread at a regional level. This is an important consideration when considering the benefits of the proposed coordination delivered by the Transmission Assets – which are projects of National Significance - at the broadest strategic level. This minimises the overall number of communities and environmental receptors which are affected.
- 7.2.2.2 At the more local level, the Applicants consider that developing aligned cable corridors allows for detailed alignment of infrastructure which ultimately avoids the proliferation of infrastructure within the host community (i.e. the potential for a 'spaghetti-junction' of cable routes) as compared to the alternative of separately developed radial connections (the usual scenario until now) to the Point of Interconnection. Separate radial connections would likely cause a wider spread of development and impacts (including landscape and visual), lead to a potential need for cable crossings, potentially increase the number of landowners and farm holdings affected, and result in more widespread land use impacts or less efficient use of land.
- 7.2.2.3 In addition, the impact on stakeholders is considered to be greater through development of separate radial connections. The consultation and wider engagement would be doubled in this scenario as the separate project proposals would each be subject to their own statutory and non statutory consultation processes, as well as two sets of application documentation, separate EIA process and proposed mitigations and two separate examinations.
- 7.2.2.4 The Applicants consider that these are among the main benefits of the coordination proposed by the Transmission Assets at a strategic and local level, and these benefits are aligned with the aims and objectives of the HND endorsed by the NPSs (see **Section 3.6** above).
- 7.2.2.5 As set out above, Applicants are also seeking to consent the Transmission Assets by way of one joint application for development consent. This is unprecedented for two projects of this nature, and this approach has required a substantial amount of work from the Applicants. By promoting one single joint application, stakeholders and the local community have only been subject to one consultation phase and DCO examination process and there is a single suite of application and environmental assessment documents. This has allowed for a far more detailed consideration of the combined impacts from all elements of the Transmission Assets, than would have been possible as part of any cumulative effects assessment if the two projects had been separately promoted and assessed. This has ensured that mitigation measures can also be coordinated to ensure the most effective reduction of environmental impacts and the development of a single set out outline management plans to align the approach across both projects.

7.2.2.6 Another benefit of the joint application process is that all post-consent management plans will be based on a single suite of outline plans, which were submitted as part of the application. This will ensure consistency in approach from both projects, in respect of mitigation measures, delivery principles and overall construction controls. This is discussed further in relation to construction co-ordination at **Section 8.2** below in **paragraphs 8.3.1.1 to 8.3.1.6**.

7.2.3 The Applicants' Position on Construction Coordination

7.2.3.1 Due to the alignment of infrastructure inherent in the design of the Transmission Assets, communication between Morgan and Morecambe post consent will be essential to ensure safe and efficient installation, operation and maintenance of the Transmission Assets. In particular to:

- manage temporary and permanent access (in particular where there are overlapping accesses for both projects along the route);
- manage overlapping compound areas (such as at landfall and Blackpool airport);
- avoid construction conflicts;
- manage relevant mitigation (for example, traffic and access, noise mitigation and delivery of ecological mitigation);
- manage operational repairs in a coordinated manner, both routine and emergency; and
- consider opportunities for the programme for decommissioning to be understood, communicated and delivered in a coordinated manner.

7.2.3.2 This benefits the local host communities because it ensures the projects are being delivered as efficiently as possible and minimises the potential for unnecessary impacts (e.g. from construction traffic) which could occur if the Applicants were developing independently.

7.2.3.3 Continued collaboration post consent is facilitated by the draft DCO (Rev F03) (AS-004) through the alignment of the drafting of the Project A and Project B requirements and DML conditions so that they mirror each other and through the submission of joint outline management plans. This ensures that each project has to take a consistent approach to discharging its requirements and DML conditions and, as each project's detailed plans will be based on the same outline documentation, there will be a consistent approach taken to preparing the detailed plans post consent. This should also assist discharging and consultee bodies post consent as the detailed plans will be based on the same outline information.

7.2.3.4 Specific co-ordinated construction proposals for the Transmission Assets cannot be committed to and therefore should not be secured in the DCO (see **Sections 8.2 and 8.3** for further details). Whilst the Applicants recognise this creates uncertainty, they believe their coordinated approach allows for such opportunities to emerge. Other commercially separate offshore wind developers have not in the past

created such opportunities, preferring instead the (significantly easier) approach of geographical separation to minimise interactions.

7.2.3.5 It is clear that the approach to coordination proposed by the Applicants also aligns with NPS EN-5, because it is emphasised in paragraph 2.14.2 (referenced in paragraph 2.13.4) that the co-ordination of construction planning applies “*for other similar projects in the area on a similar timeline;*” (emphasis added). As explained in **Section 8** below, it would not be appropriate or practical to require that the projects have a joint construction phase.

7.2.3.6 **Section 8.2** below, in response to ISH1_28, sets out the reasons why it is not appropriate or possible for provisions to be imposed on the Applicants via the DCO requiring the Applicants to commit to concurrent or joint construction.

8 Need for Project Separation (ISH Action 28)

8.1 Independent Competitors Working Together

8.1.1.1 The Applicants are two wholly independent Joint Ventures (JVs) and commercial competitors. They were competing for sites during the Round 4 bidding process (and ultimately remain competitors). It is noted that competition is a design feature and core foundational principle of the UK electricity industry to minimise cost to the consumer, so should be viewed as an inherent positive.

8.1.1.2 Despite being arms-length competitors, subsequent to Round 4, the Applicants have agreed to work together to deliver the recommendation of the HND and NPS policy on collaboration. This collaboration is unprecedented in the industry because all other examples of coordinated projects^{8.4} were essentially a single JV or consortium established at the outset to deliver more than one project (for example Dogger Bank Creyke Beck or the Sheringham Shoal and Dudgeon Extension Projects – see further details in **Section 8.4** below). In those examples there was commonality of ownership, commercial goals and strategy.

8.1.1.3 In contrast to those examples, the Applicants are not working together because it is a commercial strategy or necessarily in their commercial best interests. Before they discovered they were to be ‘neighbours’ in the Irish Sea, there was no contact between the Applicants. Instead, and in contrast to previous situations, the Applicants are collaborating to support and deliver on the UK’s aim for better co-ordination on offshore transmission to best balance cost, technical, environmental and community factors (see **Sections 3.3, 3.4 and 3.53.5** above). Indeed, in the past arms-length developers have actively sought spatial separation between projects to minimise the potential for interaction.

8.1.1.4 Further details on each undertaker’s company structure can be found in the Funding Statement (APP-008) and in response to hearing action point CAH_8 in the Applicants’ Response to Hearing Action Points (S_D1_5).

8.2 Difficulties with Requiring Concurrent Construction

- 8.2.1.1 The above explanation of the commercial separation between the Applicants provides important context for why it would not be reasonable, practical or appropriate for the consenting system to in effect impose on two separate entities a single construction project. This would be a fundamental change to the Application that would unreasonably prejudice the delivery of up to 2GW of new renewable energy capacity from the Morgan and Morecambe Offshore Wind Farms.
- 8.2.1.2 However, in addition to this point of principle of commercial separation, there are a number of regulatory, delivery and practical reasons why the Applicants cannot at this stage confirm construction will be concurrent. Firstly, at Issue Specific Hearing 1 on 30 April 2025 and 1 May 2025 (see Applicants' Hearing Summary ISH1: Day 1 (S_D1_2) and Applicants' Hearing Summary ISH1: Day 2 (S_D1_3), the Applicants explained that because the two undertakers are separate legal entities, they may not reach key milestones in terms of the delivery of their separate offshore wind farm projects at the same time. Of particular relevance is the fact that Morgan OWL and Morecambe OWL may be awarded a Contract for Difference (CfD) in different allocation rounds. This impacts on each project's delivery programme as funding for each project could be secured at different times.
- 8.2.1.3 ES Volume 1, Chapter 3: Project description (AS-024) also confirms that, whilst current planning legislation provides a mechanism for consenting two projects together within one DCO application, wider regulatory regimes do not allow for the coordinated investment which would be required for the projects to commit to the delivery of concurrent construction. The key barriers are:
- the inability to submit shared, or dependent, CfD bids into the same allocation round (as noted above); and
 - the lack of an appropriate mechanism for investment risk to be accommodated for developments with coordinated transmission assets i.e., an Anticipatory Investment model.
- 8.2.1.4 ES Volume 1, Chapter 3: Project description (AS-024) sets out further detail about CfD at paragraphs 3.3.1.4 to 3.3.1.7 and about Anticipatory Investment at paragraphs 3.3.1.9 to 3.3.1.11.
- 8.2.1.5 Each undertaker also has separate Bilateral Grid Connection Agreements (BCAs) with the NESO (as explained in response to ISH1_19 set out at **Section 6** above). This places further distinct and independent obligations on each of the Applicants. The need for the two projects to remain electrically separate from each other was the recommendation of the HND.
- 8.2.1.6 In short, delivery of offshore windfarms at this scale involves the alignment of a large number of elements, as well as land and consents. As noted above, this includes supply chain, grid connection, financing, and CfD. Many of these will impose their own timing requirements, for example a CfD will contain strict milestone requirements. It is therefore

simply not possible or practical under the UK's delivery model for offshore wind for one project to be ready to construct and then be held indefinitely for another project which is not under the same commercial control.

8.3 Delaying Delivery in order to Coordinate Construction is Not Supported by NPS

- 8.3.1.1 However, quite apart from the commercial appropriateness, the Applicants consider there is a clear reason based on NPS policy why requiring joint construction is not appropriate – it would entirely undermine the over-arching need for expedient delivery of the Transmission Assets.
- 8.3.1.2 The NPSs (paragraph 2.14.2 of EN-5) clearly places co-ordination of construction behind the expediency of delivery, making it clear that the Secretary of State does not expect co-ordination for construction delivery where projects are not on a similar timeline by stating that:
- “in assessments of their designs, applicants should demonstrate how the construction planning for the proposals has been co-ordinated with that for other similar projects in the area on a similar timeline”..*
- 8.3.1.3 This aligns with the NPS recognition of the urgency of climate change and Net Zero targets. In other words, the policies on the urgency of delivery of Critical National Priority infrastructure are not subject to the need for, and should not be held up by, the potential for co-ordinated construction to further mitigate impacts.
- 8.3.1.4 In addition, the recommendation of the HND (recognised by the NPSs) was for two electrically separate connections which need to be independently deliverable.
- 8.3.1.5 During Issue Specific Hearing 1 on 30 April 2025 and 1 May 2025 (see Applicants' Hearing Summary ISH1: Day 1 (S_D1_2) and Applicants' Hearing Summary ISH1: Day 2 (S_D1_3), there were requests from IPs that if one project was ready in advance of the other, that the first project should delay their construction so that the construction phase for each project could be aligned. This would be entirely contrary to EN-5 and would entirely undermine the over-arching need for expedient delivery of this critical national priority infrastructure which is needed to deliver almost 2GW of new renewable energy capacity.
- 8.3.1.6 The Applicant therefore maintains that it would be inappropriate, and contrary to the NPSs, to require that Morgan OWL and Morecambe OWFL commit to concurrent construction of the Transmission Assets.

8.4 Further Background on the Differences to Previous Projects

- 8.4.1.1 As noted briefly above in **paragraph 8.1.1.2**, where other projects have come forwards with either two projects within the same DCO (such as Dogger Bank Teesside A and B, Dogger Bank Creyke Beck, Hornsea One, Hornsea Two, Sheringham Shoal and Dudgeon Extension

Projects) or two projects with separate DCOs) but overlapping Order limits (such as East Anglia One and East Anglia Three, East Anglia One North and East Anglia Two, Norfolk Vanguard and Norfolk Boreas), there has always been some commonality of ownership between the undertakers promoting each project and in the case of the joint DCOs a single applicant. The coordination was a commercial strategy from the outset with a common point of company control (and therefore decision-making). Whilst the commonality of owner/single applicant approach may facilitate different options with regards to funding and facilitation of shared infrastructure (including for example shared haul roads and the potential for one project installing ducts for another project within overlapping cable corridors), none of those projects have been forced to wait for the second project to come forwards and only construct concurrently.

- 8.4.1.2 In particular, this was considered recently during the examination of the Sheringham Shoal and Dudgeon Extensions Project DCO. In that case, the ExA agreed with Equinor (the single applicant for Sheringham Shoal and Dudgeon Extensions Project) that all construction scenarios sought in the draft DCO (including in isolation, sequential and concurrent) must be retained and included in any made Order. The key basis for this was that the undertakers in the Sheringham Shoal and Dudgeon Extension DCO are separate companies and, therefore, could not guarantee they would obtain funding through the same CfD allocation round and (even in that case where there was a single applicant and a common shareholder), it was not considered reasonable to impose concurrent construction on the two projects. The ExA recommendation report for the Sheringham Shoal and Dudgeon Extensions Project DCO confirms at paragraph 4.9.37:

“As such, the ExA does not disagree with the Applicant’s position that both SEP and DEP coming forwardly jointly as the Proposed Development generally represents an all-round advantage, no matter which Development Scenarios would proceed to construction. In conclusion, the ExA accepts the range of Development Scenarios proposed by the Applicant, and finds that the exclusion of one or more scenarios, given the specifics of the case, is not necessary nor available to the ExA.”

- 8.4.1.3 The Applicants do not consider there is any reasonable basis upon which to consider this Application differently. The Applicants have explained above and within the application documents the reasons why flexibility should be retained within the draft DCO (AS-004) to allow for the projects to be constructed in different ways in order to secure the most timely delivery of the Transmission Assets and to facilitate delivery of Critical National Priority Infrastructure.